

THE NATIONAL RECORDAL SYSTEM



science
& technology

Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA



The National Recordal System

NRS: Background

- IKS Policy (2004), National Research and Development Strategy, Ten-Year Innovation Plan (Bioeconomy Strategy), further endorsed by draft IKS Protection, Promotion, Development and Management Bill.
- The largest South African initiative that record, document, preserve and protect indigenous knowledge for the benefit of the communities of South Africa.
- Records unrecorded IK in various multi media formats, link recorded IK and aim to promote community IK. Collect grassroots community experiences in local languages.
- Intersect with Prior Art through Pharmacopoeia on traditional medicines
- Constitute an IKS network infrastructure that creates a legal framework linking research and developmental strategies at different layers of government.
- Supported by National Indigenous Knowledge Management System **(NIKMAS)**



Towards a Knowledge Economy

RESOURCE-BASED ECONOMY



KNOWLEDGE-BASED ECONOMY



What is the NRS

- The National Recordal System Vision: to be the leading Indigenous Knowledge Systems treasure hub through the recording, storing, management, maintenance, dissemination and protection of IK for communal socio-economic development in South Africa.
- Constitute an IKS cyber infrastructure that will create a legal framework that will link research and developmental strategy at different layers of government.
- Will be supported by National Indigenous Knowledge Management System (NIKMAS) which will comprise a semantic digital repository with custom-developed metadata schemata and a sophisticated security model to protect, preserve IK, an advanced semantic search engine, a sophisticated catalogue system and an overarching integration architecture that combines the subsystems into a coherent, fit for the purpose system.



Our Project Approach

- Living Lab project approach – users are part of the design and development process;
- Iterative and Incremental Methodology – Start with something small and manageable and build onto that;
- Consider the latest trends and research for innovative solutions to address a complex and ambitious system.

Bottom Up approach to promoting Indigenous knowledge

- Linking people with relevant knowledge and each other directly is far useful
- Community based structures to bring people together such as :
 - Local Market places
 - Libraries and resource centres
 - Multipurpose centres build throughout the country
 - A competition among women for demonstrating various recipes





Theme heading insert

NRS OBJECTIVES

Mobilising, aligning and empowering communities and related stakeholders country wide

Building and supporting appropriate networks

Enabling the discovery, cataloguing, capturing, validation and utilisation of the national IKS heritage in an appropriate framework

Initiating, enabling and maintaining a secure, accessible national repository for the management, dissemination and promotion of IK

Achieving national Intellectual Property objectives for the appropriate protection of IK





NRS AIMS

- Preservation of IK
 - Recording of detail on IK holders, claims and IK
- Promotion of IK and communities
 - Inter-community promotion of IK
 - Intra-community promotion of IK and community pride
 - National/international promotion of South African communities and IK
- Protection of IK (positive and defensive)
 - Supporting bio-prospecting process
 - Secure NIKMAS system
 - Supporting legal framework
- Development of IK (responsible exploitation based on a sound legal framework and supported by legislation)
 - Intelligent searches by researchers/scientists



NRS OVERVIEW

Preservation

- Community members
- IK Holders



Community access

Promotion

- General Public
- Learners
- Teachers



Public access

Protection

- IP offices
- Registered scientists & researchers



Restricted access

Development

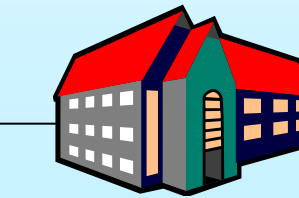
- Approved and registered scientists



Confidential access

NRS Central Operations

supported by the
National IK
Management System
(NIKMAS)

