‘Landscapes and Livelihoods’

A COMMUNAL RANGELAND STEWARDSHIP MODEL

Part of the

‘Meat Naturally Initiative’

MODEL SUMMARY AND TOOLKIT GUIDE

A COLLECTIVE PRODUCT OF THE

UMZIMVUBU CATCHMENT PARTNERSHIP PROGRAMME

Contents

Compiled by Sissie Matela and NickyMcLeod, on behalf of the Critical Ecosystem Partnership Fund, Conservation SA, and the Umzimvubu Catchment Partnership Programme, November 2015. Acknowledgement for inputs and collation go to staff of Conservation SA, LIMA, Institute of Natural Resources, NatureStamp, Isithunzi Consulting, EWTand ERS, as well as gratitude to the communities of Motseng, Mzongwana, Mafube and Mvenyane for their participation, and to Alan Savory for inspiration.

Draft 2 – February 2016

INTRODUCTION

Thisdraft modelhas emerged from five years of intensive implementation and research work in four wards of the communal tenure landscape of the Matatiele Municipality, located in the upper uMzimvubu catchment, in the northern Eastern Cape (erstwhile Transkei). The model provides guidance on an approach focussed on **facilitating the restoration and adaptation of appropriate governance systems, and the enabling environment, to manage rangelands in a more sustainable manner,** in order to secure water, food, and climate change resilience for the long term benefit of people and nature. This is CBNRM (Community Based Natural Resource Management) in a REAL sense.

The basic principle is that **healthy rangelands will produce increased quality livestock,** which, with **improved market access, will improve returns for stock-owning rural livelihoods,** with a positive feedback loop for **better rangeland** stewardship to support this stock, resulting in improved basal cover and grassland biodiversity, with **improved ecosystem services**. Livestock can thus double as livelihood assets as well as a tool for landscape management and restoration.

A development intervention model was defined by the partners as a **tested, offer-able intervention package**, or a **practically proven way of doing something** in a development intervention context.The partners' collective has attempted, through a series of workshops, field exchanges and consolidation sessions, to collate the wide spectrum of information, tools, methodologies, references, records and draft guidelines into sorted components for easier reference.

The toolkit describes how to apply the model's components. It is presented as a compendium of experiences, methodologies, tools and references which have guided the Matatiele intervention: the latter has been implemented by an alliance of four local NGOs[1] under the banner of the Umzimvubu Catchment Partnership, making use of funds from the Department of Environmental Affairs Natural Resource Management programme, along with support from the Critical Ecosystem Partnership Fund (CEPF) and other donors via Conservation International.

The approach is the result of an initial vision developed by the Umzimvubu Catchment partnership in 2012 for restoration of the Umzimvubu catchment, based on the overarching hypothesis that improved stewardship and livelihoods are inextricably linked (fig 1):

- A healthy Umzimvubu Upper Catchment ecosystem will improve the grazing potential for livestock and the quality and quantity of water available and thereby enhance food, water, and economic security in the face of climate change;
- The state of these ecosystems lies in the hands of people who live within them who will restore or conserve rangeland and freshwater systems when it is beneficial to them and they have the tools to do so;

Livestock ownership comprises on average between 50 and 82% of most village households (local research; Beyene et al, 2014) and plays a pivotal role in the lives of poorer more vulnerable communities: the potential for improving rural livelihoods through a livestock focussed intervention is thus high, and is well aligned with the National Development Programme's goals of tackling poverty.

