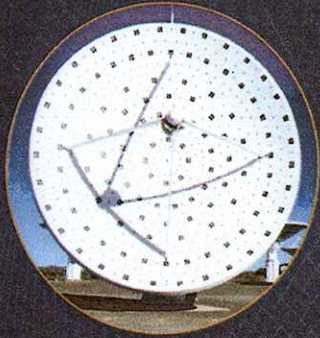


# REPORT ON IKS ACTIVITIES AND PROGRESS REPORT ON SUI GENERIS LEGISLATION DEVELOPMENT



Presentation to the Science and  
Technology Portfolio Committee

13 June 2012



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1306pcsci

# Presentation outline

1. Government Policy Alignment
2. Knowledge Development and Innovation
3. Advocacy and Policy Development
4. Progress Report on Sui Generis legislation
5. Alignment with other DST Programmes



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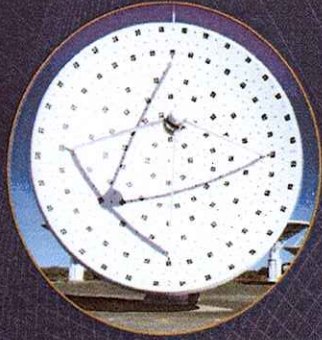
# Government Policy Alignment

- Alignment with NDP: vision 2030
- Government target outcomes
  - A long and healthy life
  - Decent employment
  - Skilled and capable workforce
  - Rural development
  - Protected and enhanced natural resources
  - Create a better South Africa
- Bioprospecting as key technical driver within the Bioeconomy Strategy
- Knowledge economy



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## Directorate: Knowledge Development and Innovation



- Innovation for the Bioeconomy
- Research and Development
- Technology Transfer Activities



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# Bioprospecting and Product Development Platform

## African Traditional Medicines

- Diabetes
- HIV
- TB

## Cosmeceuticals

- Skin-care
- Anti-balding
- Oral-care

## Nutraceuticals

- Traditional foods
- Vitamins
- Food supplements

Gov, Private sector, Science Councils, NGOs, THOs, Knowledge Holders, Academia.



## TECHNICAL DRIVERS

Plant biodiversity

Indigenous knowledge

Biological sciences



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# Cosmeceuticals - Skin-Tone Evener

- Clinical Studies completed on 2 skin-care candidate products
- Submitted commercialisation proposal for 1 product to TIA



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# Cosmeceuticals - Anti-Wrinkle

- Indigenous plant oil for reversing wrinkles formation
- Human trials ongoing

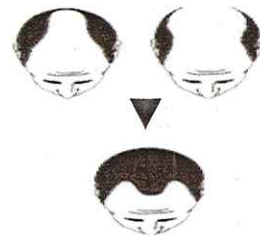
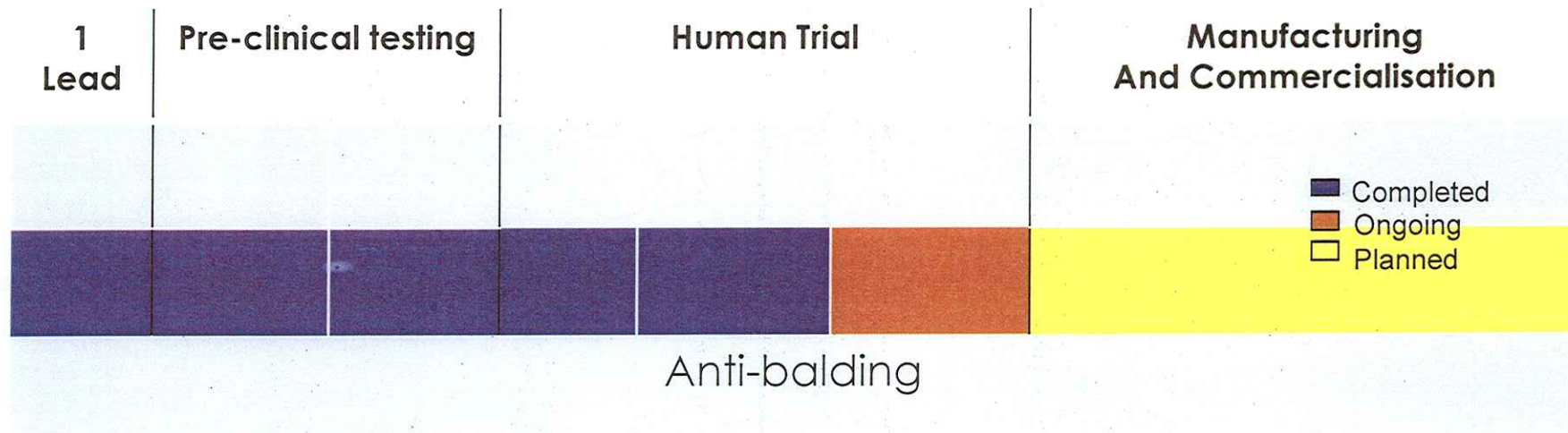


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# Cosmeceuticals - Anti-balding

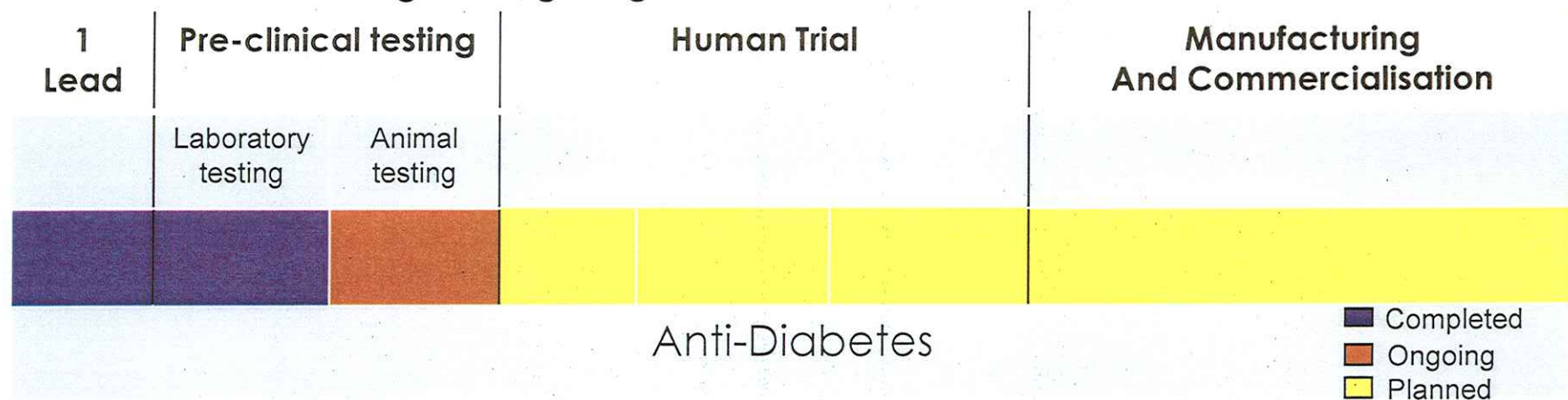
- Indigenous plant based oil for prevention of male-pattern baldness
- Clinical studies ongoing