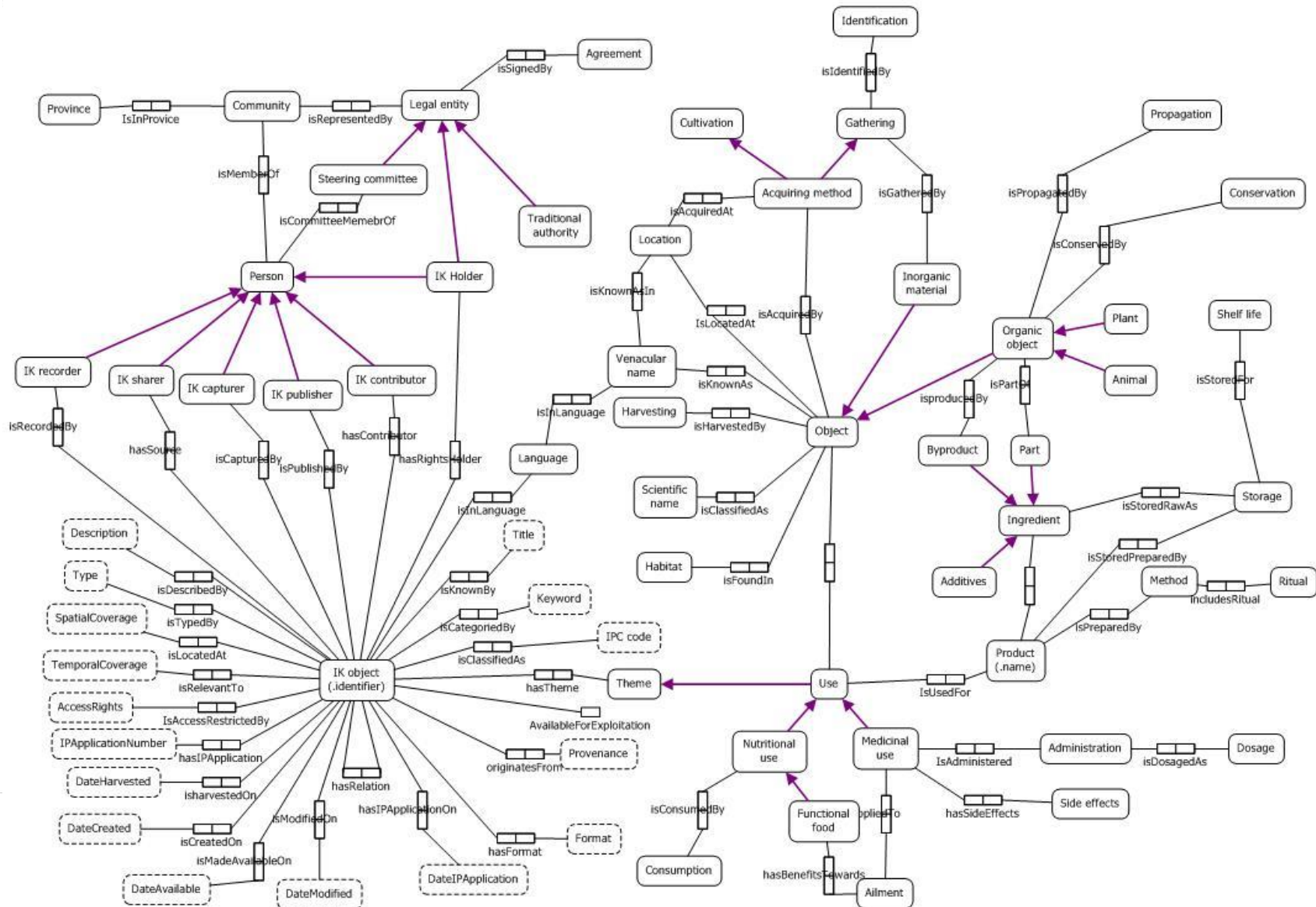


Indigenous Knowledge
Documentation Centres
(IKSDC)

