

Strengthening rangeland stewardship and restoration through Research, Development and Innovation (RDI) learning platforms

52nd Annual Congress of the Grassland Society of Southern Africa

27 July 2017

Dan'sile Cindi (with Kennedy Nemutamvuni and Nicky McLeod)

d.cindi@sanbi.org.za



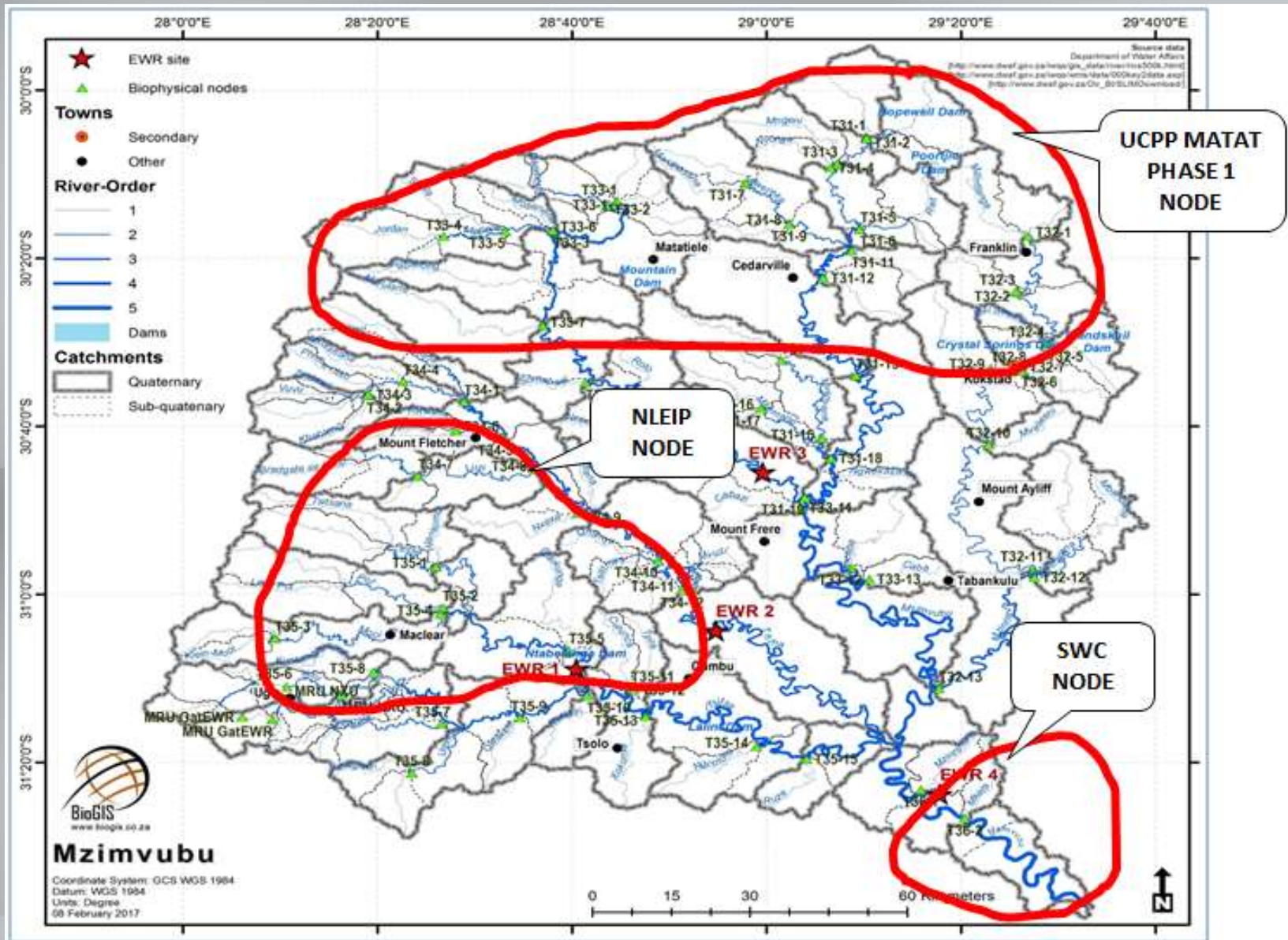
Contents

- Establishment of Catchment-based Research, Development, Innovation (RDI) platforms for ecological infrastructure.
- Challenges of the chosen catchments
- Initiatives and opportunities for learning
- Enabling tools
- Achievements
- Recommendations

RDI learning platforms for ecological infrastructure

- Funded by DST
- Piloted in the Berg and Breede (Western Cape), and uMzimvubu (Eastern Cape)
- Launched February and March 2017.
- Building on the existing initiatives rather than starting a parallel process e.g UCPP & Berg river clearing & rehabilitation forum.