# African Traditional Medicines - Diabetes

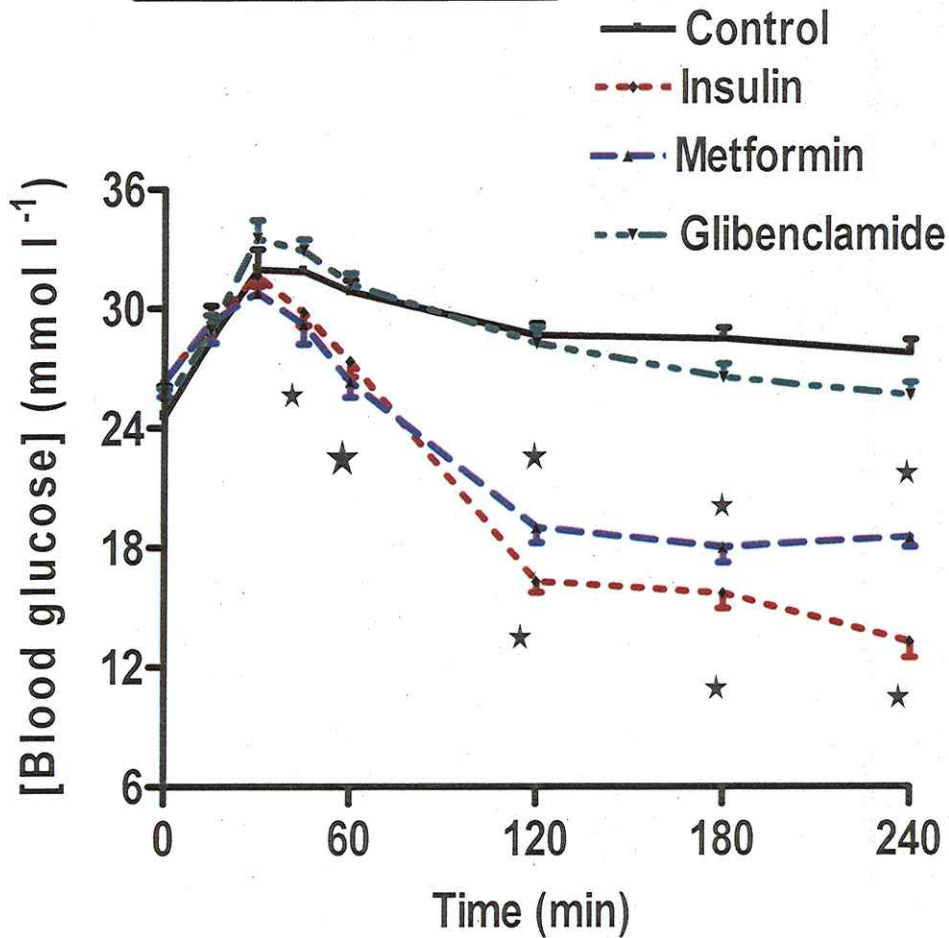
- Indigenous tree based extract for lowering blood sugar levels
- Preclinical laboratory testing and lead optimisation completed
- Animal testing is ongoing



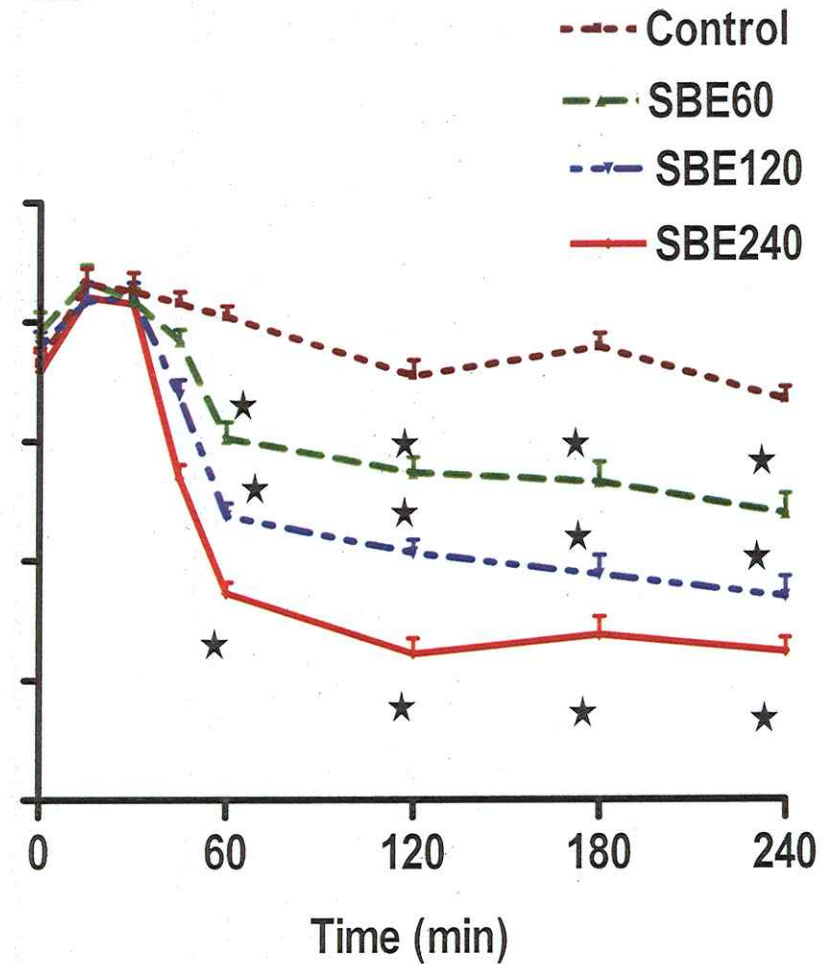
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### C- STZ-DIABETIC



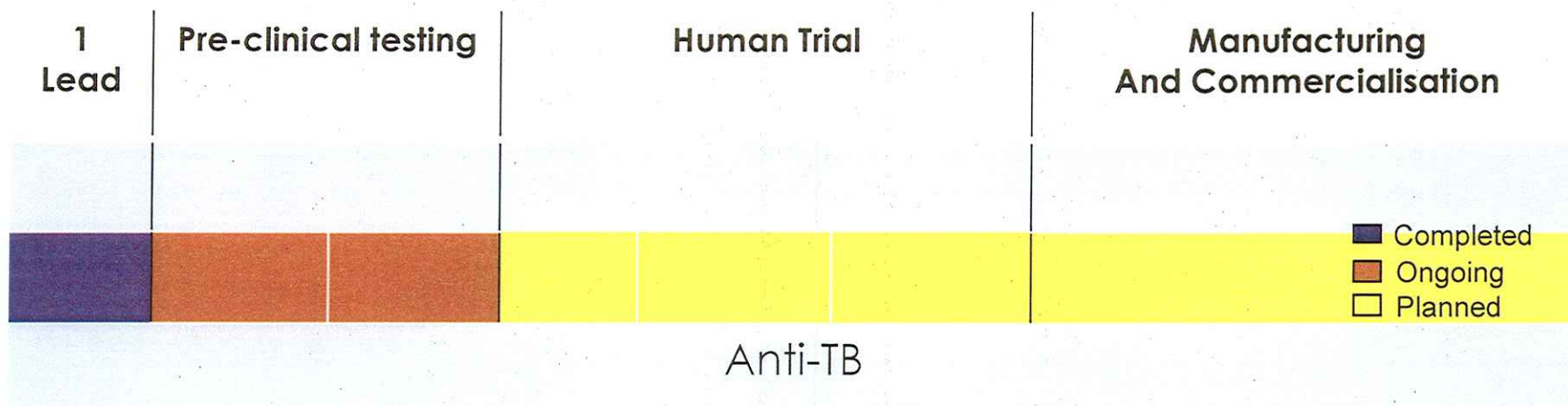
### D- STZ-DIABETIC



# African Traditional Medicines

## - Tuberculosis

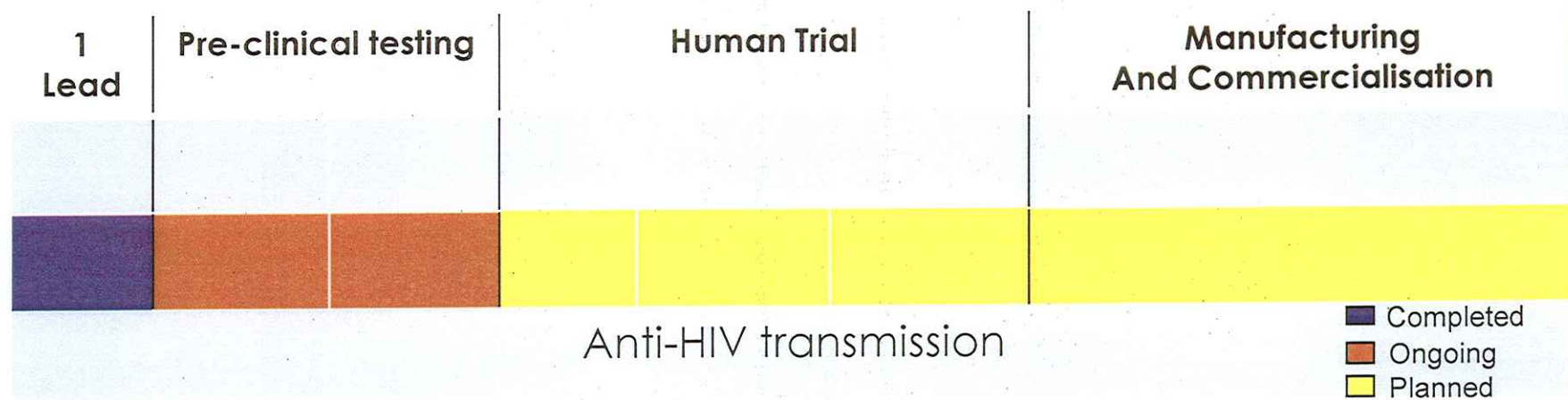
- Indigenous plant that displays strong activity against *M. tuberculosis*
- Ongoing preclinical testing