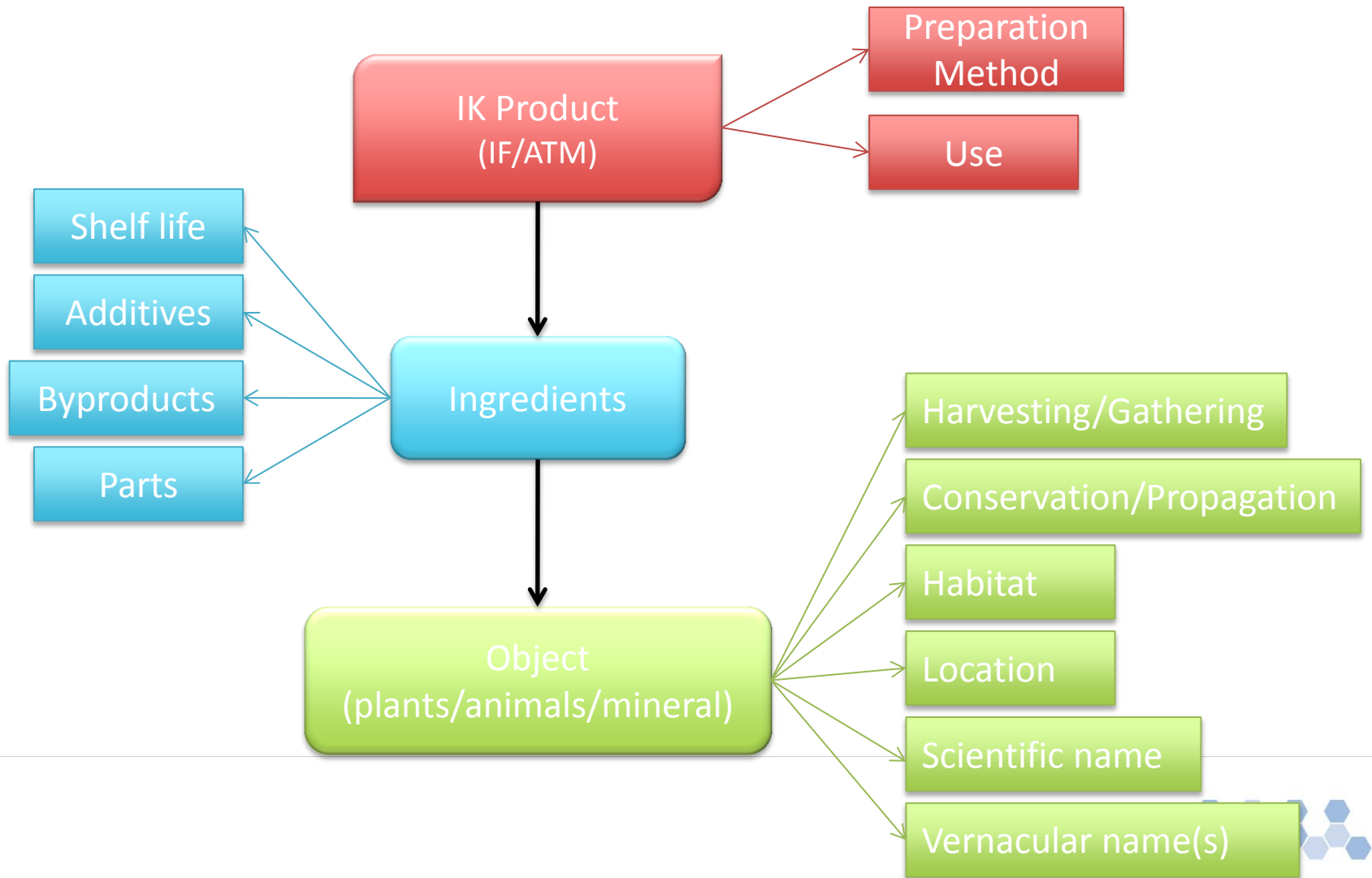


NRS Processes

CONCEPTUAL METADATA

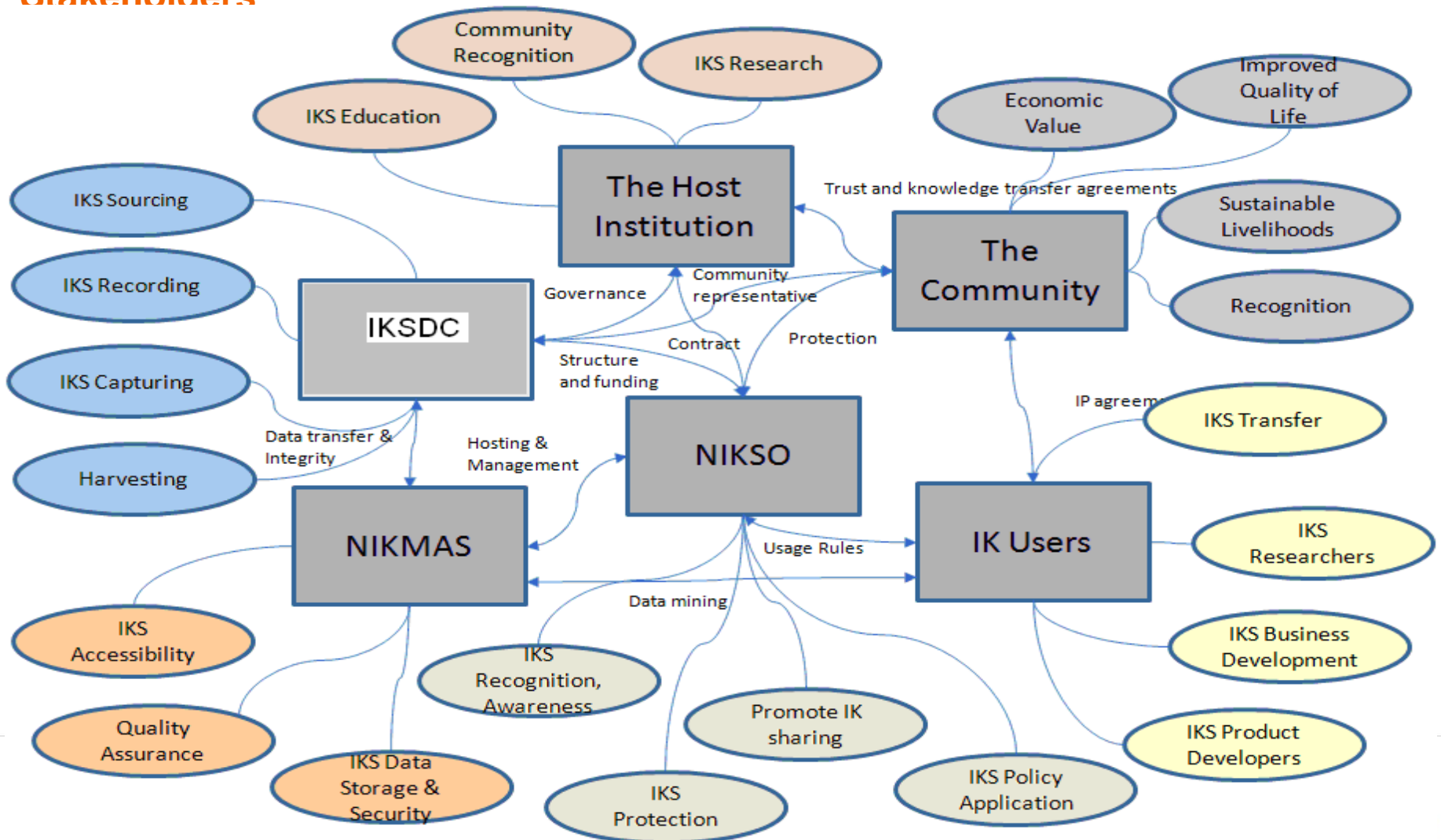


METADATA CONCEPTUAL MODEL

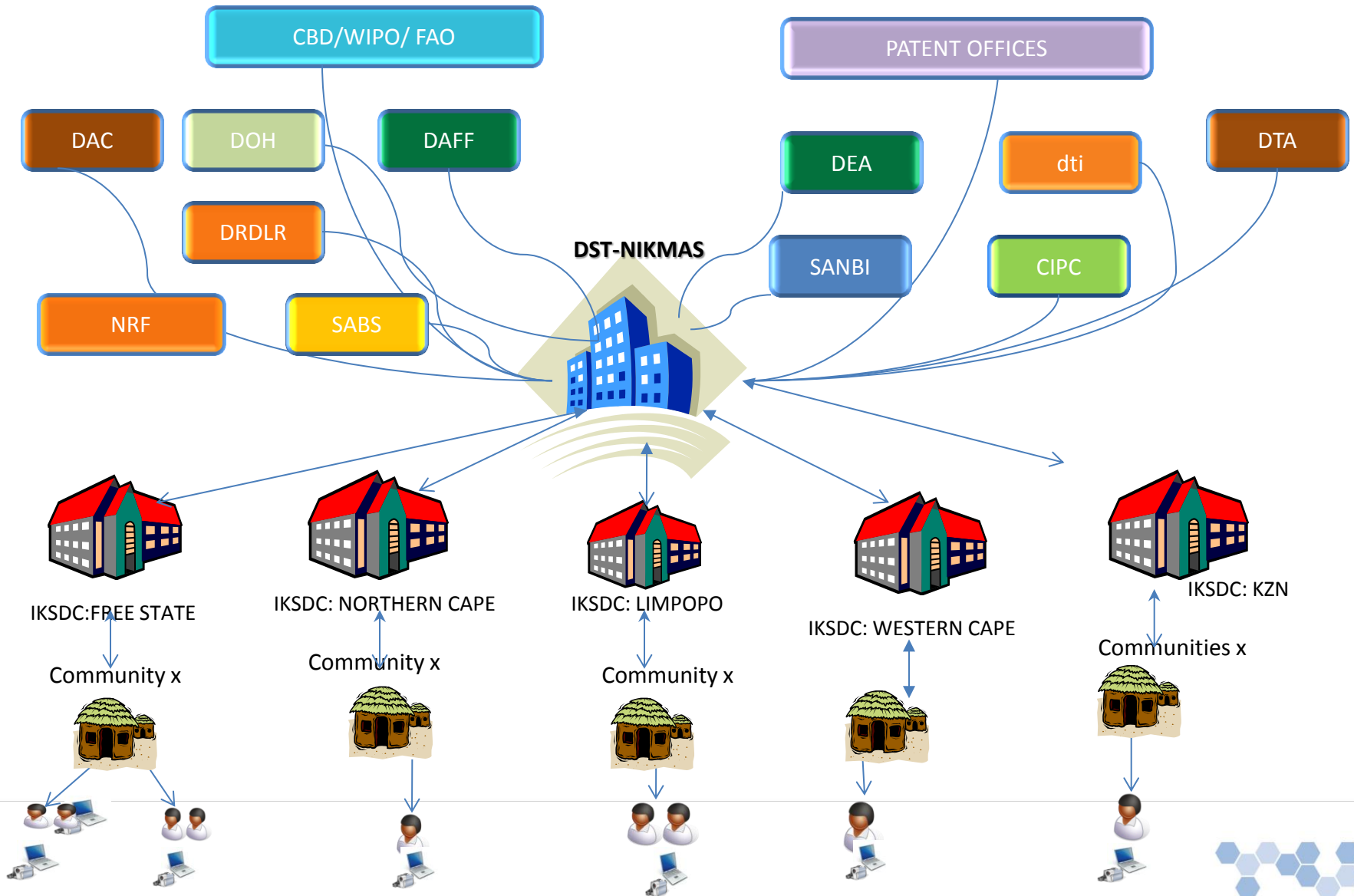


Theme heading insert

Combined impact of relationships among IKSDC Stakeholders



NRS VALUE CHAIN



NRS INTERSECTING PRIOR ART

Aspalathus linearis (Burm. f.) R. Dahlgren

www.tm.ukzn.ac.za/content/aspalathus-linearis-burm-f-rdahlgren

Plants | Treatments | Books | Journal articles | Monographs | Theses | Glossary

African Traditional Medicine

Pharmacopoeia and Resources for Research



Information

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Related journal articles


- Inhibition of tumour promotion in mouse skin by extracts of rooibos (*Aspalathus linearis*) and honeybush (*Cyclopia intermedia*), unique South African herbal teas
- An investigation on the antimutagenic properties of South African herbal teas
- Ex vivo modulation of chemical-induced mutagenesis by subcellular liver fractions

Home | *Aspalathus linearis* (Burm.f.) R.Dahlgren

Aspalathus linearis (Burm.f.) R.Dahlgren

GENERAL DESCRIPTION

Family name: FABACEAE (LEGUMINOSAE)	Synonyms:
Genus name: <i>Aspalathus</i>	
Genus number: 3662000	
Species name: <i>linearis</i>	
Species number: 14600	