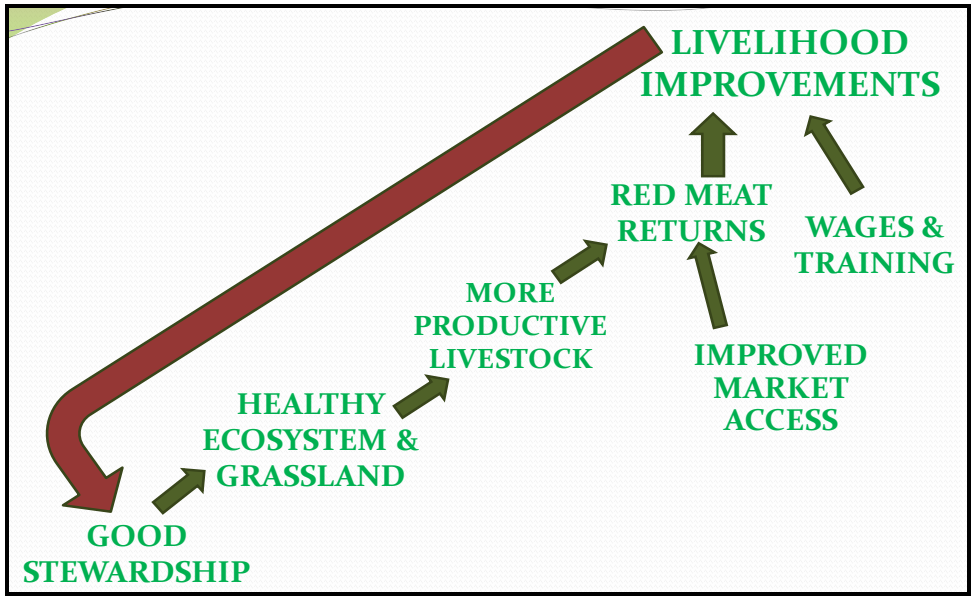

Figure 1: feedback link between stewardship and livelihoods

The toolkit is the packaged presentation of the model's key design, elements and tools, primarily aimed at or government and NGO implementing agencies, including project facilitators, field staff and extension officers, trainers of field staff, and project managers. Community beneficiaries, for example livestock farmers, may also find some of the tools useful. However, identifying implementing agencies as the primary targeted toolkit users means that the language and presentation modalities are designed primarily for implementing agency staff, rather than for community beneficiaries.

The model, outlined in figure 2 below, can be seen as a really good dish, and the toolkit the recipe for making this really good dish. The tools, references and strategic considerations are the ingredients: chefs can select smaller nuances like flavours and toppings, but the recipe has certain *non-negotiables* which will ensure a great dish or a big flop. These fundamental elements are outlined further below.

[1] *Conservation SA (CSA), LIMA Rural Development Foundation (LIMA), Institute of Natural Resources (INR) and Environmental & Rural Solutions (ERS)*

MODEL PARADIGM

The philosophy underpinning the approach is one of eroded governance systems leading to erosion of physical landscapes and livelihoods. The theory of change then is to **rebuild good governance,** recognising and integrating traditional systems along with appropriate contemporary and scientific practise and knowledge, to arrive at a workable **community based land use and resource management system**, which benefits local livelihoods and their supportive resource base.

The draft**model** is outlined in figure 2, providing an overall context and objectivesfor the approach, based on achieving the dual objectives of **improved livelihoods** and **healthy ecosystems**.

The application of the model is then described in a**toolkitmatrix** which comprises three streams:

- Social, Institutional and Marketing (enabling environment and governance)
- Landscape Restoration and Production (active facilitation and technical elements)
- Broader contextual factors (killer assumptions and considerations)

The '**toolkit**' is the spectrum of available tools and methodologies for replication of the model, based on the matrix as a guiding framework which provides strategic considerations, steps, tools and references for 11 different components which comprise the three streams. The toolkit is outlined in a matrix table, which unpacks the 11 components and provides a list of strategic considerations, proven tools and methodologies, and a variety of references for each component.

Prospective planners, decision makers and implementers and are encouraged to explore the full range of information under each component, and make use of those most appropriate to their situation.

