

Participatory Mapping for the Restoration and SLM Plan for T35A-E

Workshop Report: 1 Tribal Area: Batlokoa

NLEIP

Ntabelanga and Lalini Ecological Infrastructure Project

Implemented by: The Department of Environmental Affairs:
Chief Directorate Natural Resource Management in association with Rhodes University.

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RHODES UNIVERSITY

Where leaders learn



NLEIP PARTICIPATORY MAPPING FOR THE RESTORATION AND SLM PLAN FOR T35A-E

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PHOTOGRAPH CREDITS

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Figure 3: Nosiseko Mtati

Figure 5: Nosiseko Mtati

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LIST OF ACRONYMS

CoP:	Community of Practice
DEA:	Department of Environmental Affairs
DWS:	Department of Water and Sanitation
GIS:	Geographical Information System
Ha:	Hectare
NLEIP:	Ntabelanga Lalini Ecological Infrastructure Project
nrm:	Natural resource management
NRM:	Chief Directorate Natural Resource Management
SIP:	Strategic Integrated Project
SLM:	Sustainable land management
RU:	Rhodes University
UWP:	uMzimvubu Water Project

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PARTICIPATORY MAPPING FOR THE RESTORATION AND SLM PLAN FOR T35A-E

WORKSHOP REPORT 1: BATLOKOA TRIBAL AREA

INTRODUCTION

The Ntabelanga Lalini Ecological Infrastructure Project (NLEIP) was born of the need to support the uMzimvubu Water Project (UWP) in the Eastern Cape Province, South Africa. The catchment area extends across three district municipalities (Joe Gqabi, OR Tambo and Alfred Nzo) in the former northern Transkei communal areas, as well as commercial farming and forestry areas (Figure 1). The Department of Water and Sanitation (DWS) through the UWP intends to construct two dams, namely the Ntabelanga and Lalini dam on the Tstitsa River, a main tributary to the uMzimvubu River. The dams are expected to irrigate 2 900 ha of land and provide potable water to 730 000 people in the area (Fabricius *et al.*, 2016). The DWS has categorized the project as a Strategic Integrated Project (SIP), playing a major role in not only improvements in and development of infrastructure, but also in socio-economic development.

Through acknowledging the role of socio-economic development, NLEIP seeks to foster polycentric governance and deepen democracy by co-creating a new future for residents in the catchment. Part of this process will entail co-designing the Restoration and SLM (Sustainable Land Management) plan. This report is one of five reports that was commissioned to be included in the DEA: NRM strategic planning for NLEIP. The first phase of the Restoration and SLM plan is focused on the catchments (T35A-E) that supply water to the proposed Ntabelanga Dam. The second phase of the Restoration and SLM Plan will cover the catchments (T35F-M) that supply water to the Lalini Dam, the attached hydro-power plant and the associated irrigation.

Phase 1 of the Plan in the Ntabelanga T35A-E region covers the Elundini Local Municipality in the Joe Gqabi District Municipality. The Tribal Authority Areas within the Ntabelanga extent include: Lower and Upper Tsitsana, Batlokoa, Elangeni, Northern Mpondomise and Basuto. This report covers just one of these tribal authority areas, Batlokoa (Figure 2).



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It has always been the vision and ethos of NLEIP to conduct the social assessments and the participatory mapping efforts at the appropriate scale (close to the village-cluster level). This is aimed at ensuring greater representation and inclusion of the voices of minority in the planning. Unfortunately, due to time constraints and the logistics connected to a large area – this has not been possible, but tribal authorities will be revisited through engaged and sustained community engagement work, effectively revising and fine-tuning the findings of this report, as well as the co-management plans for the future. This report was commissioned by DEA/NRM to undertake a rapid assessment and pitched at the level of the Tribal Leaders and associated structures.