- Leaf extract more effective than isoniazidine

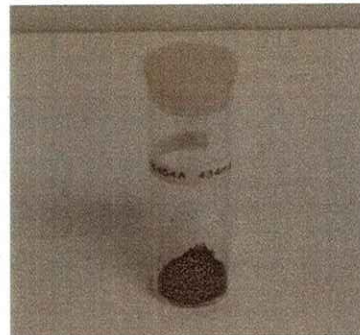
# African Traditional Medicines - HIV Microbicide

- Indigenous knowledge based microbicide that prevents HIV transmission
- Ongoing preclinical testing



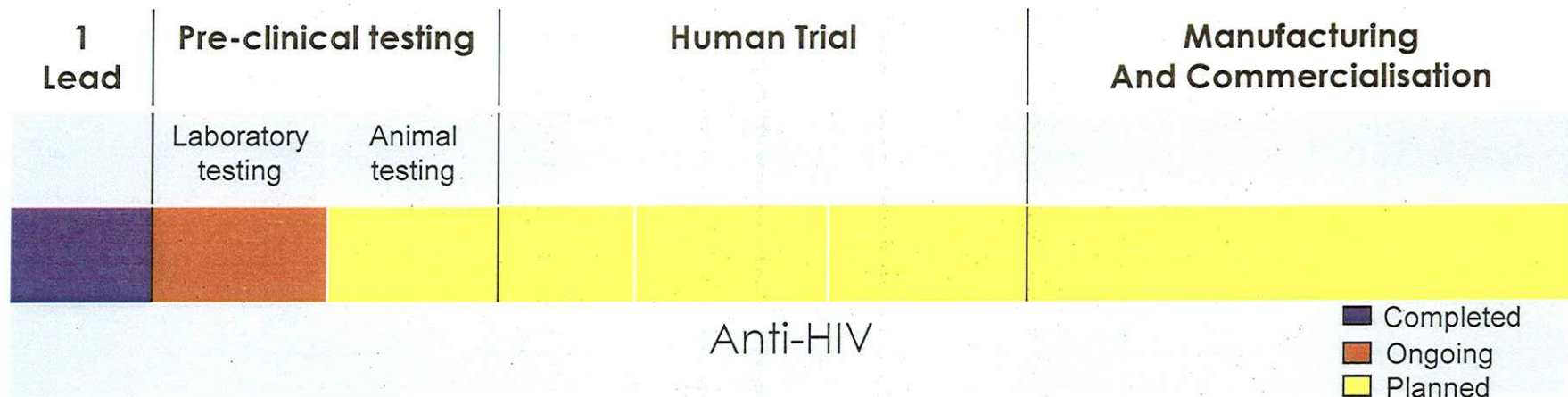
- Prototype formulation: gel and caplet
- Management and preventative

Extracted actives



# African Traditional Medicines - HIV prevention

- A mixture of 3 indigenous plants to prevent HIV infection
- Ongoing preclinical studies



- 2008 patients treated between 2004 and 2010
- 62 patients tested HIV -ve

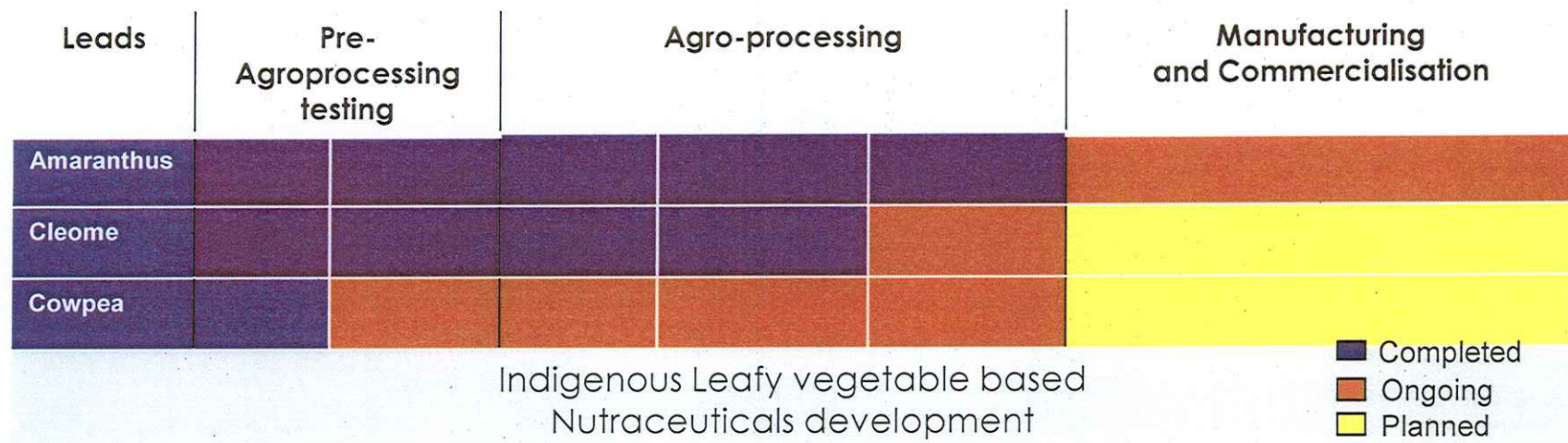


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# Nutraceuticals - Indigenous Leafy Vegetables

- 3 indigenous leafy vegetables under investigations for bioactives, chemistry and agro-processing analyses
- Optimum cultivation and harvesting methods completed on one indigenous leafy vegetable, *Imbuya* (Amaranthus)



## Optimal Cultivation and harvesting

Amaranthus



Cleome (*Ulude*)



Cowpea (*Indumba*)



## Financial Support and Challenges – Bioprospecting Platform

Year	2007/8	2008/9	2009/10	2010/11	2011/12	Total
African Medicines	500 000	500,000	750,000	10,000,000	4,000,000	<b>15,750,000</b>
Cosmeceuticals	250,000	500,000	-	7,000,000	4,000,000	<b>12,750,000</b>
Nutraceuticals	250,000	500,000	250,000	5,000,000	4,000,000	<b>11,000,000</b>
Sub-Total	1,000,000	1,500,000	1,000,000	22,000,000	12,000,000	
<b>GRAND TOTAL OVER 5 FINANCIAL YEARS</b>						<b>39,000,000</b>



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# Looking Ahead

- Alignment with National Development Plan: Vision 2030
- IKS Bioprospecting Platform evolution towards the **South African National Bioprospecting Platform**
- Required DST support – PROJECTIONS (Rm; 6% inflation):

2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
50	50	150	150	200	206	218.4	231.5	245.4	260.1