Figure 2: LANDSCAPES FOR LIVELIHOODS MODEL OUTLINE	
model elements	**Specific UCPP Rangeland Restoration Programme**
Context	Communal rangelands where degradation has occurred and livestock farming is underperforming (The tools or micro-methodologies developed may have applicability over wider contexts: this model was developed for a primarily grassland biome.)
Objectives	1) **Environmental**: to restore and maintain degraded/stressed communal rangelands in the Umzimvubu catchment and other applicable landscapes. 2)**Socio-economic**: to generate increased and sustainable benefits for livestock farmers and communities in targeted areas 3) **Climate change resilience**: to improve climate change resilience for communities reliant on land and livestock productivity.
Users	• Other practitioners; development agencies, e.g. NGOs • Policy and decision makers • Donors
Components and Elements / Sub-systems	**Social and Institutional** • Stakeholder engagement/gaining broad based perspective to next steps • Livestock owner and community organization • Capacity building • Agreements—formal vs informal • Localising the recurrent costs **Technical** • Grazing planning • Rangeland rehabilitation • Livestock Health and Nutrition • Incentives • Skill development for Herding for Health • Fire management and skill development • Measuring our impact in a way that is also visible for supporting uptake/sustainability • Market access—dealing with distance, health, classification **Issues and gaps** • Stock theft management and skill development • Dealing with cross-border issues (fire and theft) • Risk management (Insurance opportunities by whom?)
Tools / Micro-methodologies	A wide range of previously existing tools and methodologies was drawn from, and various new tools modified or developed from these and by field and management staff. These are listed in the matrix and provided in the electronic toolkit collection.

Some fundamental concepts of the model: a holistic landscape management perspective

The model grew out of an attempt to rebuild local governance and land management systems to underpin and sustain active landscape restoration efforts and investments. It drew extensively from local experience, as well as from the Holistic land and livestock management (HLLM) concept developed by Alan Savory in Zimbabwe and the USA. HLLM is a response strategy designed to address increasing land degradation, especially in rural areas where there is still a high dependence on the productive potential of the land and the overall environment.

The concept is based on the premise that with proper livestock management, land degradation can be reversed and the desired impacts, including the recharge of water resources and an increase in biodiversity resources, will be a reality. There is a need to change the mindset, especially of the authorities, that overgrazing is a function of time, not animal numbers; this is important especially in e rural settings where communities are not willing to part with their livestock, mainly for cultural reasons. The HLLM approach ensures that local capacity is built to improve livestock management practices, to ensure that the livestock contributes to the reversal of the land degradation, and decrease dependency of the rural communities on outside resources. All the major components including exploration of the issues, planning, implementation, monitoring and evaluation are done with full participation of the local land user communities, so that they can decide when the time is right for them to scale up, and what the resource requirements are in order to attain sustainability. The success of this model acknowledges the influence which Alan Savory and the Savory Foundation have had on our thinking.

Stewardship

Multi-functional landscapes are tangible working social-ecological systems. For example, in rural villages multiple landscape functions typically overlap and co-exist, such as residence, cultivation, free range pastoral livestock production, cultural and religious activities, tourism, and trading, while also providing ecological goods and services like water, grazing, grass-cover enabling rainfall absorption ('water factories'), biodiversity, and water and carbon cycles. Management of multi-functional landscapes requires balancing ecological and social priorities and actions of multiple, diverse actors in seeking collaborative solutions that bring long-term ecological function and social justice.

The evolution of the western European concept of stewardship was traced from earlier spiritual and secular conceptions to those under 19th century industrialisation, 20th century environmentalism, and 21st century sustainability and subsequently resilience thinking. Resilience thinking, which has already spawned a substantial body of literature[2], roots into the context of rapid global environmental change and uncertainty, hence environmental stewardship aims to adapt to or mitigate the effects of stresses, to promote proactive policies, and avoid or escape unsustainable social-ecological traps. Stewardship goes beyond sustainability in raising questions of environmental and social justice and management, such as who or what should benefit, and to whom are environmental stewards accountable?

A common-language definition of 'stewardship' relevant for this model is "**taking care of something valuable"**. An example was the traditional '*maboella*' controlled grazing custom. Because of the way earlier stewardship notions presented people as dominating nature for their benefit, as well as the connotations with formalised biodiversity stewardship, several partners expressed their preferred comfort with the term 'custodianship'.