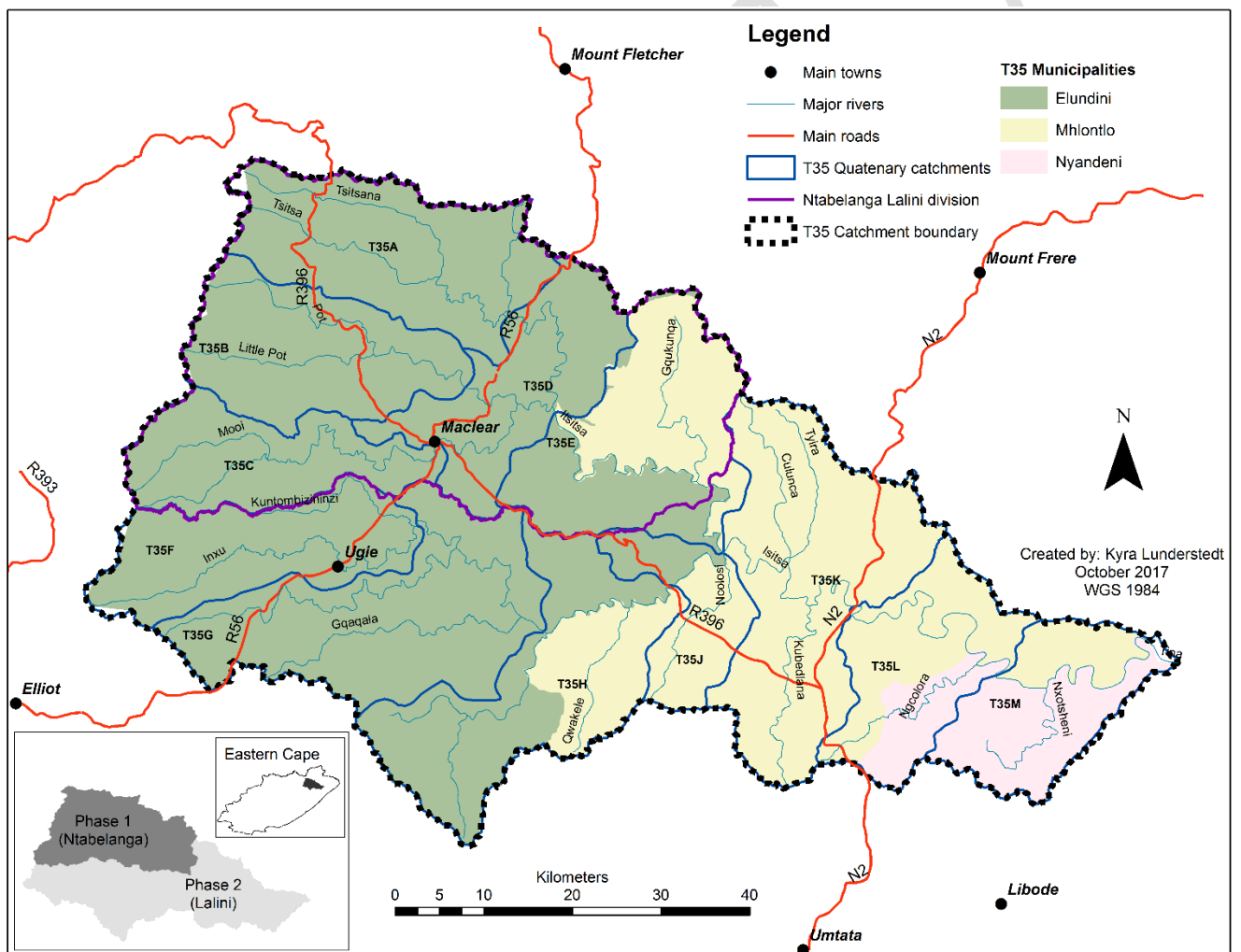


Figure 1: T35 catchment and NLEIP footprint.



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WORKSHOP AGENDA, PROTO-VISION AND PRELIMINARY PRINCIPLES

Rhodes University members of the Sediment and Restoration Community of Practice (CoP) within NLEIP, conducted their first community participatory mapping workshop in the Batlokoa/Hlankomo tribal authority on the 27th June 2017. The workshop was met with good participation and representation, with 14 sub-headmen being present (two were absent, one from Ngqwane and the other from Ntatyani). Four to six women were present at any given time during the workshop and younger participants also attended, which was welcomed despite the workshop being intended for the tribal leaders. The following report is an account of the method and feedback received from the workshop.