The objectives of RDI platforms

- **Deepen relationships** and sharing within the community of practise in strategic catchments;
- Improve **coordination, sharing and cross-pollination of research efforts**;
- Strategically position, **pitch and package research** in a way that will improve uptake and impact, particularly by bringing practitioners and researchers into contact on a shared platform;
- **Share lessons** between catchments by documenting projects, lessons learned, reflections and sharing these between catchments;
- **Deepen and expand** the active community of practise around EI nationally.

RDI learning platforms for ecological infrastructure

- Often work in the same landscapes but hardly work together
- Integration to encourage strategic uptake, use and implementation of research outcomes



Challenges of the catchment

uMzimvubu catchment

- Poverty and unemployment
- Overall loss of biodiversity in communal rangelands
- Spread of alien invasive species
- Poor land management through eroded governance and history of tenure systems
- Effects of climate change

Challenges of the catchments

Berg & Breede catchment

- **Service delivery** to the farming communities in the rural areas from government was ineffective;
- **Several illegal developments** worsened by the uncoordinated development planning;
- **Surface and ground water resources** are almost fully utilized, degradation of wetlands, flooding events;
- **Alien infestations**

Initiatives and opportunities in support of RDI objectives

Rangeland stewardship & meat naturally initiative (MNI)

Based in the northern Eastern Cape within the upper uMzimvubu river catchment

Driven by Conservation SA in partnership with local NGOs (ERS, INR and LIMA), as a collective under the UCPP

- The basic principle of this initiative is that, with improved market access good rangeland stewardship, healthy rangelands will produce:
 - **Increased quantity** (within carrying capacity) and **quality** of livestock,
 - **Improved returns for rural livelihoods**,
 - Improved basal cover and **effective catchment functions**
 - **Increased grassland biodiversity**, with **improved** ecosystem services



Info sharing

livinglands
Sustainable working on living landscapes



RESEARCH, DEVELOPMENT AND
INNOVATION PLATFORM
FOR ECOLOGICAL INFRASTRUCTURE IN
THE BERG AND BREEDE CATCHMENTS

Newsflash March 2017

There has been a multitude of engagement, connection and learning around the theme of ecological infrastructure in the last few months. Here is a review of these exciting activities;

November 2016

LANDSCAPE LAB



Cross-pollination and co-learning between stakeholders of the Berg and Gerste river.

Landscape Lab Video Link: <https://www.youtube.com/watch?v=uhW25GmIQs8&feature=share>

December 2016

RIPARIAN REHABILITATION FIELDTRIP



Amazing results after 3 years of riparian zone rehabilitation in Tuikagh by Intaba Environmental

Twitter link: https://twitter.com/Living_Lands/status/806687587455985904



UCPP UPDATE NEWSFLASH #1: MARCH 2017 16th QUARTERLY SPECIAL SESSION

A week-long gathering of partners, who have signed a basic Memorandum of Understanding to form the UMZIMVUBU CATCHMENT PARTNERSHIP PROGRAMME (UCPP), was held in Matatiele from 6 to 10 March, as part of the 16th quarterly gathering of this voluntary catchment alliance. The MoU was signed by over 30 partners in early 2013. Highlights from this week's gathering include:

- **Strategic expansion into phase 2:** both the UCPP strategic planning, and the SANBI/DST RDI platform (research, development and innovation) sessions, identified that the alliance needs to upscale towards the original wider 20 year vision, i.e. moving from phase 1 to phase 2. Participants agreed that UCPP should function as an 'umbrella catchment body' for the entire basin, supporting current geographic nodes of NLEIP, SIAC and the Matatiele-based UCPP 'chapter', where research and communities of practice already exist. The current research activities within these nodes should continue: the RDI platform will facilitate 'inter-nodal' learning and exchanges across the wider catchment, as well as sharing with other catchments like UEIP and Berg 'n Breede. All agreed that this will add tremendous value to the current but geographically constrained 'nodal' activities. The two stronger 'chapters' at Matatiele and Ntabelanga should provide the core niches for special working groups to explore successful and new methodologies and technical exchanges.
- Sinegugu Zukulu remains as the Chairperson (a minor mutiny ensured he can't step down!) and he will be supported by three deputies, namely Ms. Baetsiana Khatshi (ANOM), Mr. Dean Ricketts (DEDEAT) and Ms. Nolufele Nonjoke-Dlanjwa (SaveACT), with ER5 as the secretariat, with WWF Nedbank Green Trust support for the next 2,5 years. This system will ensure continuity, optimising Sinegugu's irreplaceable skills and respected reputation across the catchment.
- Learning exchanges will include CMP development, livelihoods and rangeland restoration, sediment monitoring, research programme development, biodiversity database development for the wider catchment and an annual UMzimvubu catchment CUPs showcase fair (see Newsflash #4).
- **Meat Naturally Auctions around Matatiele:**
 - 29 March at Mzongwana
 - 19 April at Mahube
 - 17 May at Ongelukznok
- **UMzimvubu classification:** remember to submit comments on sub-quaternary catchment issues as soon as possible to patsy@itsnet.co.za. Spreadsheets and maps can be found at <https://umzimvubu.org/projects/water/>. PLEASE COMMENT BEFORE 31 March 2017.
- **ESG Comparative analysis** – excellent workshop on 9th and 10th with Zuncel ecological & Environmental Services: an outline of the tool is posted at <https://umzimvubu.org/training/>. Next session will be on Friday 21st April in Matatiele.