***Aspalathus linearis* (Burm.f.) R.Dahlgren**

Search for:
-Any-
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- Plants
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- Monographs
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Useful links

- South African Traditional Medicines Research Group (SATMERG)
- Traditional Healers Organization
- Traditional Health Practitioners Act 2007

www.tm.ukzn.ac.za

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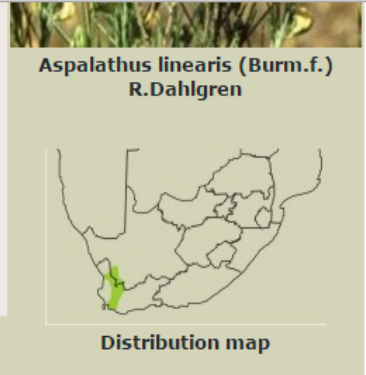
- teas
- Ex vivo modulation of chemical-induced mutagenesis by subcellular liver fractions of rats treated with rooibos (*Aspalathus linearis*) tea, honeybush (*Cyclopia intermedia*) tea, as well as green and black (*Camellia sinensis*) teas
- Effect of Rooibos Tea (*Aspalathus linearis*) on Chick Skeletal Muscle Cell Growth in Culture
- Superoxide anion and α,α -diphenyl- β -picrylhydrazyl radical scavenging capacity of rooibos (*Aspalathus linearis*) aqueous extracts, crude phenolic fractions, tannin and flavonoids
- Can rooibos (*Aspalathus linearis*) tea have an effect on conventional antimicrobial therapies?
- A comparative study on the antimutagenic properties of aqueous extracts of *Aspalathus linearis* (rooibos), different *Cyclopia* spp. (honeybush) and *Camellia sinensis* teas
- Protective Effects of Rooibos (*Aspalathus linearis*) and/or Red Palm

name:

Species number: 14600

Sub species: **SANBI Red list status:** LR-lc - Lower Risk- Least Concern

Variety: **Reference:** SANBI



Botanical description: *Aspalathus linearis* is an erect to spreading, highly variable shrub or shrublet up to 2 m high. Its young branches are often reddish. The leaves are green and needle-like, 15-60 mm long and up to about 1 mm thick. They are without stalks and stipules and may be densely clustered. The yellow flowers, which appear in spring to early summer, are solitary or arranged in dense groups at the tips of branches. The fruit is a small lance-shaped pod usually containing one or two hard seeds.

References:
 1 South African National Biodiversity Institute. (2007). *Aspalathus linearis* (Burm.f.) R. Dahlgren.

Common name/s:	Koopmanstee - Afrikaans Rooibostee - Afrikaans Bush tea - English Mountain tea - English Rooibos tea - English	Prota database record:	<i>Aspalathus linearis</i> (Burm.f.) R.Dahlgren
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Geographical distribution: *Aspalathus linearis* is naturally distributed in the winter rainfall area from about Vanrhynsdorp in the north to the Cape Peninsula and the Betty's Bay area in the south. The area experiences cold wet winters and hot dry summers with about 300-350 mm of rain per annum. Rooibos tea is made from selected forms of the species found mainly on the Cederberg Mountains. It is cultivated on sandy soils in the valleys of the Olifants, Breede and Hex Rivers (Dahlgren 1988).

- South African Traditional Medicines Research Group (SATMERG)
- Traditional Healers Organization
- Traditional Health Practitioners Act 2007

Related monographs

- [Aspalathus linearis](#)

Related theses

- Cancer modulating properties of unique South African herbal teas (rooibos and honeybush) in short term in vitro and in vivo carcinogenesis assays
- Effect of tea and herbal infusions on mammalian reproduction and fertility