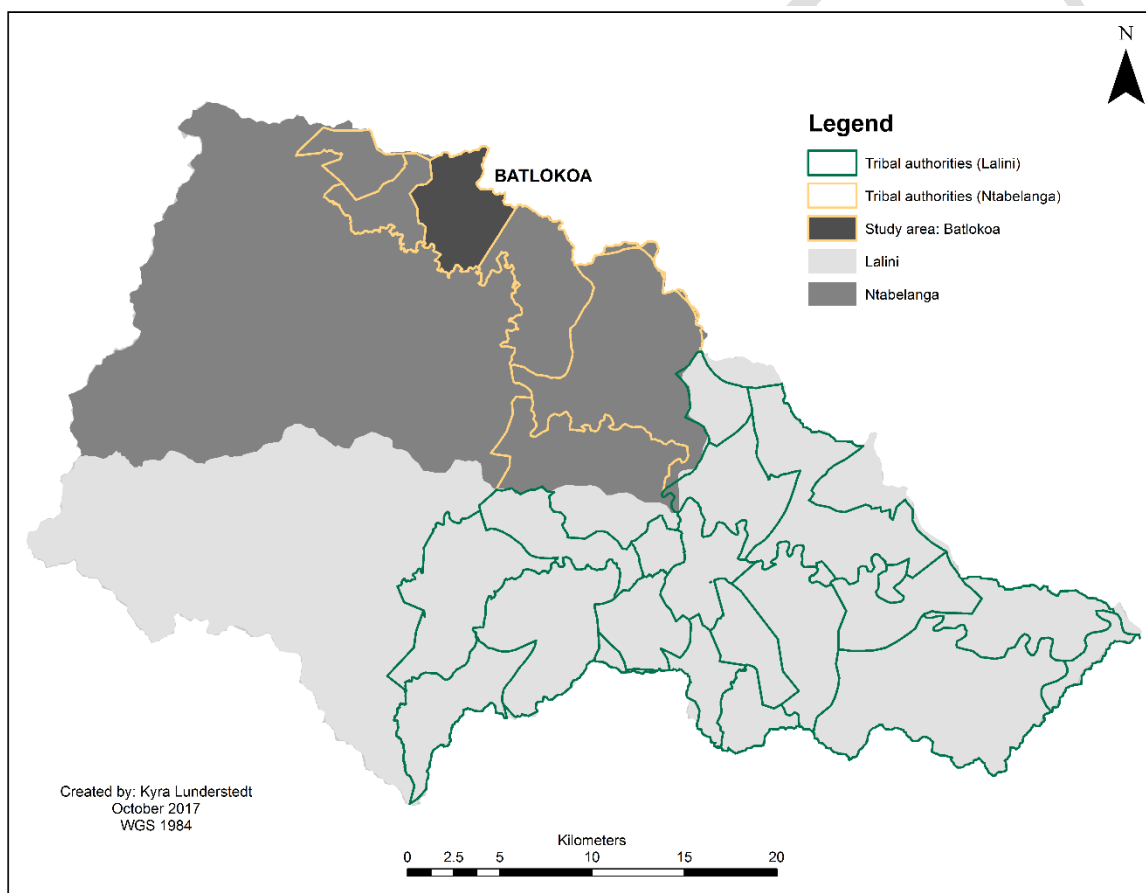


Figure 2: Location of the Batlokoa tribal authority area.

AGENDA

The agenda below was used mostly as a guideline for the duration of the workshop and to reiterate the community's voice in the process.

1. Introduction by the tribal leader.
2. Introduction from Rhodes University.

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- a. Purpose of the meeting
 - b. Background to NLEIP
 - c. The preliminary vision for the NLEIP project
 - d. Principles of NLEIP
3. Natural resource problems within the tribal authority and catchment: a community perspective.
 4. Management and restoration options: slideshow and explanations.
 5. Mapping exercise of natural resource problem priority areas and themes.
 - Gully restoration
 - Hillslope restoration
 - Alien invasive vegetation clearing
 - Fire management
 - Grazing management
 - Wetland restoration
 - Avoided degradation (protecting areas with good vegetation cover)
 6. Sustainable Land Management and restoration options: a community perspective.
 7. Discussion on willingness of restoration options and management interventions and changes.
 8. Conclusions and take-home messages.
 9. Meeting closure and thanks.