There is often contestation between priorities, especially when confronted with already degraded landscapes. For example, stabilising uncovered rangeland through planting patches of kikuyu grass may be the easiest and most cost effective way of restoring the water infiltration function and preventing soil erosion, although kikuyu inhibits biodiversity and is invasive in some landscapes. Biodiversity may re-surface as a top priority following basic rehabilitation. Another example was the conflicted response in Mzongwana when use of more remote and previously under-utilised (due to stock theft) grazing lands led to losses of livestock to wild animals; what helped was discussion with livestock farmers highlighting the role of predators in a functioning ecosystem.

Community mobilisation

Many approaches and tools exist for stakeholder identification, consultation, analysis and communication and awareness raising: the important thing is to use a method or tool that works best in your specific implementation context. Where it is important to understand power dynamics, stakeholder mapping or 'Power mapping'(in which the power of stakeholders is indicated by their size on the map, and power relationships between stakeholders are represented by stronger or weaker lines) may be useful. It is important to include people from the ward committee AND the Traditional Authority in project steering committees, in order for them to report to their respective leadership structures. Normal good practice is to conduct social and environmental baseline surveys, to gather data on the status quo of demographics and social trends, and to develop a good GIS database of plant infestation and grazing area maps, CBAs, wetlands, rivers etc, as a base for the social data overlay. This can assist with identifiying specifric intervention targets such as alien clearing and grazing.

Livestock owners and community level institutions are particularly central stakeholder groupings. In discussion of engaging with livestock owners, it is helpful to assist communities to understand the laws of the country and the bylaws of their region. It is essential to determine and communicate the niche or role of NGOs / consultants in relation to government bodies and other stakeholders. Implementing agents need to identify long term support needed and who leads it, with

[2]See, for example, the Resilience Alliance website, resilience.org

what resources. Implementers need to ensure that the principles within which we operate are well understood e.g. science and water, and linking those to resources that people use every day. A key step is allocating respective individual and collective responsibilities of the livestock owners and of overall community institutions. With regard to monitoring, it has to be clarified what will be monitored by the implementing agent, and what by the community: this will be based mostly on capacity once the monitoring variables have been identified.

Agreements, Incentives and sanctions

A key driver for catalysing and sustaining stewardship activities is a shift in consciousness and in the way land and resources are managed. This requires appropriate incentives for participants to make these behaviour changes, and the exchange of incentives for behavioural shifts requires some sort of agreement, the primary element of which is a ***transaction between equals***, which balances needs with deliverables in an equitable, effective and sustainable manner.

Identification of problem factors, risks and threats which are leading to degradation of landscapes such as overgrazing, insecurity of tenure, is done through community mobilisation as described above, and incentives should be identified through this process. Caution should be given to introduction of potentially perverse incentives which lead to dependence or could backfire on the long term sustainability of a conservation intervention.

Agreements can be between a conservation entity and a land-user group, or between the conservation entity and individual land users or community members. The land user group can also develop sub-agreements between itself and individual farmers and land users. The latter is seen as preferable in the context of the rangeland-type programmes whereby a Grazing or Livestock Association enters into agreement with a conservation entity, and the Association then holds its members accountable, with monitoring support from the conservation entity, for compliance with agreed conditions. Withholding of support can be done between the two groups, with more responsibility for members' compliance placed with the Association, who can put pressure on deviant members.

Incentives are provided in the form of services or inputs, as motivation for certain *conservation-related activities or practices, or withholding from these practices,* based on an agreed commitment by both parties to the negotiated agreement.

It is vital to recognise traditional practices in the process of consultation and in establishing appropriate incentives and agreements: restoring good governance is often the key to restoring healthy landscapes. The community mobilisation phase is vital to identify the useful, acceptable or damaging practices, and their causes, and determine a process which leads to benefits for all of the participants and both parties to the agreement.

