1. Introduction: Policy Landscape
2. Advocacy and Policy Development
   • Advocacy Activities
   • Policy development
   • Knowledge Development
3. Knowledge Management
   • National Recordal System
   • Accreditation and Certification Framework
4. Innovation
   • Bioprospecting
   • Technology Transfer
5. Alignment with other DST Programmes
INTRODUCTION

• IKS has grown from a Cinderella subject to one of the Department’s flagship projects.
• It has developed from the adoption of the Policy in 2004 having 3 members of staff to being mainstreamed across the NSI, from Universities, Science Councils, IKS dedicated government directorates, spin off companies, communities’ to utilising most of the human capital and research instruments with the NRF
• It is a public policy issue loved by the citizenry

• To stimulate and strengthen the contribution of Indigenous Knowledge Systems to social and economic development in the country.
• Recognize, affirm, develop, promote and protect Indigenous Knowledge Systems (IKS) in South Africa.
• Interfacing IKS with other Knowledge Systems

KEY COMPONENTS

- Building Institutional Capacity
- Mainstreaming IKS in Education and the National Qualification Framework
- Integration of IKS in the National System of Innovation
- Research and Development Strategy
The IKS Policy seeks to address the key concerns of the country, namely to harness local resources for innovation through the protection, promotion and development and management of indigenous knowledge systems.

4 key policy drivers namely:
- Affirmation of African cultural values in the face of globalisation.
- Development of the services provided by traditional healers
- Contribution of indigenous knowledge to the economy.
- Interfacing with other knowledge systems.
Provide the following functions:

- Provide public resources according to identified priorities;
- Establish mechanisms for the nature and extent of relationship between the holders of Indigenous Knowledge and the research community, and the regulation of standards for information and material transfer agreements related to Indigenous Knowledge;
- Develop and implement infrastructure for programmes as it relates to priorities
- Leverage funding to IKS laboratories and centres, practitioners/holders for the purposes of research and development
- Maintain and disseminate information on IKS; and
- Advise indigenous/local communities/person on matters of dispute in collaboration with traditional leaders and other IKS stakeholders.
NIKSO established a 3 tier structure

- NIKSO Chief-Directorate
  - IKS Development & Planning
    - Policy, legislation, advocacy, mobilisation and management of stakeholders
  - Knowledge Development & Innovation
    - Research, development & innovation in IKS
  - Knowledge Management
    - IKS information infrastructures (National Recordal System; Accreditation and Certification of IK holders; auditing, monitoring & evaluation of IK activities & projects)
• **Purpose** – To develop appropriate legislation and policy for the protection of indigenous knowledge resources from unfair exploitation and to ensure its development.

• Development of legislation for the protection, promotion, development and management of IKS.

• **Status** – IKS Bill approved by EXCO.

• Research ethics and database policy approved by Exco.

• Development- legislative framework for SSDU.

• **2014/15 priorities and beyond** – consultation, approval and implementation of the policy.
**Purpose:** Institutional collaboration’s mission is to consolidate collaborative research, initiate agreements with strategic partners and stakeholders locally, regionally and internationally.

**Status:** Bi-lateral agreements with:
- Namibia, Zambia, Angola, China, India, South Center, SABS.
- SADC workshop and WIPO engagements.
- Interdepartmental committee meetings.

**2014/15 priorities and beyond:** Servicing PoAs under bi-lateral agreements, extending agreements to other countries.
Purpose: The overall purpose of the advocacy strategy is to disseminate information targeted at enhancing public’s knowledge and understanding of the importance of South Africa’s indigenous knowledge.

Status: Advocacy and Communication Strategy approved by Exco.

IKS thrust in the NSW.

2014/15 priorities and beyond – national consultation, approval and implementation of the strategy.

Budget: R1.5m
WHY A SUI GENERIS LEGISLATION

- South Africa's current legislation on intellectual property rights cannot accommodate and adequately protect IK.
- While there is consensus that indigenous knowledge is worthy of protection, there appears to be disagreement on how best to protect indigenous knowledge, with two main options being put forward:
  - 1. Using the existing IP rights system
  - 2. Developing a sui generis system of IP rights
INTELLECTUAL PROPERTY

PRIVATE RIGHTS
- Economic Benefits
- Individual Ownership
- Limited Term
- Tools
  - Copyright
  - Trademark
  - Patent
  - Industrial Design
- Criteria
  - Material Form
  - Trademark Distinctiveness
  - Patent Novelty Inventive Step
  - Industrial Design Industrial/Aesthetic Use

SUI GENERIS
- Economic Benefit
- Moral Benefit
- Customary Benefit
- Collective Ownership
- Perpetuity
- Tools
  - Folklore
  - Databases
  - Genetic Resources
  - IK
- Criteria
  - Embedded in a Local Community Intergenerational Context
  - Collective Ownership
Sui generis approach:

- Industrial Design
- Copyrights
- Geographical Indications
- Trade marks
- Patents
- Plant Breeders
- Indigenous Knowledge