Next quarterly meeting on 21 June 2017 at Scientific Roets AgriSETA hub near Kokstad

Examples of Enabling tools



'Landscapes and Livelihoods'

A COMMUNAL RANGELAND STEWARDSHIP MODEL

Part of the
'Meat Naturally Initiative'

MODEL SUMMARY AND TOOLKIT GUIDE

A COLLECTIVE PRODUCT OF THE



Grazing and Burning Guidelines

Managing Grasslands for Biodiversity and Livestock Production

Integrating grazing and burning best-practice principles in grasslands helps secure

livelihoods, farm-scale livestock production, biodiversity and ecological infrastructure.

WHY IS THIS IMPORTANT?

Fire and grazing management determine whether grassland ecosystems retain or lose their livestock productivity, biodiversity and ecological values.

The Grazing and Burning Guidelines provide best-practice principles that promote good grassland management, sensitive to the type of grassland and prevailing environmental conditions.

SOME EASY-DO'S AND DON'TS

GRAZING

- ✓ Plan grazing so that the number of animals does not exceed the carrying capacity of the land and grazing values.
- ✓ Plan all cattle for a full growing season, without any long periods.
- ✗ Never let livestock graze beyond the carrying capacity of an area.
- ✗ Don't graze stream banks during wet periods.
- ✗ Don't allow cattle to form deep paths, especially into wetlands or rivers.
- ✗ Don't allow over- or under-grazing, especially from areas of good natural grassland.

BURNING

- ✓ Flexibility: only burn a zone when there is good reason to do so, such as fire production, firewood or fuel control.
- ✓ Variety: increase the variety of fuels on the farm by having zones of different weather conditions and at different times.
- ✓ Frequency
- ✗ Don't burn in the dry.
- ✗ Don't burn in wetlands.
- ✗ Don't burn in riparian areas.



This diagram shows how livestock productivity, biodiversity and ecological infrastructure change with management.

For more information, read the Grazing and Burning Guidelines on the South African National Biodiversity Institute's Resources page at www.sanbi.org.za