Incentives can take the form of provision of services (e.g. training, subsidised inoculations, equipment, etc) as well as market access (auctions, opening up value-chain and accessing buyers, providing accreditation for compliance with industry standards to make products more attractive, etc) to improve the value and return from products developed through better stewardship practise. Wages should be used with circumspection, as they can create expectations which may result in later challenges. Wage incentives can provide a valuable catalyst for kick starting participation and mobilisation, but should be embedded as an initial phase within a longer term sustainability strategy. Remember: agreements should always be seen as a transaction between equals.

Restoration

This component looks at how to modify the way the land is used through influencing people's behaviour on the landscape, their management of livestock on it, and the use of mechanical techniques to aid recovery of degraded areas to a more naturally functional state. It has to be based on increased awareness of root causes of problems, as well as capacity to tackle them effectively, and should be informed by consultation done through the mobilisation phase.

Livestock are known to be engineers of ecosystems in terms of creating micro-habitats for plants and animals (Derner et al., 2009) as well as modifying soil moisture and structure characteristics (Stavi et al., 2009). Holistic planned grazing provides a natural, mechanical, low cost method of managing plants and sustaining soil through regeneration of cover, via trimming, mulching, manuring, and breaking up capped surface to allow infiltration of rainfall. Simultaneously, livestock health is improved through improved plant production, and they can be used as low cost crop field preparation rather than ploughing and purchase of fertiliser. This requires a common herd which is managed on a planned grazing system to allow plant recovery in grasslands (Stinner et al., 1997). Our own pilot studies have shown that planned grazing and herding of cattle on land post AIP-clearing (alien invasive plants) results in increased grass growth and suppression of AIPs due to hoof action and other factors involved in bioturbation, with minimal follow up visits and costs. Additional research on bioturbation and restoring natural groundcover has been identified as a priority in managing landscapes threatened by alien invasive plant spread.

The following guiding principles apply to planning and facilitating restoration activities within this model:

- Landscapes can be: 1) degraded and uncovered i.e. no grass / basal cover, or 2) degraded but with some basal cover. Treatment will vary according to the nature of degradation.
- Implementers also need to align their clearing techniques with the intended end land use for that land: e.g. grazing, safety, water infiltration. People are more likely to support rangeland than river clearing.
- Rehabilitation activities require incentives, normally wages, grazing, and livestock auctions.
- Invasive alien plant (IAP) clearing is a step in restoration, not an endpoint.
- It is important to identify your clearing targets for best return –look at controllable patches with a high recovery potential, and agree on areas with land users.
- Take into account the different uses of wattle in communities. They tend to look at areas that are less dense as it's more economical.
- Participatory mapping should be done with communities, and with municipalities.
- The restoration activity areas should be incorporated into the municipality Spatial Development Framework (SDF).
- Any clearing has to be done in conjunction with the grazing plan –you can't have one without the other, this is a non-negotiable, so that over time you see a progression of more grass, less aliens, better animal condition.
- The main tools for post-clearing rehabilitation are cattle, fire, and rotational grazing.

Rehabilitation is to **an ecological functioning state**. Restoration is to an approximate original undisturbed state. Incentives are required to encourage different behaviour in order to reflect different, and improved, land use impact sand outcomes.

Market development and links

The Umzimvubu programme model has potential to be linked into a national or transnational social enterprise, constituted and registered as a for-profit Meat Naturally (Pty) Limited Company (MN Pty), that would provide environmental stewardship, jobs and increased natural meat production. Key features would be upscaling impact, and building in capacity for covering marketing support costs internally and sustainably. In moving from the local to the national/transnational level, MN Pty would target regions where there is overlap of areas with higher densities of invasive alien plant (IAP) and bush encroachment, poverty (especially in communal lands which have 47% of South Africa's livestock but only 5% of the red meat market), and threatened water resources (which may be linked to climate-change-related stress, as in Namaqualand).

The MN Pty is built on and would itself contribute to upscaled application of the rangeland restoration/livestock production model. Replication would include training of other NGOs, networking, and growing and establishing livestock producer organisations. Livestock producer organisations would affiliate to the Grass Fed Association of South Africa (GFSA), which was established through the Red Meat Producers Organisation in 2014. GFSA affiliation would guarantee the traceability of meat from the rangeland or farm to consumers, and that the meat is produced without growth hormones and antibiotics. Supplier agreements or contracts would be established between livestock producer organisations and MN Pty, which would include required GFSA protocols. There may also be contracts between farmers, GFSA and retailers.