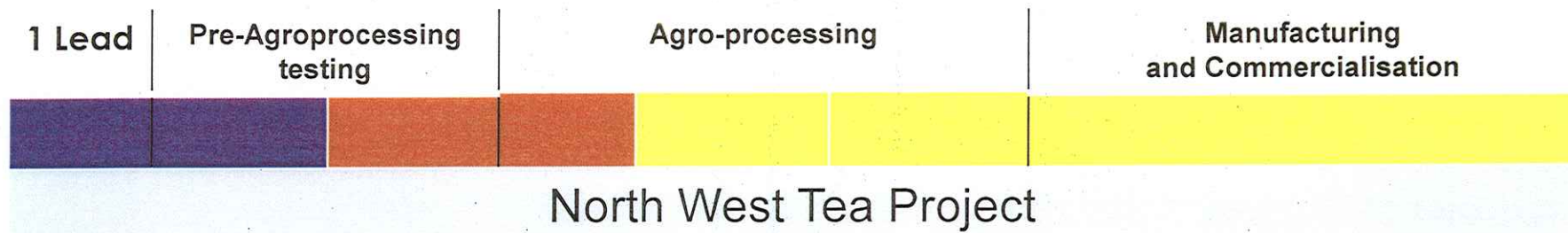
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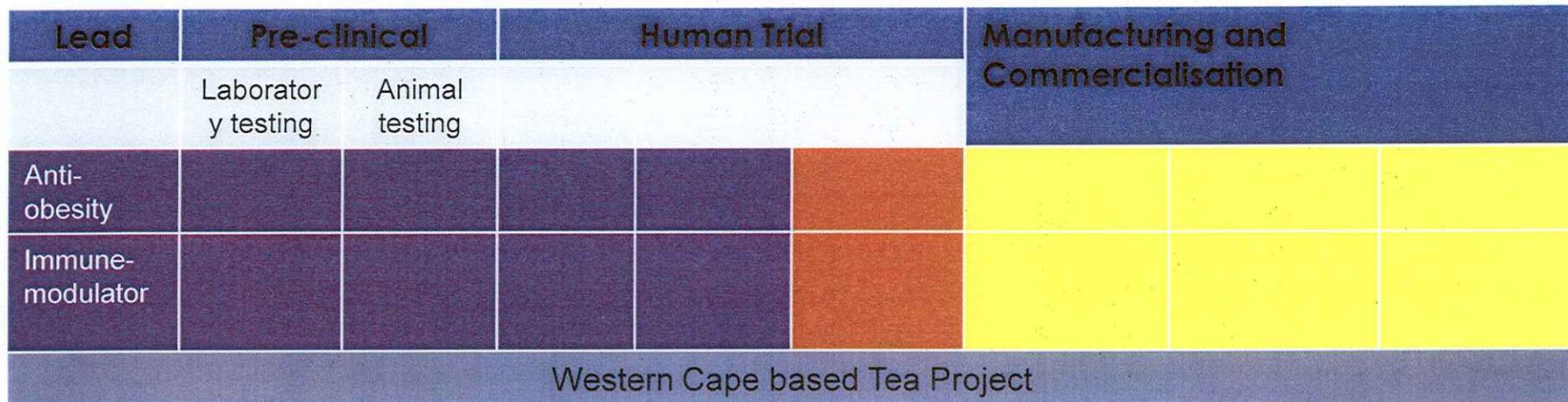


# Knowledge Development [NRF Ring-Fenced Funding] Projects

- Indigenous plant based Tea Project



- Indigenous plant based anti-obesity and Immune-modulation projects



- Completed
- Ongoing
- Planned



# Knowledge Development

- Ring-fenced research fund
  - R10 Million [inadequate to support old and new projects]
  - 19 Projects
  - 52 Post-Graduate Students
- 2 IKS Research Chairs in UKZN and WSU
  - 24 Post-Graduate Students
- IKS COE to be finalised
  - B.IKS approved and to be launched



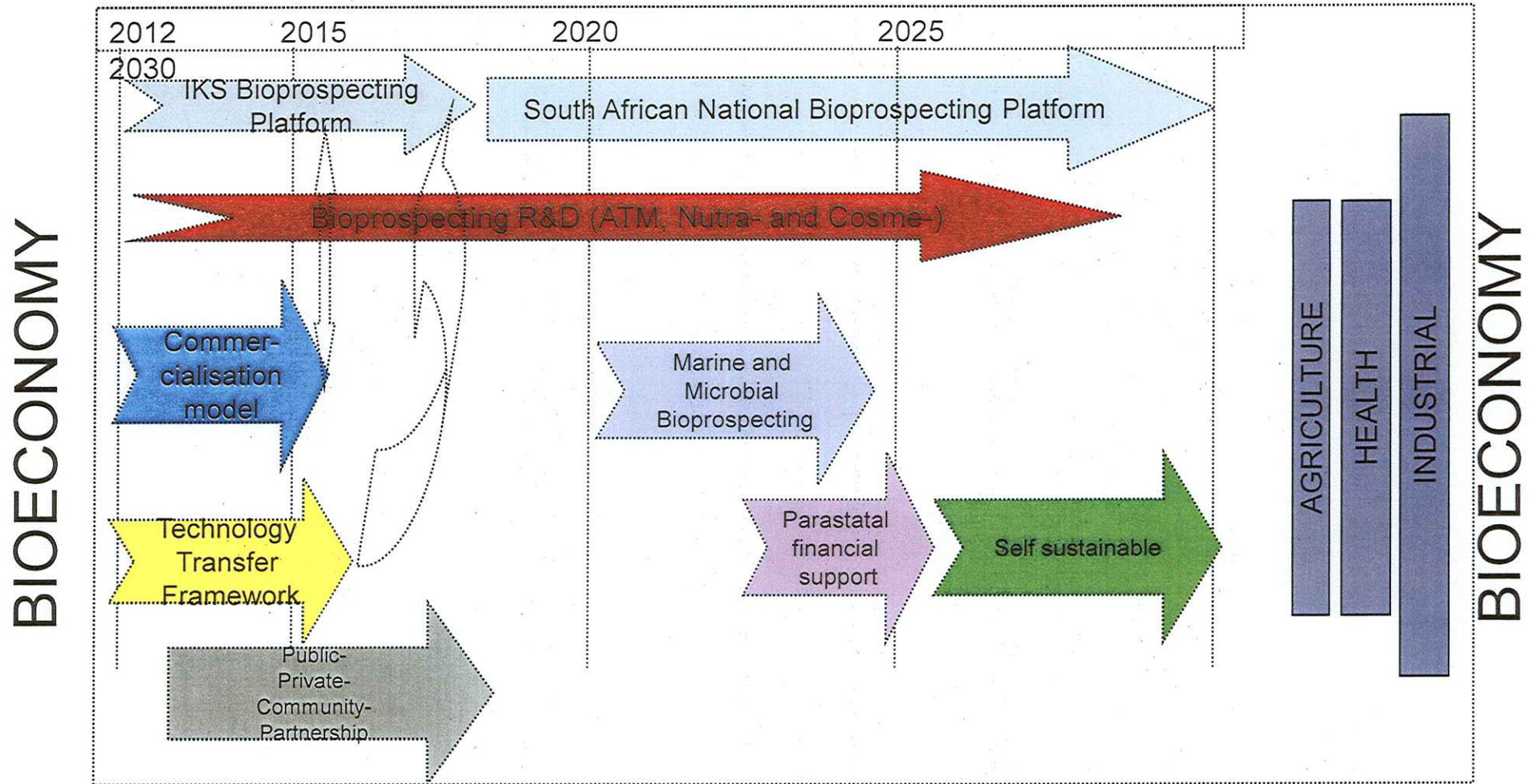
# Technology Transfer Initiative

- Four community based Technology Transfer projects initiated in 2011.
- Technology Transfer conceptual framework development is ongoing.