Grazing and Burning Guidelines

Managing Grasslands for Biodiversity and Livestock Production



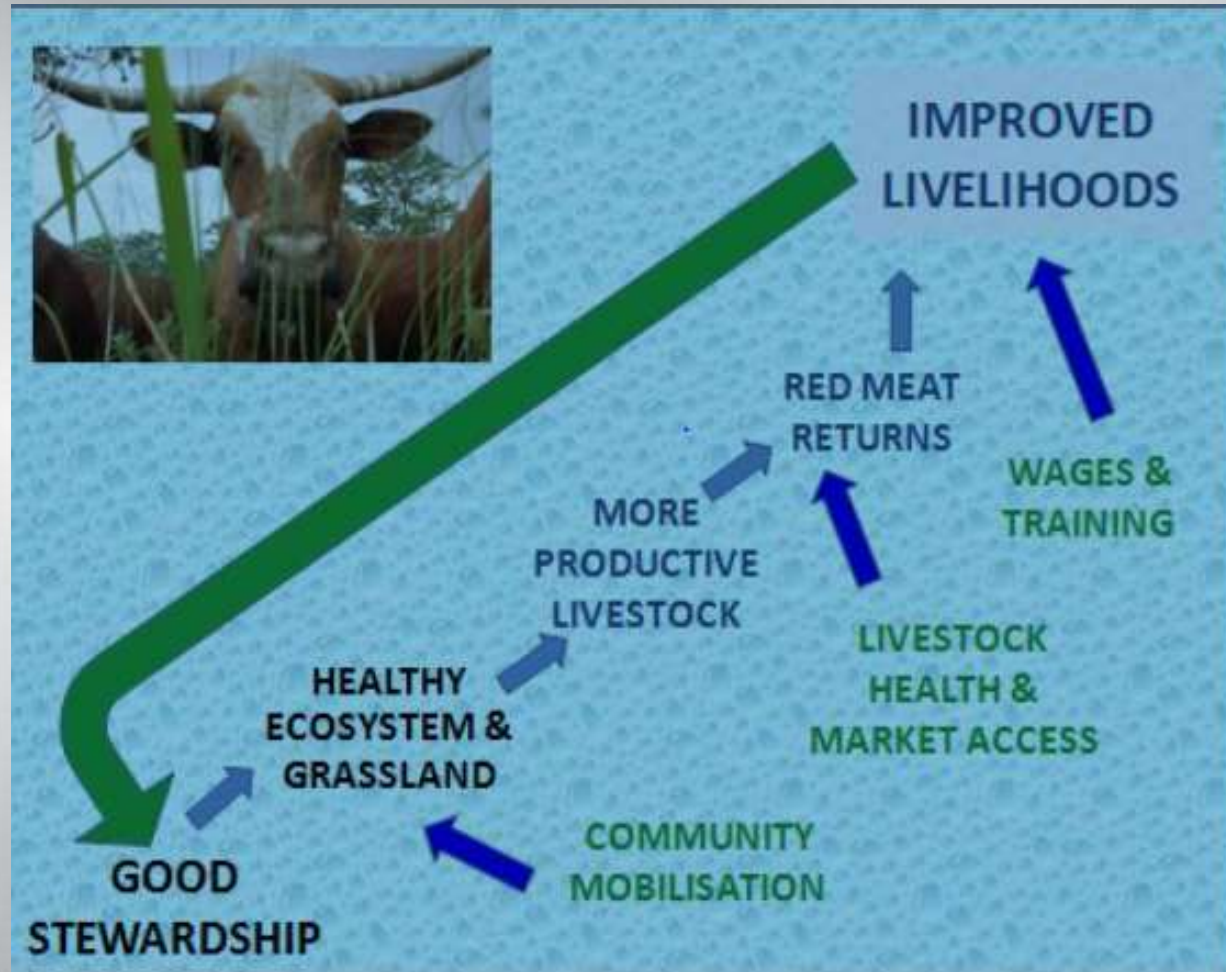
Grassland Ecosystem Guidelines

Landscape interpretation for planners and managers



RDI platform learning exchange

- Learning exchange, showcasing the pilot model, through interactive presentations and participation in a mobile livestock auction.
- Focuses on sharing experiences and innovative ideas for potential use of the model in other communal landscapes and rangelands.



Achievements of this initiative...

- **Change** in the mind-set of land users, stock owners and governance authorities
- **Improved rangelands** with enough grazing for livestock
- **Improved livestock quality**
- **Improved water quality** in the river streams through improved effectiveness of rainfall from increased basal cover and decreased alien plant cover
- **Market sales** through community auctions of more than R1.5 million
- **Community cohesion**
- **Created jobs** through restoration programmes and Eco rangers

Future plans...

- **Continue learning exchanges** between related catchment initiatives, regarding Rangeland Stewardship and Meat Naturally approach (**sustainable land-use management**)
- **Develop and share policy briefs** and obtain buy-in from the national political principals
- **Build wider & stronger partnerships** between civil society and state agencies
- **Increase access to the domestic livestock market** for rural farmers, and build consumer demand for sustainable veld raised red meat products
- **Mobilisation of resources** for continuity and growth across the catchment
- (RPF 14-17 Aug'17)



SANBI  **science & technology**  **environmental affairs**  **uMzimvu Catchment** 

uMZIMVUBU CATCHMENT ECOLOGICAL INFRASTRUCTURE RESEARCH DEVELOPMENT & INNOVATION PLATFORM

POLICY BRIEF 1:

RANGELAND STEWARDSHIP IN COMMUNAL LANDSCAPES - A SOCIAL AND BIODIVERSITY WIN-WIN

SUMMARY

Communities residing in many of the rural areas across South Africa face livelihood challenges through lack of economic opportunity. Almost 50% of the national large livestock herd is also found in these communal tenure areas, but only 5% make it to the formal domestic beef market, indicating an enterprise opportunity. An innovative model in the Eastern Cape is helping to link these communal farmers with equitable markets, through a system of mobile village markets, simultaneously promoting healthy well-managed rangelands for production of good strategic water source areas.

livestock production as an outcome, we
duction and improved governance in



Recommendations

- Both the UCPP strategic planning, and the RDI platform sessions, identified that the alliance needs to upscale towards the original wider 20 year UCPP vision,
- Participants agreed that UCPP should function as an ‘umbrella catchment body’ for the entire basin, where research and communities of practise already exist.
- RDI platform will facilitate ‘inter-nodal’ learning and exchanges across the wider catchment, as well as sharing with other catchments like UEIP and Berg ‘n Breede.

Well managed ecological infrastructure (Rangelands)



The partners