NLEIP PROTO-VISION

The Rhodes University (RU) facilitator gave a brief description of the vision and explained carefully that it was a proposed vision and would need to be systematically interrogated and validated by all the residents and stakeholders in the NLEIP footprint. The community seemed provisionally happy with the below vision:

“To support sustainable livelihoods for local people through integrated landscape management that strives for resilient social-ecological systems and which fosters equity in access to ecosystem services.”

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FIVE CORE PRINCIPLES OF NLEIP

The facilitator further explained the proposed core principles that NLEIP strives to adhere to. These included:

1. To restore landscapes.
2. To maintain restored and natural landscapes.
3. To avoid degradation, as it is cheaper and more sustainable than restoring landscapes.
4. To ensure inter-generational equity and
5. To encourage an involved democracy.

WORKSHOP PROCEEDINGS

PRE-WORKSHOP DISCUSSION OF NATURAL RESOURCE PROBLEMS

In this section, the facilitators asked the attendees of the workshop to voice to us the natural resource problems within their area that they have identified. We emphasized that these problems should only be in relation to natural resources and it was a session intended to engage the community without the influence and knowledge of those conducting the workshop (See Figure 3 of attendees and activities). The following is a list of problems and observations as conveyed during the session:

- Alien plant invasion of grasslands (Dywabasi/wattle).
- Dongas are forming from runoff from the roads, injuring animals who fall into them.
- Veld fires cause dongas due to decreased vegetation and exposed soil. Fires are also not controlled properly. People intentionally burn to get more fodder, but this isn't managed and communicated properly between community members.
- River banks of the Hlankomo River are eroding away due to harvesting of sand in the area. It is also a frequently used zone as they fetch water from there and livestock drink from the river.
- Springs are becoming degraded from trampling by livestock and are dirty. This is a critical issue as the springs are a water source for the people.

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- In the past there were good grazing lands. However, the vegetation has changed and soils are eroding, decreasing the grazing areas for cattle.



Figure 3: Batlokoa workshop at the local school Mhlontlo High School in Hlankomo, Village No 5.

WORKSHOP COMMENTS ABOUT IDENTIFIED NRM PROBLEMS AND SOLUTIONS

The following are remarks from a session where we showed community members a slideshow containing pictures of our own identified natural resource problems, as well as possible methods for management and restoration. Here we identified seven problems or areas where intervention are needed.

HILLSLOPE EROSION

- It would be good to have the fences and the community members like the fences because they will benefit and the land will be protected.
- The fencing would need to be protected from thieves, however if the community came together and valued the fences, then this could be done. It was recommend that steel barbed-wire fencing be used, as this is harder to work with and has less street value.
- A key issue raised was that in Hlankomo, the community don't work together. A good example cited was sand mining. A particular family has a field where they noticed that it's eroding away because of the mining. But, when he reported it to the tribal leadership, nothing was done. It was further emphasized that if there was an area restored and fenced off, then the community would work together to protect it.
- The community felt that abandoned fields are highly erodible.

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OVERGRAZING/ GRAZING MANAGEMENT

- The need to have fences to protect land that is resting was highlighted, but this would need rangers to ensure that the fences don't get stolen.
- The fences would work, but there is a need to tighten up the laws in the tribal area.
- When asked if they would protect the fence if they benefited from it, all members agreed.
- Again, it was recommended that steel barbed-wire be used instead of galvanized barbed wire as it is difficult to work with due to its springy nature (hard to erect in a new location).
- Mountains are recognized as farmlands that are very important for grazing. No government agency or PG Bison are currently permitted/accepted to utilize those areas by the tribal authority.

ALIEN INVASIVES

- A desire was voiced to clear all the wattles in the north of the tribal authority - but directly around the villages they can use the wattles for firewood.
- It was suggested that large logs from the wattle clearing, can be placed into the dongas to slow down the water velocity and reduce the erosion.
- There was a wish for the wattles to be cleared to open up grazing areas.
- Indigenous forests are dwindling from wattle invasion and require urgent restoration.

FIRE MANAGEMENT

- Fire management would work if there was a small group within the tribal authority who can keep a lookout for fires and who make the decisions as to when the fires could be started to improve grazing potential.
- Most fires are started at night, which makes it more difficult to control.