Sui generis legislation
NO BENEFITS TO THE NDEBELE COMMUNITY
• The National Indigenous Knowledge Systems Office and the legal Unit at the DST formed a task team that drove the drafting of the legislation.
• The broad objectives of the Bill are protection, promotion development and management of Indigenous Knowledge Systems in the form of a "sui generis" legislation.
• Submission to the Minister for approval for consultation with government departments is in process.
HUMAN CAPITAL INSTRUMENTS UNDER IKS

- Research Grant under the NRF
  - Competitive research in priority areas
- SARCHi Research Chairs
  - 3 on IKS
- Centres of Excellence
  - One in Development (UKZN, NWU, UL, Univen and UNISA)
- Post doctorates
- Bursaries
- Interns
IKS Information Infrastructure

- Integrating digital Pharmacopoeia with NRS
- National recordal system
- Development of complimentary infrastructure
- NRS Technical Development & deployment at IKSDCs
- Concept for IKS infrastructure in museums & libraries

Knowledge Leveraging

- Accreditation & certification of knowledge HOLDERS
- Develop framework: Pilot norms and standards
- Develop legislation and regulation
- Project appraisals, project selection, M&E
- Monitoring & Evaluation
- Reports and Sharing lessons learnt

Nikso priorities: recognition, affirmation, protection & promotion of IKS

DST 10 Year Plan: 5 Grand Challenges
- Space Science
- Energy Security
- Bioeconomy
- Global Change
- Human and Social Dynamics
National Recordal System (NRS)

- **Purpose** – To record, document, preserve and protect indigenous knowledge for the benefit of the communities of South Africa.

- Records unrecorded IK in various multimedia formats, link recorded IK and aim to promote community IK.

- Collect grassroots community experiences in local languages.

- Constitute an IKS Cyber infrastructure that provides authentic, legal and secured IKS information for research develop and support.

- Support by National Indigenous Knowledge Management System (NIKMAS)
Status of NRS implementation

**Status:**

- NRS officially launched and implemented in 6 provinces:
  - KZN, LIMPOPO, NORTH WEST, EASTERN CAPE, WESTERN CAPE, FREE STATE
  - 12 Communities participating in NRS initiative across provinces
  - 30 community people employed across provinces

- NRS Communication strategy approved by DST EXCO
- Draft NRS legal Framework developed
- SANBI/NRS scientific classification process included in system

**2014/15 priorities and beyond** – NRS established with coordinator appointed in Northern Cape province.
NRS Overview

Preservation
- Community members
- IK Holders

Promotion
- General Public
- Learners
- Teachers

Protection
- IP offices
- Registered scientists & researchers

Development
- Approved and registered scientists

NRS Central Operations

supported by the National IK Management System (NIKMAS)

Indigenous Knowledge Documentation Centres (IKSDC)

Community access

Public access

Restricted access

Confidential access

NRS Processes
- Scientific Verification
- Classification
- Quality Check
- Verification
- IK Recording
- Catalogue
NRS Benefits to Communities

Traditional Medicine  Food Security

video  audio  transcriptions  photos

NIKMAS
National IK Management System

Technical support of the NRS objectives, processes and legal framework.

Communities

- recognition
- community identity
- sustainable livelihood
- economic value
- improved quality of life
Purpose: The overall purpose of the pharmacopoeia is to serve as a form of protection against misappropriation and exploitation of indigenous knowledge as it relates to genetic resources and prior art.

Status:
- Pilot digital pharmacopoeia developed
- Access to 793 open access journals, 185 South African theses, 32 digitised books, 57 updated monographs and 1 conference paper

2014/15 priorities and beyond – Further digitisation of priority plant species, development of monographs for selected plant material
• **Purpose:** The overall purpose of the accreditation and certification of IK holders is to provide the necessary assurance that the IK field of practice is continually engaged in reviewing and improving its quality and services, and aligned to nationally endorsed norms and standards.

• **Status:**
  
  – Draft Accreditation and Certification Regulatory Framework developed
  
  – DST EXCO approval of draft Regulatory Policy document
  
  – Pilot norms and standards for Traditional Healing & Practice developed by practitioners and leaders from North West, KwaZulu-Natal, Mpumalanga, Limpopo provinces and Northern Cape

**2014/15 priorities and beyond** – national consultation, development of regulations
• Supporting the strategic objectives highlighted by the National Research and Development Strategy, IKS Policy and the Ten Year Innovation Plan.