ICD-10 CODES

INTERNATIONAL CLASSIFICATION OF DISEASES

Measles, treat - Artemisia afra - Leaves and stem - Infusion

Plant:	Artemisia afra
Indication:	measles, treat
System:	SKIN
Plant part:	leaves and stem
Preparation:	infusion - hot
Administration:	Skin - wash/bath
Harvest:	unspecified
Dose:	unspecified
Note:	2 litres boiling water over 1 cup fresh material, steeped 1 hr, strain
By whom:	Xhosa
Patient:	unspecified
Symptom:	measles
Str code:	A71
Include:	complications of measles
Exclude:	
Criteria:	prodrome with injected conjunctivae, fever, and cough; plus white specks on a red base in the mucous membranes of the cheek (Koplik's spots), or confluent maculopapular eruption spreading over the face and body, or an atypical exanthem in a partially immune person during an epidemic of measles, or serological evidence of acute measles
Consider:	fever A03, viral disease with exanthem A76, rash S07
ICD 10 codes:	B05 - Measles ☑
IPC codes:	A61K 36/28 - Asteraceae or Compositae (Aster or Sunflower family), e.g. chamomile, feverfew, yarrow or echinacea ☑ A61K 36/282 - Artemisia, e.g. wormwood or sagebrush ☑ A61K 127/00 - Containing or obtained from leaves ☑ A61K 135/00 - Containing or obtained from stems, stalks, branches, twigs or shoots ☑
Reference:	Indigenous Healing Plants - pages 226 - 227
Coverage:	South Africa



Artemisia afra

IPC- CODES

INTERNATIONAL PATENT CLASSIFICATION

Measles, treat - Artemisia afra - Leaves and stem - Infusion

Plant:	Artemisia afra
Indication:	measles, treat
System:	SKIN
Plant part:	leaves and stem
Preparation:	infusion - hot
Administration:	Skin - wash/bath
Harvest:	unspecified
Dose:	unspecified
Note:	2 litres boiling water over 1 cup fresh material, steeped 1 hr, strain
By whom:	Xhosa
Patient:	unspecified
Symptom:	measles
Str code:	A71
Include:	complications of measles
Exclude:	
Criteria:	prodrome with injected conjunctivae, fever, and cough; plus white specks on a red base in the mucous membranes of the cheek (Koplik's spots), or confluent maculopapular eruption spreading over the face and body, or an atypical exanthem in a partially immune person during an epidemic of measles, or serological evidence of acute measles
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Reference:	Indigenous Healing Plants - pages 226 - 227
Coverage:	South Africa



Artemisia afra

PUBLISHED RESOURCES

Artemisia afra

Family name:	ASTERACEAE (COMPOSITAE)	Synonym family:	
Genus name:	Artemisia	Synonym genus:	
Genus number:	9358000	Synonym species:	
Species name:	afra	Synonym sub species:	
Species number:	300	Synonym variety:	
Sub species:		Red data list status:	LR-lc - Lower Risk-Least Concern
Variety:		Reference:	Medicinal Plants of South Africa - page 48 Zulu Medicinal Plants: An inventory - page 327 African Herbal Pharmacopoeia - pages 37-42 Artemisia Afra Herba monograph



Artemisia afra

Botanical description Artemisia afra grows in thick, bushy, slightly untidy clumps, usually with tall stems up to 2 m high, but sometimes as low as 0.6 m. The stems are thick and woody at the base, becoming thinner and softer towards the top. Many smaller side branches shoot from the main stems. The stems are ribbed with strong swollen lines that run all the way up. The soft leaves are finely divided, almost fern-like. The upper surface of the leaves is dark green whereas the undersides and the stems are covered with small white hairs, which give the shrub the characteristic overall grey colour. A. afra flowers in late summer, from March to May. The individual creamy yellow flowers are small (3-4 mm in diameter), nodding and crowded at the tips of the branches. Very typical of A. afra is the strong, sticky sweet smell that it exudes when touched or cut.