WETLANDS

- Valley bottom wetlands are not a problem in the Batlokoa area, but spring or hillslope seeps or springs were mentioned as an issue due to degradation.

DONGAS

- The attendees believe the weirs could be used for the dongas and protect homes and graveyards that are at risk of being washed away.



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- There was a comment that the tribal areas typically have small gullies, so they don't know where the big structures could be used.
- Dongas reduce arable land available.

AVOIDED DEGRADATION

- Initiated a conversation about the community working together to be more sustainable and avoid future degradation and the preservation of the land.

PARTICIPATORY MAPPING EXERCISE

The workshop was divided into four randomly chosen groups. Each group was asked to highlight the top three NRM problems that influenced and affected them. This was recorded per group, see Figure 4 for the images of data capture.



Figure 4: Group prioritization of three out of seven selected NRM problems in the tribal authority.

All four groups prioritized alien invasive plants and dongas/gullies within their top three NRM problems. Groups 2-3 prioritized dongas and gullies as a first priority. Alien invasive plants were 3rd priority for groups 2-3 and 1st priority for group 1. Fires were only a priority for groups 1-3, where group 4 identified an additional problem of spring degradation as a 2nd priority, see table 1 below.

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Table 1: A community perspective on the top ranking natural resource management challenges.

Group	Dongas	Hillslope erosion	Alien plant invasives	Fires	Wetlands	Avoided degradation	Over-grazing	Other
1	2		1	3				
2	1		3	2				
3	1		3	2				
4	1		3					2 (Springs)

Following the prioritization, each group was asked to place three tokens on an enlarged map of the area, for each nrm problem that they identified. This was useful and engaged members well in a practical sense. However, it wasn't efficient when it came to post-processing due to scale issues (large token on a small scale map). Figure 5, is an example of a map with tokens.



Figure 5: Map of Batlokoa Tribal Area, showing top three donga/gully locations per group. Different colours represent different groups.

The top three locations for each of the three priority areas were digitized using Google Earth after the workshop. During the workshop, we additionally asked of the current and future land use areas in the tribal authority and digitized accordingly. KML files of the region were further

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exported and saved as shapefiles in ArcGIS. Figure 6 shows the final map following mapping using Google Earth and digitizing the locations identified in the nrm prioritization.

All groups identified a problem with alien plant invasion in the north of the tribal area, however it is important to note the following preferences for alien removal:

- Group 1 and 3 requested that all alien plants should be removed.
- Group 2 stated that aliens can be removed along water courses and in abandoned fields, but not within or around the villages. Here the alien invader plants are deemed as important resources for fuel and building houses.
- Group 4 stated that the alien species can be removed at the foot of the mountains.