The MN Pty would raise government funding to fund production and landscape restoration products and services to communal lands livestock producers, including grazing planning, equipment and veterinary services, ecoranger training, and ecoranger supervision and management. Training would be given to Department of Environment Affairs (DEA) Implementing Agents (IAs), who would engage in catalysing and mobilising communities, and capturing lessons learned for adding to and improving the MNI/Landscapes for Livelihoods toolkit and curriculum. There would be potential shareholding for long-term financing for community farming groups to assist with internalising currently or initially subsidised costs.

To provide consistent but flexible market access, the MN Pty would use revenues generated through economies of scale, through sales support services including mobile auctions in regional nodes, establishing marketing contracts and distribution, and auditing of GFSA protocols.Participatory democratic governance would be expressed through representation of Livestock producer organisations and NGOs on the MN Pty board of directors.

UMZIMVUBU RANGELAND & LIVELIHOODS RESTORATION PROGRAMME: *MEAT NATURALLY*

SUMMARY STATISTICS FROM JAN 2013 TO END MAY 2015:
DIRECT BENEFITS TO TARGET GROUPS IN 4 WARDS OF MATATIELE MUNICIPALITY

INCLUDING INCOME FROM EPWP WAGES, STOCKSALES, PPE, EQUIPMENT, VET SUPPLIES AND TRAINING.

MANAGEMENT & FACILITATION COSTS EXCLUDED. FUNDING SOURCES INCLUDE DEA NRM PROGRAMME, CEPF AND OTHER NGO SOURCES.

LIVESTOCK SALES	SALE #1 WARD 14 ONGELUKSNEK 6/2014	SALE #2 WARD 14 ONGELUKSNEK 4/2015	SALE #3 WARD 8 MAFUBE 5/2015
No of stock offered	129	182	65
No of stock sold	76	146	26
No of stock not sold	53	36	39
% Sold	58.91%	80.22%	40%
Highest price	R 10,050.00	R 8,400.00	R 7,700.00
Lowest price	R 3,100.00	R 2,500.00	R 2,600.00
Ave R/kg sold	R 11.24	R 11.37	R 11.20
Total Sale turnover	**R 471,800.00**	**R 871,650.00**	**R 125,000.00**
No of sellers	66	105	15
No of buyers	4	6	1
No households	27	36	15
Average income /HH	**R 13,105.56**	**R 32,283.33**	**R 8,333.33**
No of villages	9	11	4

INCOME & DIRECT BENEFITS	WARD 5 & 7 MZONGWANA	WARD 8 MAFUBE	WARD 12 & 13 NKAU, MPHARANE	WARD 14 THABA CHICHA	WARD 21 MVENYANE	%
ALIEN TEAM WAGES	R 904,000	R 1,100,000		R 1,967,000	R504,000	34%
ECORANGERS WAGES		R 800,000		R 950,000		13%
FIRE TEAM WAGES			R 3,000,000			23%
TRAINING & INPUTS	R 300,000	R 500,000	R 1,550,000	R 1,000,000	R225,000	19%
LIVESTOCK SALES		R 120,000		R 1,343,450		11%
	R 1,204,000	**R 2,520,000**	**R 4,550,000**	**R 5,260,450**	**R 729,000**	
TOTAL VALUE OF DIRECT BENEFITS TO 685 HOUSEHOLDS IN MATATIELE MUNICIPALITY = **R 13,263,450**						
600 ha CLEARED = R5,232,500 POTENTIAL GRAZING @ R6500/ha	520 JOBS CREATED AND PEOPLE UPSKILLED			> 5000 HOMES & 80 000 ha PROTECTED FROM FIRE*		
VALUE OF ECOSYSTEM GOODS & SERVICES RESTORED AND RETAINED: water worth R27 million/annum						

Sustainability

Initial stakeholder engagement processes should provide an understanding of what kind of land use people want, so this informs implementation planning and it gets integrated into municipal SDFs. At this point, we have plenty of lessons learned rather than tools about sustainability. THE Umzimvubu collective defined sustainability as "the operation of the system by communities / beneficiaries, without donor finance, with optimisation of socio economic benefits that enjoys the support of all stakeholder groups". What is required to move responsibility and initiative from the local IA to beneficiaries is capacity, willingness and knowing where we are heading with stakeholders, having a clear vision.