Moringa Product Development	Infrastructure investments	Skills transferred	Value adding research	Job creation venture model
		27 people from 6 farming communities trained	Plant cultivation and processing	Empowered community farming
Tooseng (Limpopo)	Farming and Agro-processing equipments	4 representatives trained	Nutritional content analyses and nutraceuticals development	Agri-business establishment strategy
Attridgeville (Gauteng)	Farming and Agro-processing equipments	4 representatives trained	Nutritional content analyses and nutraceuticals development	Agri-business establishment strategy
KwaDukuza (KZN)	Farming and Agro-processing equipments	2 representatives trained	Nutritional content analyses and nutraceuticals development	Agri-business establishment strategy

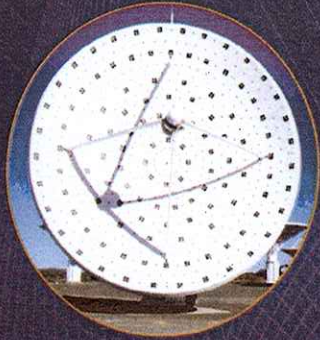


# Towards the SA National Bioprospecting Platform



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# Directorate: Knowledge Management



# National Recordal System Accreditation and Certification

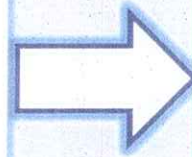


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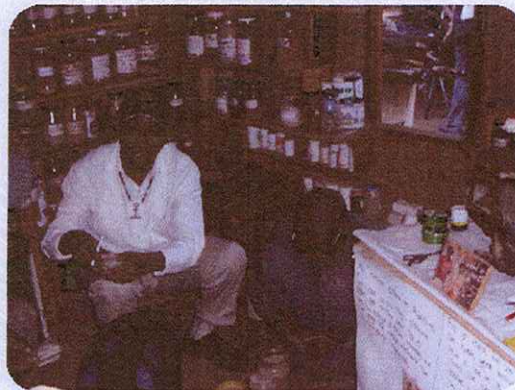
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# National Recordal System

To be the leading Indigenous Knowledge Systems treasure hub for communal socio-economic development



Preservation, protection, promotion of IK and development of indigenous products for communal socio-economic development



# NRS Objectives



Mobilising, aligning and empowering communities and related stakeholders

Building and supporting appropriate networks



Achieving national IP objectives for the appropriate protection of IK

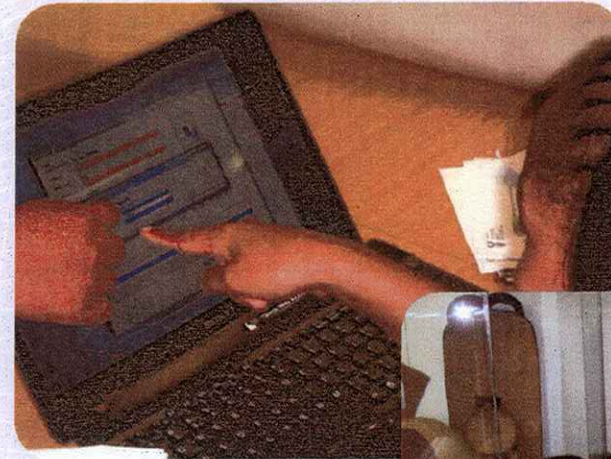


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# NRS Objectives

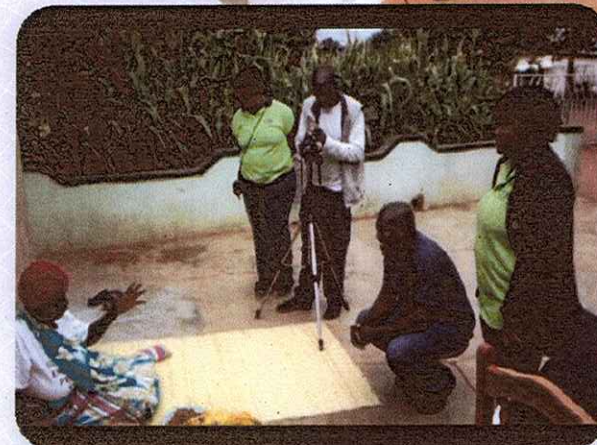
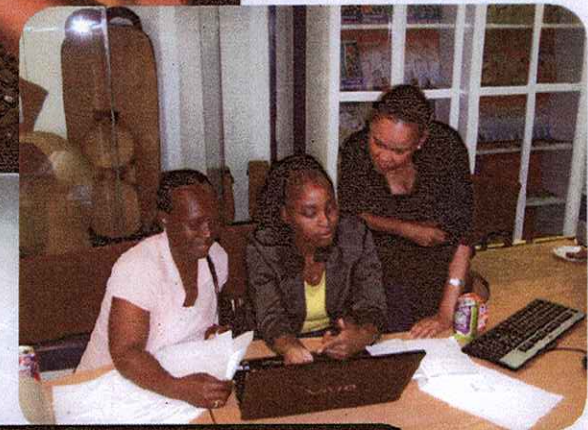
Initiating, enabling and maintaining a secure accessible national repository for the management, dissemination and promotion of IK



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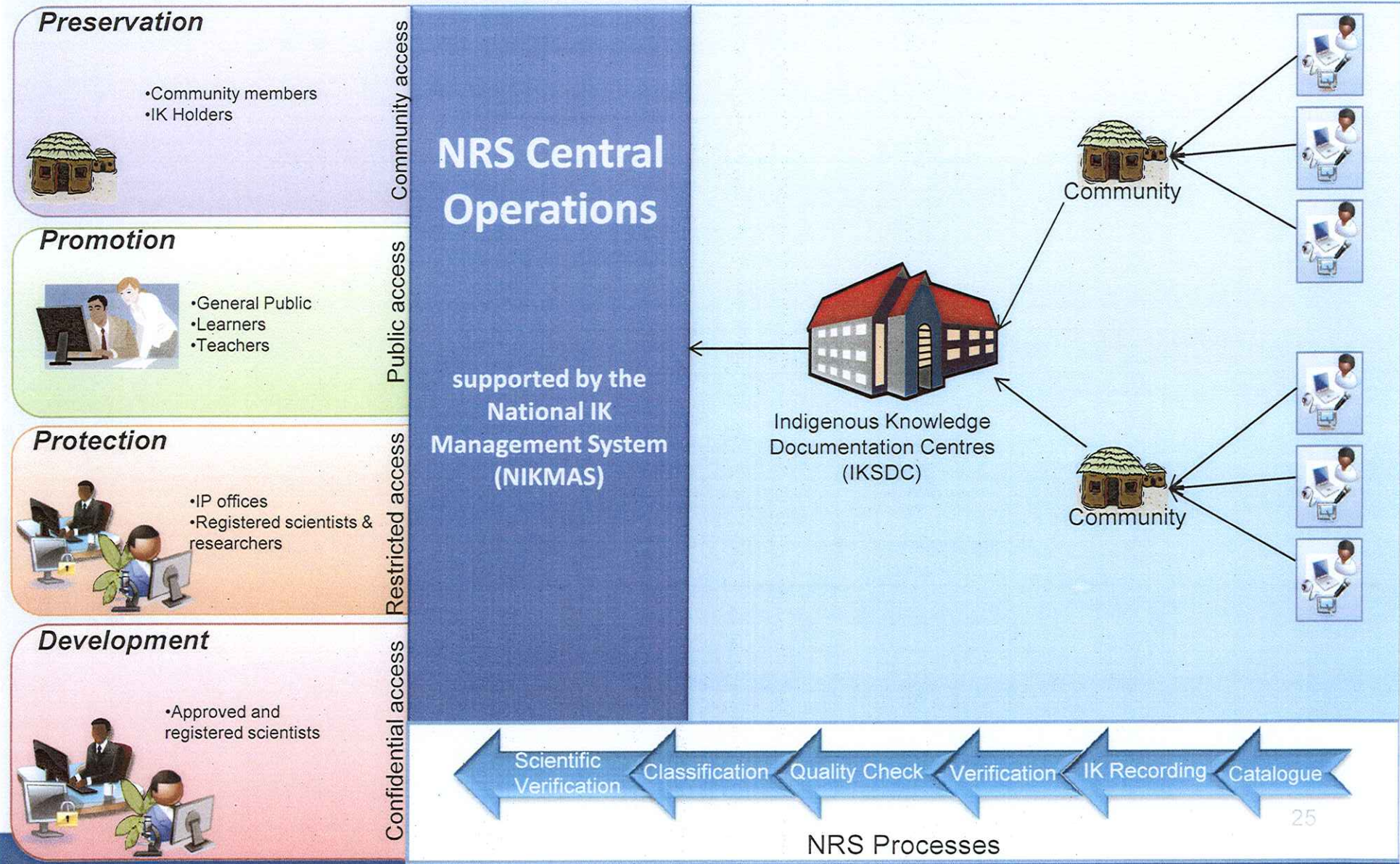
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Enabling the discovery, cataloguing, capturing, validation and use of the national IKS heritage in an appropriate framework