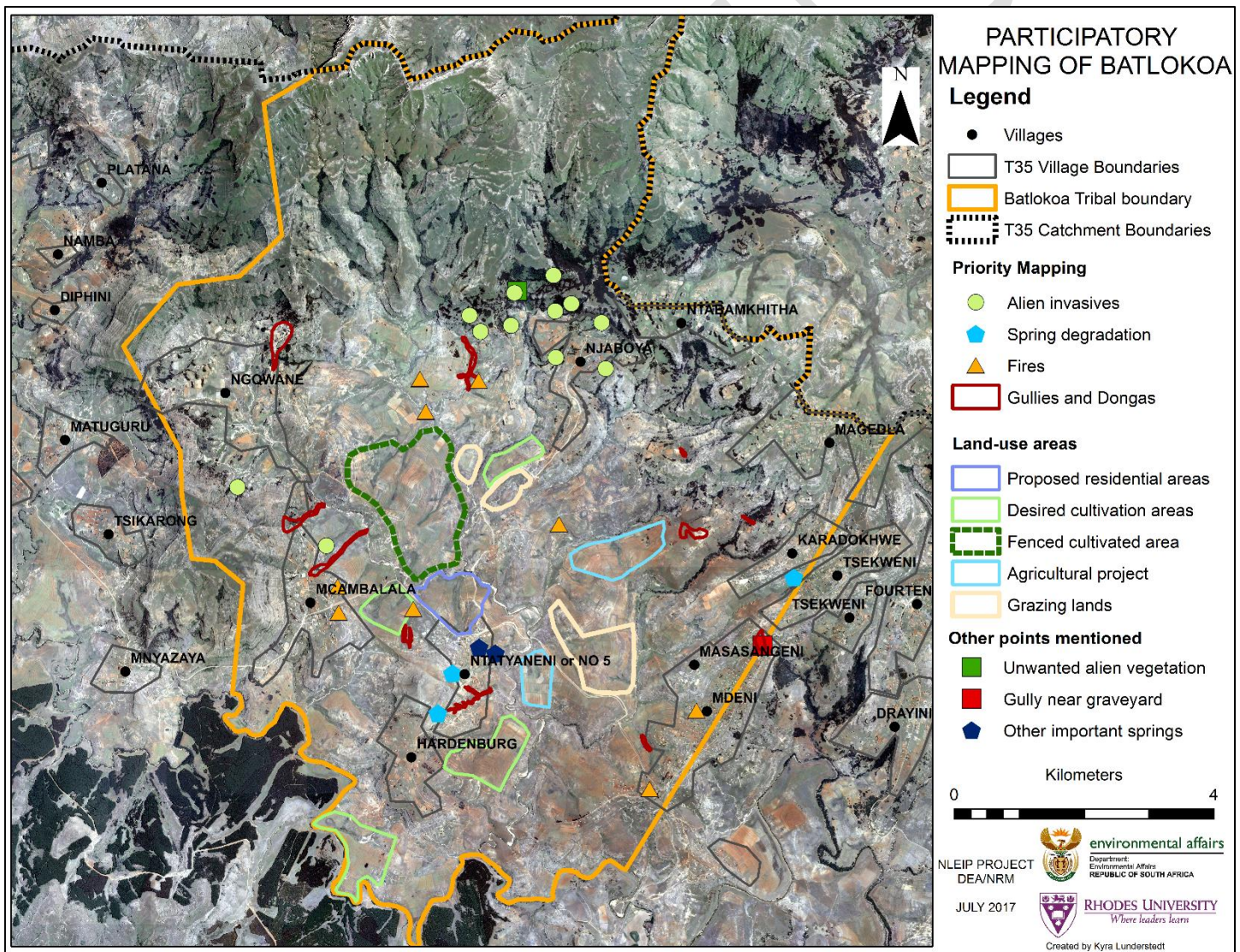


Figure 6: Post workshop map following the participatory exercise of Batlokoa’s natural resource problems.

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In an effort not to discard all the nrm priorities addressed, all top nrm problems were mapped. As a rank based on the priority scores provided, the top three nrm problems within Batlokoa were 1) dongas, 2) fires and 3) alien vegetation. In addition, certain land use areas were digitized with the assistance of a key informant (a local community development worker - CDW). The delineated land-use areas are beneficial in deciding on locations for nrm management and intervention. In Batlokoa (9 652 ha), these included proposed residential areas, (68 ha), desired cultivation areas (136 ha), fenced cultivated lands (251 ha), agricultural projects (one 34 ha fenced and one 120 ha unfenced, however only 70 ha of the 120 ha was mapped in the session, therefore this will need to be re-evaluated) and grazing lands (212 ha). In addition, participants emphasized to us where unwanted alien species are located, a gully at risk of destroying a graveyard and two important springs.

CLOSING REMARKS

The community requested that the work and discussions from this first workshop, should only be a **draft and not a final product**. The attendees of the workshop need to speak to other community members who are distributed around the country and require the input and permission from external members for restoration and management. For example, in Mt Fletcher the DEA: NRM performed restoration on farmlands without the permission of the owner of the field who subsequently destroyed all restoration work. This was because permission was not granted by him directly to do so, but rather by his mother.

On repeating the NLEIP vision, the attendees were content with the vision presented.

ACKNOWLEDGEMENTS

The NLEIP Participatory Mapping Team would like to thank the Batlokoa community and participants of the workshop for their time, patience and input into constructing an nrm problem and land-use map for their tribal area. Gratitude must also extend to Harry Biggs, for his input and advice following our first workshop.

REFERENCES

Fabricius, C., Biggs, H., & Powell, M.J. (2016). *Research investment strategy for Ntabelanga-Laleni Ecological Infrastructure Project*. Technical report, Chief Directorate Natural Resource Management, Department of Environmental Affairs, 1-47.