• The system will also support the work of the government departments such as the National Department of Health in complementing the Traditional Health Practitioners Act No. 22 of 2007

Financial Resource Considerations

• Financial and human capital are required to develop such a system. Resources will be used to develop standards and train personnel

• National consultations and tabling before Cabinet.
Commissioned by the Department of Planning, Performance Monitoring and Evaluation (DPME) in collaboration with the Department of Science and Technology (DST)

Evaluation Purpose:

– assess the implementation of the IKS Policy from 2006 to March 2014.
– Assess IKS main policy outcomes (results) and make recommendations for policy enhancement and improved service delivery.
– Inform future IKS impact evaluation studies

Status:

• Request for proposals and compulsory briefing session conducted: 15 August 2014
  – Evaluation Project Closure: 09 February 2015
IKS-Based Technology Innovation: 2008-2014
[Key Achievements]

IKS Bioprospecting and Product Development Platform - Consortium-Based

African Traditional Medicine
4 Candidate Products

IK-Based Cosmeceuticals
6 Candidate Products

IK-Based Nutraceuticals
9 Candidate Products

Health Teas and Beverages
3 Candidate Products

IK-Based Technology Transfer
8 Moringa Products

30 Products Yielded 3 Registered PCT and 4 Local Patents

12 PhDs, 31 M.Sc, and 40 Honors Graduates

Tech Transfer to 3 Coops and 1 Trust and 300 IKH Trained

L’Oreal, Nestle, Amka, Afriplex, Kalahari, Wollies and Nativa
AFRICAN TRADITIONAL MEDICINES
[HIV/AIDS Prevention and Management]

- Pre-Clinical Studies Complete in Primates
- Microbicide - Caplet Application Trials Ongoing
- Immune Modulator Capsule and Syrup
- Product Registration and Clinical Trials Protocols
- Medicines Control Council Approval in 2015
AFRICAN TRADITIONAL MEDICINES
[Diabetes Management]

- Pre-Clinical Completed on Leaves and Fruit
- Sugar Management Food Supplement
- Sugar Management Complementary Medicine
- Diabetes Treatment Medicine
- Product Optimisation and Primate Studies
- Patent and Trademark for Food Supplement
- Better than Insulin and Metformin
AFRICAN TRADITIONAL MEDICINES
[Tuberculosis Management]

- Pre-Clinical Completed on Small Animals
- Product Formulation Completed
- In-vitro Efficacy Study Completed
- Primate and Clinical Trials Protocols Development
- Medicines Control Council Approval in 2016

Outperforms Isoniazid
COSMECEUTICALS FLAGSHIP
[Anti-Hair Loss and Anti-Wrinkle]

Human Trials and Market Studies Completed

Afriplex and Amka Licenses

Amka Developed Cosmetic Range

Royalties and License to Supply Agreements

One PCT for Anti-Hair, and One PCT Planned
Human Trials and Market Studies Completed

Community- Spin-Off Company in Partnership

Extract Sales and New Range Formulations

Pre-Processing Plant and TIA for Manufacturing

Two Patents Filed Nationally and Two PCT Filed
NUTRACEUTICALS AND FUNCTIONAL FOODS

- Fortified Vegetable Relishes
- Health Protein Drinks
- Ice-Tea and Hot-Tea Infusions
- Soups and Food Ingredients
- Muffin Mix and Raw/Dry Vegetables
- Amaranthus, Cleome and Cowpea Products
- Nestle Ingredients Range
HEALTH TEAS
[Resurrection and Hawhaw Teas]

Product Optimisation Studies Concluded

Propagation and Tissue Culture Studies Ongoing

Land Identified Zeerust

Patent and Trade Marks to be Registered

SABS Requirements Completed

Commercialisation Planned for 2014
HEALTH TEAS
[Honeybush Tea]

Product Optimisation Studies Completed

Propagation and Tissue Culture Studies Complete

Land Identified in Genadendaal, Western Cape

Cooperative to be Registered and Market in 2015

Trademark and Breeders Rights to be Registered
MORINGA PRODUCTS
[Technology Transfer Manufacturing]

- Food Supplements in Capsules
- Protein and Energy Shakes
- Ice-Tea and Patented Vitamin Water
- Soups and Food Ingredients Range
- Tea-bag Infusions and Raw Veggies
Infrastructure Development

Bachelor of IKS, M.IKS and PhD in IKS

Community Skills Development

High-End Skills
MORINGA PRODUCTS
[Technology Transfer Manufacturing]

Technical Human Capital Development

Commercialisation Partners

Community-Based Companies

Cultivation and Agro-Processing
COMMERCIALISATION
[Sustainable livelihood and improved QOL]

- Licences
- Royalties
- Coops
- Joint Venture
- Holistic Integral
- Enterprise
- Trusts
- Start-Ups Spin-Offs
SUSTAINABLE LIVELIHOOD AND IMPROVED QUALITY OF LIFE

- Ubuntu [Humane]
- Technical [Scientific]
- Industrial and Economic [Equitable]
- Environment [Liveable]
- Institutional and Governance
- Legislative [Cultural Protocols]
- Social and Inclusive

SUSTAINABILITY [UBUNTU]

Institutional and Governance

Environment [Liveable]

Industrial and Economic [Equitable]

Technical [Scientific]

Ubuntu [Humane]

Social and Inclusive

Legislative [Cultural Protocols]
Thank you for listening

- Cosmology
- Social ecology
- Public health and medicines
- Biodiversity
- Indigenous technologies
- Indigenous food and food technologies

From Muthi & Myths, Heather Dugmore and Ben-Erik van Wyk