Common name/s: Wormwood - English
Bitterals - Afrikaans
Wilde-als - Afrikaans
Wildealsem - Afrikaans
Wilde-alsem - Afrikaans
Wilde-alsies - Afrikaans
Umhloniyane - Zulu
Lengana - N. Sotho
Lengana - S. Sotho

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Related monographs

- Artemisia Afra Herba

Related theses

- Acute and chronic toxicity of the flavonoid-containing plant, Artemisia afra in rodents
- The design, preparation and evaluation of Artemisia Afra and placebos in tea bag dosage form suitable for use in clinical trials
- Bioassay-guided fractionation of Artemisia afra for in vitro antimalarial activity against Plasmodium falciparum
- Antimicrobial interactions of Artemisia afra used in African traditional medicine
- Isolation and

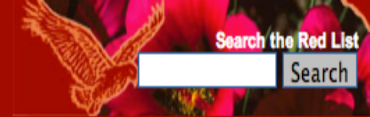


- Related journal articles
- Efficacy of Artemisia afra phytotherapy in experimental tuberculosis
 - The design and evaluation of placebo material for crude herbals: Artemisia afra herb as a model
 - Acute toxicity associated with the use of South African traditional medicinal herbs
 - Variations in the Quality and Yield of the Essential Oil from Artemisia afra Using Different Drying Methods
 - Artemisia Species: From Traditional Medicines to Modern Antimalarials— and Back Again
 - Evaluation of polyphenolic content and antioxidant activity of Artemisia afra Jacq. ex Willd. aqueous extract
 - Protective role of Artemisia afra aqueous extract on tissue antioxidant defense systems in streptozotocin-induced diabetic rats
 - In vitro anthelmintic effects of Artemisia afra and Mentha longifolia

LINKED TO PROTECTED SPECIES SYSTEM



Red List of South African Plants



[Red List statistics](#) [Summary of recent changes](#) [National Red List categories](#) [Assessment methodology](#) [Glossary](#) [Guidelines for EIAs](#)

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Threatened Species Programme



In one of the continent's largest collaborative conservation projects to date, South Africa has become the first megadiverse country to fully assess the status of its entire flora. The Red List of South African Plants Online provides up to date information on the [national conservation status](#) of South Africa's indigenous plants.

Search the Red List of South African Plants

Enter species name or keywords you wish to search for. For example, type 'rooibos' to find species threatened by rooibos farming. For advanced Search functionality use the [POSA](#) website.



Welcome to the Red List of South African plants version 2013.1

One of South Africa's wild yams, the Critically Endangered [Dioscorea strydomiana](#) (pictured left) has been included in the international publication [Priceless or Worthless?](#), featuring 100 of the world's most threatened species. In addition to being threatened by unsustainable medicinal harvesting, a prospecting application for the only site where this plant is known to occur is now under review.

Some good news is that a new population of another of South Africa's most threatened plants, the Critically Endangered [Watsonia humilis](#) (pictured right), previously known only from one small population of about 50 plants, was found during a series of [iSpot Bioblitzes](#) held last year. The plant was found on the farm Romansrivier in the Breede River Valley near Worcester, one of the Western Cape's hottest hotspots of threatened plant species, with 39 threatened species, including seven Critically Endangered species, recorded from this farm. Even more good news is that this site has been secured for conservation through a [Biodiversity Stewardship contract](#), an innovative approach for involving landowners in formal conservation of areas of critical biodiversity importance.



Challenges

- Database Protection Policy- aims to protect unauthorized access to data from commercial exploitation, misappropriation and misrepresentation and to govern the use of IK at institutes;
- Issues around ownership of the national database- governance, management and administration of the national database as it aims to serve a number of government departments. Identify lead departments.
- Standardization of IK information storage and capture onto a common IT infrastructure platform e.g. currently no IK taxonomy exist. Identify lead departments.
- Location of the national database.
- Language and translations- language can serve as a protection mechanism.
- Authentication/verification and validation of IKS.
- Levels of access to the national database- decisions who gets access to the national database and at what level.



Welcome Ronell

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Knowledge Management System

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Advanced IK Search

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indigenous knowledge sharing

ensuring quality knowledge transfer
for our childrens' future

The National Indigenous Knowledge Management System (NIKMAS) supports the processes and structures developed through the National Recordal System (NRS) and is responsible for the recording, storing, management and dissemination of Indigenous Knowledge (IK) and related information. [More ...](#)

Fast Facts



Total 6

News

The National Recordal System (NRS) is launched by the Minister of Science and

Timeline