We also need to understand what the functions and responsibilities of government stakeholders are so we can communicate expectations of them fulfilling their role. The model of conservation agreements has worked everywhere else in the world, here there is an expectation of incentives to achieve changed behaviour. A healthier interaction mode could be "I'll help you with YOUR journey", rather than GIVING something. Another key to sustainability is to get departments to buy into programmes in terms of their design, e.g. EPWP is not sustainable, so when the budget runs out then the project ends. The department should have stronger sustainability too. 'Agreements come out of negotiation processes, negotiations are the only way you can get through addressing contentious issues'

Ecorangers

Ecorangers are essentially the community based facilitators of the restoration and red meat supply process, selected by the beneficiary community based on required criteria, and equipped with a basic set of skills to support the rangeland management and red meat supply activities within their community.

An ecoranger is a local person who has some experience of working with livestock, and is then supported with an increased suite of skills to be able to assist their community in sustaining the herd management and related activities, according to the type of grazing management system selected by the community, and ensuring a sustainable, traceable supply of livestock for the grassfed red meat market.

Eco rangers should ideally be selected by the beneficiary community as trust worthy stock keepers, who are then provided with opportunities to develop a range of relevant skills to support their functions, including basic 'para-vet' functions and livestock husbandry, alien plant control, environmental awareness, citizen science, first aid, auction support, etc. They should assist with ensuring that demarcated rest areas / camps are kept free of livestock during the growth season, a traditional system in the Matatiele area known as 'maboella', which is long respected but recently broken down due to limited herding skills and co-operation amongst stock owners.

They can also provide a level of administrative support to the local leadership in terms of recording livestock numbers and health, and arranging auctions with buyers. Ecorangers in some projects have

been using *cybertracker* and other biodiversity 'apps' to assist with monitoring and recording species presence / status and veld condition. In some projects they are the key facilitators of the communal herd overnight kraaling and trampling facilitation, and have been provided with appropriate equipment such as tents and radios to assist with security in case of stock theft incidents.

Ecorangers can assist with monitoring of impacts and trends through the use of basic citizen science techniques, providing indicators of restoration and improved ecosystem functions. Their core functions within the rangeland restoration programme would include:

- follow up alien clearing & erosion control
- support grazing management plan agreed with stock owners, e.g. augment local *'maboella'* system
- support owners' stock theft patrol efforts
- facilitate stock trampling on areas cleared of alien plants
- auction preparation, administration & support
- recording & monitoring of animals using communal rangelands
- stewardship ambassador within community, to leadership and schools

Technical matters: alien clearing and livestock health

These elements are worthy of their own collection of manuals, and cannot be discussedin sufficient detail here to do them justice: they are however the core of the direct visible and measurable change as an output of the intervention efforts of this model's application. These aspects are discussed further in the TOOLKIT MATRIX (ANNEX 1) and further reference to useful material and tools ("how to's", body condition scoring, alien plant control, bioturbation, etc) is provided within the electronic compendium of available tools and references catalogued in ANNEX 2.

