Community involvement in the commercialisation of medicinal plant species

The case studies: *Lippia javanica* and *Elephantorrhiza elephantina*

Dr Sechaba Bareetseng
6 November 2015
To discuss the CSIR case studies based on the commercial cultivation of two South African indigenous plant species, namely:

- *Lippia javanica* by the Hi-Hanyile / Dzundze Community Trust at Giyani, Limpopo Province.
- *Elephantorrhiza elephantina* by the Bathlaro Ba Ga Bareki Community Trust at Abbey, Northern Cape Province.
"The objects of the CSIR are, through directed and particularly multi-disciplinary research and technological innovation, to foster, in the national interest and in fields which in its opinion should receive preference, industrial and scientific development, either by itself or in co-operation with principals from the private or public sectors, and thereby to contribute to the improvement of the quality of life of the people of the Republic, and to perform any other functions that may be assigned to the CSIR by or under this Act."

(Scientific Research Council Act 46 of 1988, amended by Act 71 of 1990)
The primary objective of the CSIR bioprospecting and agro-processing initiative is to add value to South Africa’s biodiversity by identifying, characterising and annotating the CSIR compound library and other external client compounds for applications in herbal products, cosmeceuticals and nutraceuticals.
Collaboration with Knowledge Holders

1. Contact with THPs
2. Sign NDA, MTA CSIR + THPs
3. Plant Identification by SANBI
4. Literature review on plant & use
5. Report discussed with THPs
6. Positive
7. R&D BSA discussions
8. Discovery phase
   - If signed continue
9. Prior informed concern (PIC) THP & other stakeholders

© CSIR 2015
The CSIR Bioprospecting Research Approach

Acquire IK, documentation

Plant supply & collection; Botanical identification

Plant extraction

Bioassaying (toxicity & efficacy)

Support SMMEs and THPs (product development + training)

Formulation studies

Process & Product development

Quality control

© CSIR 2015

PIC, NDA; RCA; MoU; MTA; BSA

CSIR
The *Lippia javanica* case study

South African regulatory authority: Department of Environmental Affairs
Bioprospecting, Access and Benefit Sharing Regulations of 2008

Traditional Healers Committee

- IKS & list of medicinal plant species (Heads of Agreement 1998)
- Royalty payment (Benefit Sharing Agreement 2003)

CSIR Biosciences

- Royalties
- Non exclusive license

Zollhaus International (Pty) Ltd

- Manufacturing capacity
- Purchase agreement for the essential oil

Hi-Hanyile / Dzundze Trust (landowners; labour force)

- Technology transfer
- Business incubation

CSIR Enterprise Creation and Development

- Funding

Department of Science and Technology
The *Elephantorrhiza elephantina* case study

**Suppliers**
- Abbey community
- Farmers

**Stakeholders**
- District Municipality
- Local Municipality
- Bareki Trust
- DEA
- DWS
- DAFF
- DRDLR
- NC DENC
- NC DA
- NC EDT
- SANBI
- TUT
- CSIR

**Production processes**
- Harvesting
- Washing
- Slicing
- Drying
- Milling
- Packaging

**Resources**
- Land and water
- Plants
- Processing facility
- Storage & ablution
- Processing equipment i.e. mechanical slicer & hammer mill
- Labour force

**Products**
- Powder

**Distribution**
- Road

**Market segments**
- Pharmaceutical companies e.g. Afriplex, Parceval, AMKA, etc.
Thank you

Sechaba Bareetseng (sbareetseng@csir.co.za)