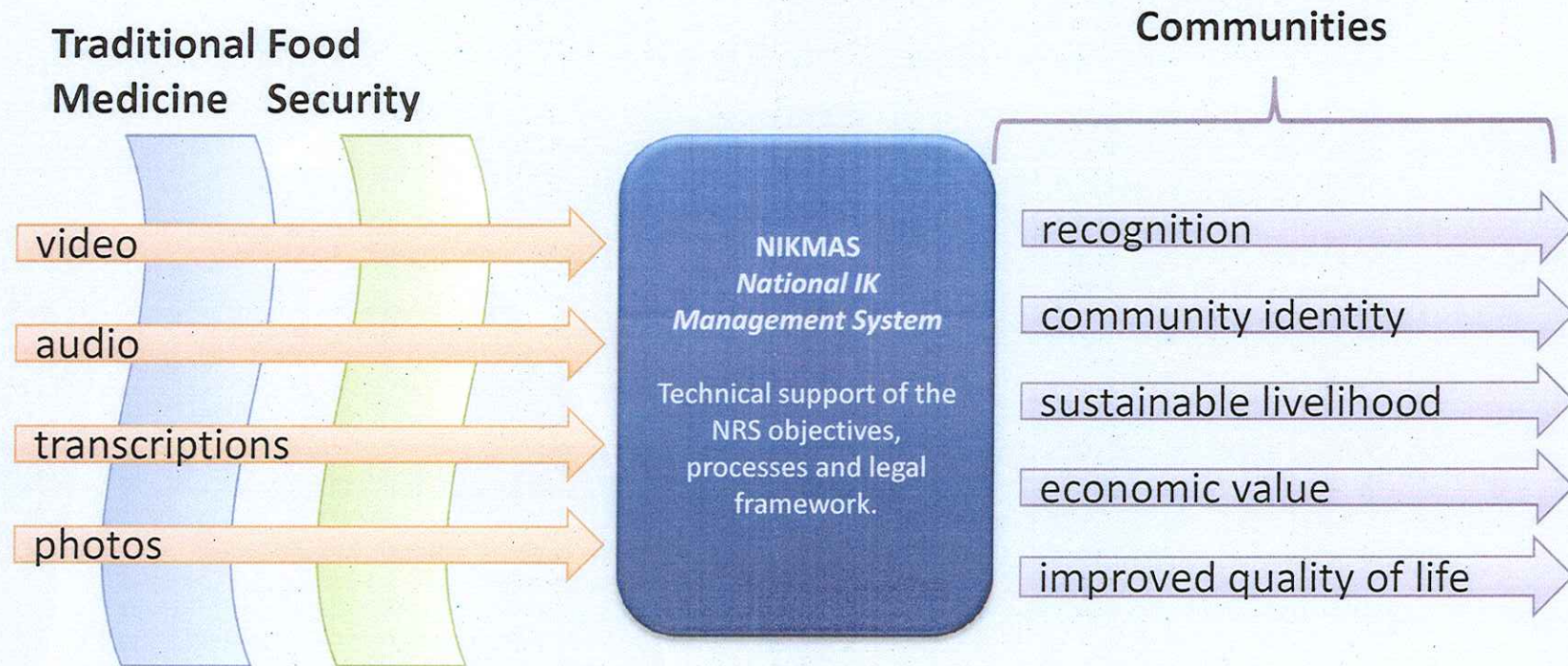




# NRS Overview



# NRS Benefits to Communities



## uMhlabuyalingana Community

### Zululand District Municipality, Kwazulu Natal, South Africa

uMhlabuyalingana Community has currently 911 IK holders, 1181 claims and 7 recorded IK entries.



911 IK holders



[View IK Entries](#)




Matamela Nthambeleni

 Claims: 1

Aluminium Pots

ALUMINIUM POTS Mrs Matamela Sophy Nthambeleni was [More...](#)

 IK Entries: 0



Flora Nthite

 Claims: 1

Traditional Healer

Performs Traditional, African Rituals Diagnoses a [More...](#)

 IK Entries: 0



Muofhe Radzuma

 Claims: 1

Medicinal plants

She has knowledge on plants that heals like Muton [More...](#)

 IK Entries: 0



Poppy Molopyane

 Claims: 1

"Sangoma" Traditional Healer

Use of "ditaola" (bones) and Traditional Herbs Sp [More...](#)

 IK Entries: 0



Anna Pieters

 Claims: 1

Traditional Medicines

Anna believes in using traditional medicine for a [More...](#)

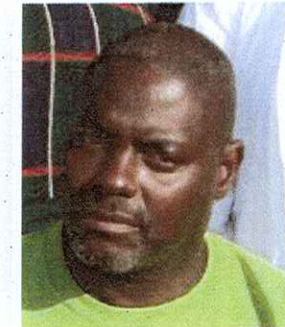
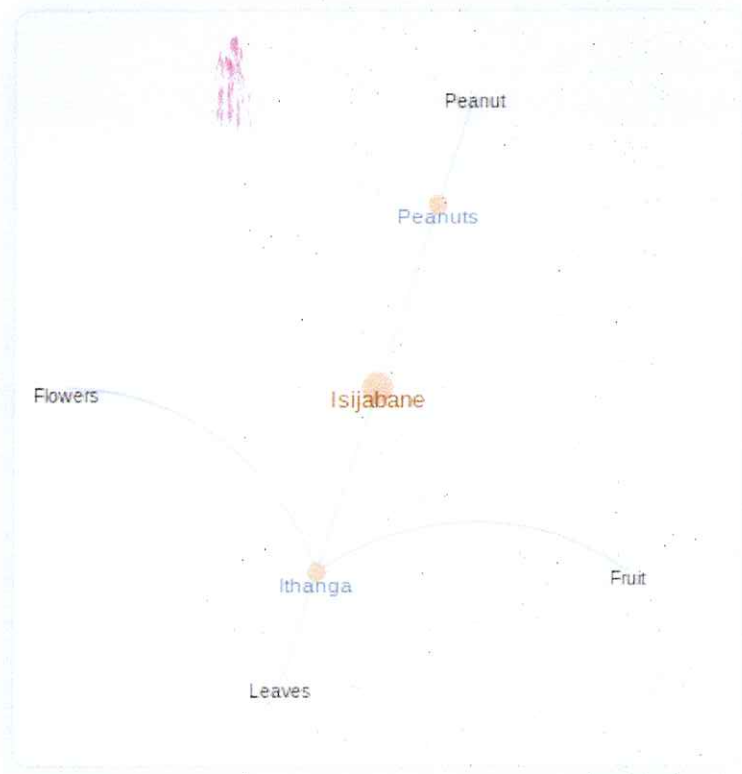
 IK Entries: 0



## Isijabane

### Isijabane

- Ithanga (is used in Isijabane)
- Peanuts (is used in Isijabane)



Andries Dlomo

### Food name: Isijabane

**Preparation method:** Make fire  
Put a pot with clean water on a fire and bring to boil  
Cut the pumpkin fruit into small pieces (2 cm)  
Cut the pumpkin leaves and flowers also into pieces  
Add pumpkin fruit, leaves and flower pieces to the water  
Boil for 3 to 5 minutes  
Grind peanuts with salt until a coarse powder  
Cut tomatoes into pieces  
Add the tomato pieces and peanut to the pot  
Boil until the pumpkin is soft  
Stir the the dish until all the ingredients are mashed and well mixed

**Additives used:** Salt, water, tomatoes

**Rituals during preparation:** None

**Storage of medicine:** -

**Shelf life of medicine:** -

**Consumption description:** Anytime

# OBJECTIVES FOR THE ACCREDITATION AND CERTIFICATION OF INDIGENOUS KNOWLEDGE HOLDERS AND PRACTITIONERS

- to affirm Indigenous Knowledge as a knowledge domain on its own merit;
- to recognise and acknowledge the professional status of the Indigenous Knowledge holders and practitioners;
- to recognise the institutions, governance structures, approaches to quality assurance, rules and codes of practice inherent in this system;
- to provide guidelines for the development of the Accreditation and Certification approach which complies with the SAQA and NQF prescripts; to establish a regulatory body to oversee the operation, functionality, administration and governance of the newly established system for the accreditation and certification of IK holders and practitioners;
- to promote social justice by facilitating access to, as well as mobility, and progression within, education and training career paths; and
- to provide for the protection of the public through the establishment of competency standards and quality assured practices.



## ACHIEVEMENTS

- Two national consultative workshops were held in 2010, and 2011 for the introduction of the concept document and endorsement respectively;
- Two tasks teams were appointed to facilitate the development of the norms and standards for two Communities of Practice knowledge domains and the work was completed by end of March 2012;
- High-level draft pilot norms and standards for African traditional healing and practices and traditional leadership and governance was developed by practitioners and leaders from North West and KwaZulu-Natal provinces;
- The draft Accreditation and Certification Framework and pilot norms and standards documents are prepared for submission for approval by the Minister for public and stakeholder consultation in the second half of the 2012/13 financial year.



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# WAY FORWARD

The Accreditation and Certification System will in future support 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 National Department of Health in complementing the Traditional Health Practitioners Act No. 22 of 2007 as norms and standards will enable the Interim Traditional Health Council to perform their regulatory work effectively within the Traditional Health System.

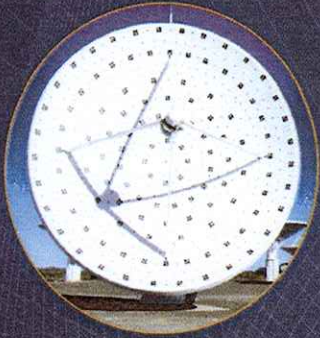
## *Financial Resource Considerations*

- The development of a framework for the accreditation and certification of Indigenous Knowledge holders and practitioners will require financial and human capital. Resources will be used to develop standards and train personnel to execute the responsibilities of the accreditation and certification structures.
- National consultative workshops also need to be conducted to solicit input into the draft documents before the document can be tabled at Cabinet earmarked for 2013/14 as indicated in the operational plan.



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## DIRECTORATE: ADOCCACY AND POLICY DEVELOPMENT

- Advocacy
- Policy Development
- Sui Generis legislation Development





# DST- IKS PUBLIC AWARENESSS ACTIVITIES

- INSTITUTIONAL AND SYSTEMIC PROMOTION
- INTELLECTUAL PROPERTY PROMOTION
- NATURAL JUSTICE BIOCULTURAL PROTOCOLS WORKSHOPS IN COMMUNITIES
- DISTRIBUTION OF MATERIALS PROMOTING THE BACHELOR OF INDIGENOUS KNOWLEDGE SYSTEMS
- RAND EASTER SHOW TO THE GENERAL PUBLIC
- THROUGH ENGAGEMENT WITH COMMUNITIES ON BIOPROSPECTING
- REGIONAL PROMOTION THROUGH BIENNIAL SADC IKS POLICY CONFERENCE
- PARTICIPATION AND HOSTING OF CONFERENCES

# Enabling Policies for the Protection of IKS

## RESEARCH ETHICS

- The research ethics policy is in response to the continued exploitation of communities' indigenous knowledge and resources.
- The IKS research ethics policy reinforce the protection of indigenous knowledge by emphasizing that research involving communities is associated with a process of meaningful engagement and mutual exchange between the researcher(s) and the IK community concerned.
- The principles stipulated in the policy accentuate amongst others the following key elements: - community consultation, informed consent, intellectual property, respect for indigenous/local community's protocol and cultural practices.

## DATABASE POLICY

- The preservation, protection and promotion of Indigenous Knowledge (IK), innovations and practices of local and indigenous communities are of key importance for developing countries specifically in South Africa .
- The overall purpose of the IK database policy is to protect IK resources from unfair commercial exploitation and to ensure recognition of the source of the material is documented when IK resources are used towards new innovation.
- The policy aims to ensure that the IK material is retained, treasured by the appropriate communities and used in accordance with their concerns/wishes; and to generate new knowledge to assist with innovation.



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# Why Sui Generis Legislation – Why Legislation of a Special Kind?

- South Africa's current legislation and its concomitant amendments by the *dti* on intellectual property rights (includes provisions on ownership and authorship, material form, originality, beneficiaries, duration of protection, rights in derivative works) cannot accommodate and adequately protect IK.
- While there is robust consensus that indeed indigenous knowledge is worthy of protection, there appears to be some 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*



# *Using the existing IP rights system*

- In the first option the Department of Trade and Industry (DTI) and the Trade and Industry Portfolio Committee of Parliament were convinced that indigenous knowledge in South Africa is best protected using the existing IP rights regime.
- Both these constituencies have advocated the application of intellectual property rights to indigenous knowledge and have convinced Parliament that indigenous knowledge could be protected by the existing IP system, or by modifying certain aspects of the current forms of intellectual property rights protections.
- The approach adopted by the DTI, and by the Trade and Industry Portfolio Committee, was to take four of the existing Intellectual Property statutes, namely the Copyright, Designs, Performers Protection, and Trade Marks Acts, and to write into them provisions aimed at granting protection to traditional works.
- The National Council of Provinces passed the Intellectual Property Laws Amendment Bill in December 2011, and the Bill has now been sent to the President for assent.



# ***Developing a sui generis system of IP rights***

- The Department of Science and Technology (DST) proceed on the premise that intellectual property rights are just one set of tools in the protection of Indigenous Knowledge Systems.
- DST accept that the mandate of the Department of Trade and Industry (*dti*) is to protect indigenous knowledge through a system of remuneration; however, there are other systems, including recording and documenting, as well as *sui generis* that form part of protection of both the tangible and the intangible.
- A *sui generis* protection of IKS aims to create a special kind of intellectual property rights protection of IKS that takes into consideration both the moral and economic rights of the knowledge holders.
- It creates new rights for knowledge holders that take into consideration the idiosyncrasies of IK.



# 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

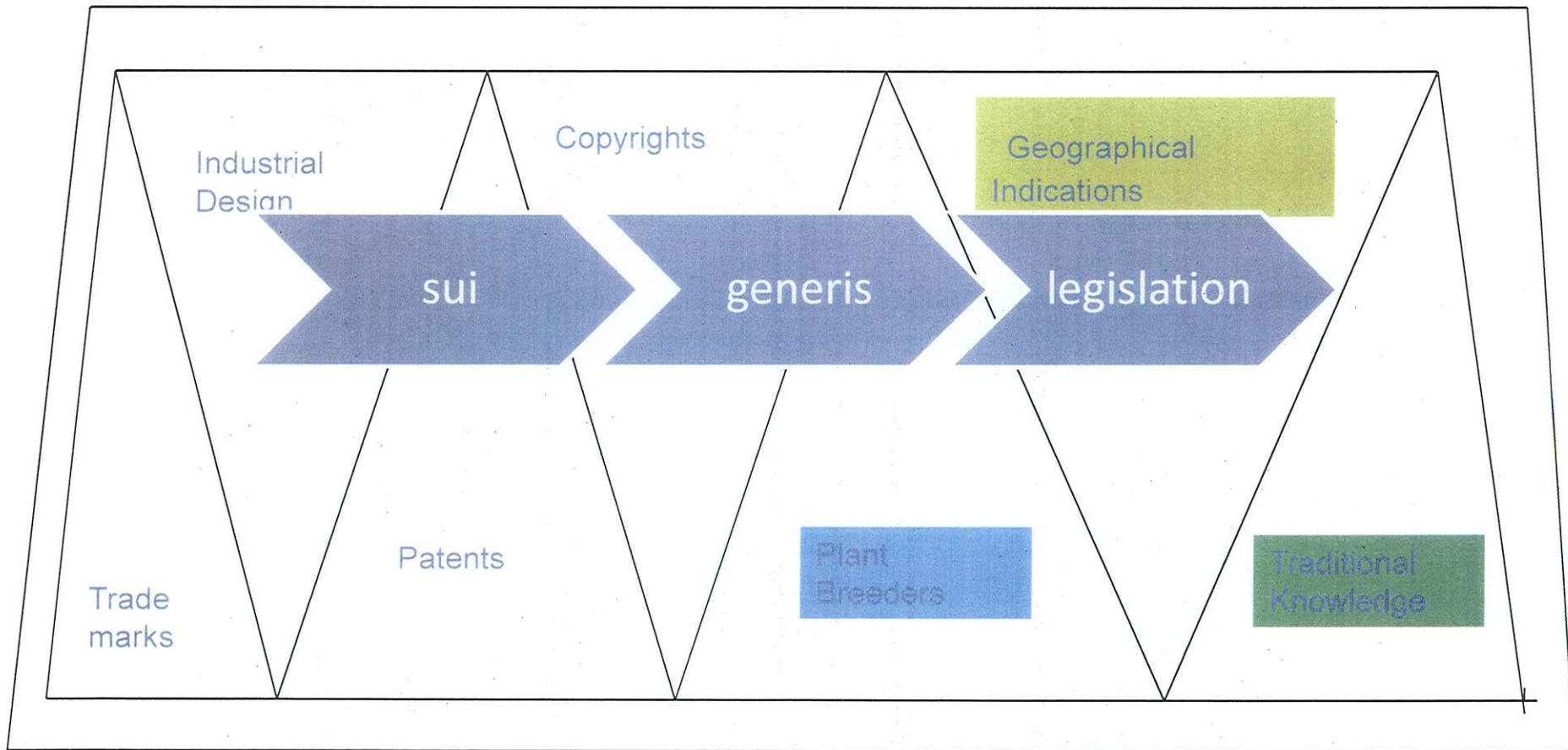
EMBEDDED IN A LOCAL COMMUNITY  
INTERGENERATIONAL CONTEXT  
COLLECTIVE OWNERSHIP



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# Sui generis approach



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# Status of Sui Generis Legislation Development

- The National Indigenous Knowledge Systems Office (NIKSO) and the Legal Unit at the DST formed a task team that produced a first draft of the legislation.
- The broad objectives of the bill are protection, promotion development and management of Indigenous Knowledge Systems in the form of *sui generis* legislation.
- The DST is currently considering this internally, with the inclusion of NIPMO.
- DST and the *dti* Director-Generals to engage on the issue.
- Submission to the Minister for approval for consultation with government departments.

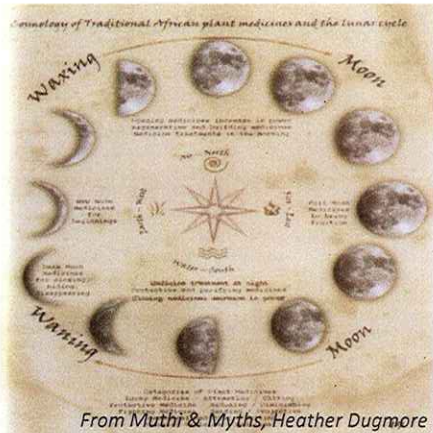


# Alignment with other DST Programmes

Programme / Entity	Activity	Outcomes
Programme 1 Legal Unit	Drafting the sui generis bill	Driving the Bill
Programme 2 (Res, Dev & Innovation) NIPMO Health and Biotechnology	Management of IP Portfolios from IKS Bioeconomy	IP Management Knowledge Exploitation/ innovation
Programme 3 (International Cooperation)	SADC IKS Workshops	Policy development & institutional development
Programme 4 (Human Capital and Knowledge Systems)	Funding of NRS infrastructure Knowledge Generation i.e. SARCHi chairs & CoE	Knowledge Generation, Human Capital and infrastructure
Programme 5 (Socio-Economic Partnerships)	Innovation for poverty alleviation Sustainable livelihoods	Technology transfer Enterprise development



# Thank you for listening



Cosmology

Social ecology



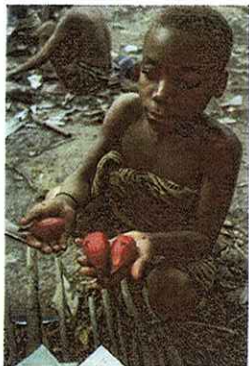
Public health and medicines



Biodiversity

Indigenous technologies

Indigenous food and food technologies



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# Status Page

## MFP



### TASKalfa 500ci

Firmware Version 2H7\_2F00\_013\_006 2012.01.06

11/06/2012 13:33  
[2H7\_1000\_023\_001] [2H7\_1100\_002\_003] [2H7\_7000\_013\_006]

**Paper Settings**  
MP Tray Size/Type: Letter/Plain  
Cassette 1 Size/Type: A4/Plain  
Cassette 2 Size/Type: A4/Plain

**Group Settings**  
None

**Print Settings**  
Copies: 1  
EcoPrint: Disabled  
Default Media Type: None

**Device Common Settings**  
Sleep Timer: 240 Minutes  
Form Feed Time Out: 30 Seconds  
MP Tray Empty: Enabled

**Option Status**  
Document Processor: Installed  
Paper Feeder: Not Installed  
Finisher: 3000-Finisher  
Mail Box: Not Installed  
Job Separator: Installed  
Document Guard(A): Not Installed  
Card Authentication (B): Not Installed  
Internet FAX Kit(A): Not Installed  
Security Kit(E): Not Installed

**Network**  
LAN Interface: 100BASE-TX Full  
Setting: 100BASE-TX Full  
Current: 100BASE-TX Full  
TCP/IP: Enabled  
Status: KM4CA2BC  
Printer Host Name: IPv4  
DHCIPv4 Status: Disabled  
Bonjour Status: Disabled  
IP Address: 10.184.53.40  
Subnet Mask: 255.255.255.192  
Default Gateway: 10.184.53.1  
IPv6: Disabled  
Status: Disabled  
DHCIPv6 Status: Enabled  
RA Status: Enabled  
Manual: Not Defined  
DHCIPv6(Stateful): Not Defined  
RA(Stateless): Not Defined  
LinkLocal: Not Defined  
AppleTalk: Disabled

**JOB Settings**  
JOB Name: doc

**Interface Block**  
USB Host: Unblock  
USB Device: Unblock  
Option I/F: Unblock

**Memory**  
Total Size: 2.0 GB

**Emulation**  
Emulation: KPDL (AUTO)  
AES Mode: On  
Error Print: On  
Error Clear Timer: On  
Font Cache (MAX): 819200 Bytes  
Form Cache (MAX): 400000 Bytes

**Scan Settings**  
File Format: PDF  
Resolution: 300x300dpi  
Quality: Printed Document

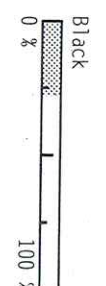
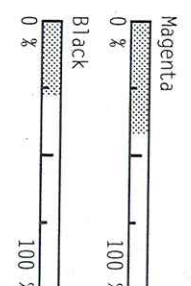
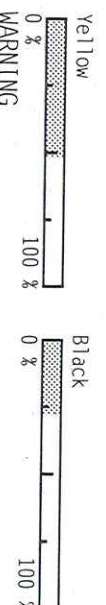
**Copy Settings**  
Quality: Printed Document  
Collate: Enabled

**FAX Settings**  
Local FAX Name: 0000  
Local FAX Number(Port1):  
Local FAX ID:  
FAX Line Setting(Port1):  
RX Setting: Tone(DTMF)  
Auto(Normal)

**Counters**

Counter	Color	Monocolor	B & W	Total
Copier	46793	0	70978	117771
Printer	28849	0	25714	54563
FAX	0	0	0	0
<b>Total</b>	<b>75642</b>	<b>0</b>	<b>96692</b>	<b>172334</b>
Paper Size				
A3	462	0	854	1316
B4	0	0	0	0
A4	74858	0	95726	170584
B5	0	0	0	0
A5	0	0	0	0
Folio	0	0	0	0
Legal	0	0	0	0
Letter	0	0	0	0
Statement	321	0	112	433
Other1	0	0	0	0
Other2	0	0	0	0
Other3	1	0	0	1
Scanned Pages				
Copier			28176	
FAX			26	
Other			6768	
<b>Total</b>			<b>34970</b>	

**Toner Gauges**  
Cyan



**WARNING**  
We recommend the use of our own brand supplies. We will not be liable for any damage caused by the use of third party supplies in this machine.



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