Essential elements to consider

The following are key intervention and design management principles which have contributed to the success of the current interventions, and should ideally be considered in the replication of the model:

•Recognise the greater landscape and interlinked elements, not just micro-sites or problems
•Buy in from traditional and elected authorities is essential
•Build on traditional knowledge, systems and practices
•Cattle and fire are tools not problems, under correct management
•Communicate incentives to motivate escape from unsustainable social-ecological traps (e.g. unsustainable grazing patterns, dependence on EPWP wages)

The outcomes are likely to be significantly diminished if certain considerations are not included and integrated in any implementation process. Fifteen **non-negotiable** elements were identified for underpinning the successful application of this model, which are :

1. understanding context, including institutional government, current practice, and biophysical context
2. buy-in from governance structures
3. social and environmental baselines
4. facilitated and sustained engagement (not short term)
5. adequate time management in multi-stakeholder processes
6. sufficient mutual willingness and trust
7. strong community governance structure (or help establish or strengthen one)
8. livestock owners' participation
9. planned grazing with rotational camp resting for long term sustainable rangeland management
10. links with local herders
11. ecoranger element (help monitor, make decisions)
12. training on pricing and market issues
13. livestock off-take bringing financial and environmental benefits
14. a market that is discerning of environmental factors
15. agreements between implementers and land users/livestock owners (contracts, minutes, etc.)

While the above 15 elements must be included or implemented, it was noted that the content within the elements is flexible and will always need adaption for the specific implementation context, and implementation processes are always organic rather than linear.

THE TOOLKIT MATRIX: A MAP OF WHAT, WHEN& HOW

The eleven key components into which the toolkit has been 'sorted' according to the three core streams are outlined in figure 3 below:

This is detailed further in the attached **TOOLKIT REFERENCE MATRIX** (ANNEX 1) which provides context, strategic considerations, key tools and methodologies for implementation of each component, some sequencing recommendations, as well as a list of resources and references for further guidance.

The toolkit matrix makes reference to various tools, papers and readings: despite attempts at being as comprehensive as possible, this is far from exhaustive due to the enormous spectrum of available literature. The Toolkit guide is thus also accompanied by an **ELECTRONIC COMPENDIUM OF TOOLS**& REFERENCES as an accompaniment to this toolkit guide. This is summarised in ANNEX 2.

Fig 3: RANGELAND RESTORATION TOOLKIT STRUCTURE OUTLINE	
COMPONENT	**KEY ELEMENTS**
STREAM 1: SOCIAL, INSTITUTIONAL & MARKETING ELEMENTS	
1: STAKEHOLDER ENGAGEMENT	Community mobilizing and capacity building (including stock owners and leadership)
2: MARKET ACCESS	Enabling incentives; sharing health perceptions; condition and grading requirements
3: ESTABLISHING AGREEMENTS	Mutual obligations, ensuring commitment, clarifying expectations for all parties
4: SUSTAINABILITY & RESILIENCE	Building on traditional and accepted systems; financial management; independence from project support
STREAM 2: LANDSCAPE RESTORATION & PRODUCTION	
5: RANGELAND REHABILITATION	Alien clearing techniques for grassland recovery; rotational resting; restoration techniques; mapping and monitoring
6: ECORANGERS AND ROTATIONAL GRAZING	Training; herding and livestock husbandry skill sets; careers for ecorangers; links with rangeland rehabilitation component 5
7: LIVESTOCK HEALTH	Nutrition; healthcare, inoculations and 'paravet' functions and training (linked with component 6)
8: FIRE MANAGEMENT	As threat and as tool; control and management; prevention and response
STREAM 3: BROADER CONTEXTUAL FACTORS	
9: STOCK THEFT	Improving security, reducing risks for stock owners
10:CROSS BORDER ISSUES	Illegal grazing, stock theft links, international liaison committees
11: CLIMATE CHANGE TRACKING & RESILIENCE	Vulnerability and stresses, water security, awareness, external threats beyond local control

Sequencing

The suggested steps for each component are provided in the toolkit matrix. The overall order for implementers to make use of the process is broadly according to the order of the streams, where social and institutional elements are addressed to provide a sound foundation for tackling the more physical interventions of landscape restoration and livestock management.
Figure 4 below provides a general sequencing guideline, acknowledging that each situation and process will be unique: implementers should first gain a full understanding of the spectrum of issues, expectations, resources, aspirations and capacity, and be flexible and responsive to local opportunities and challenges.

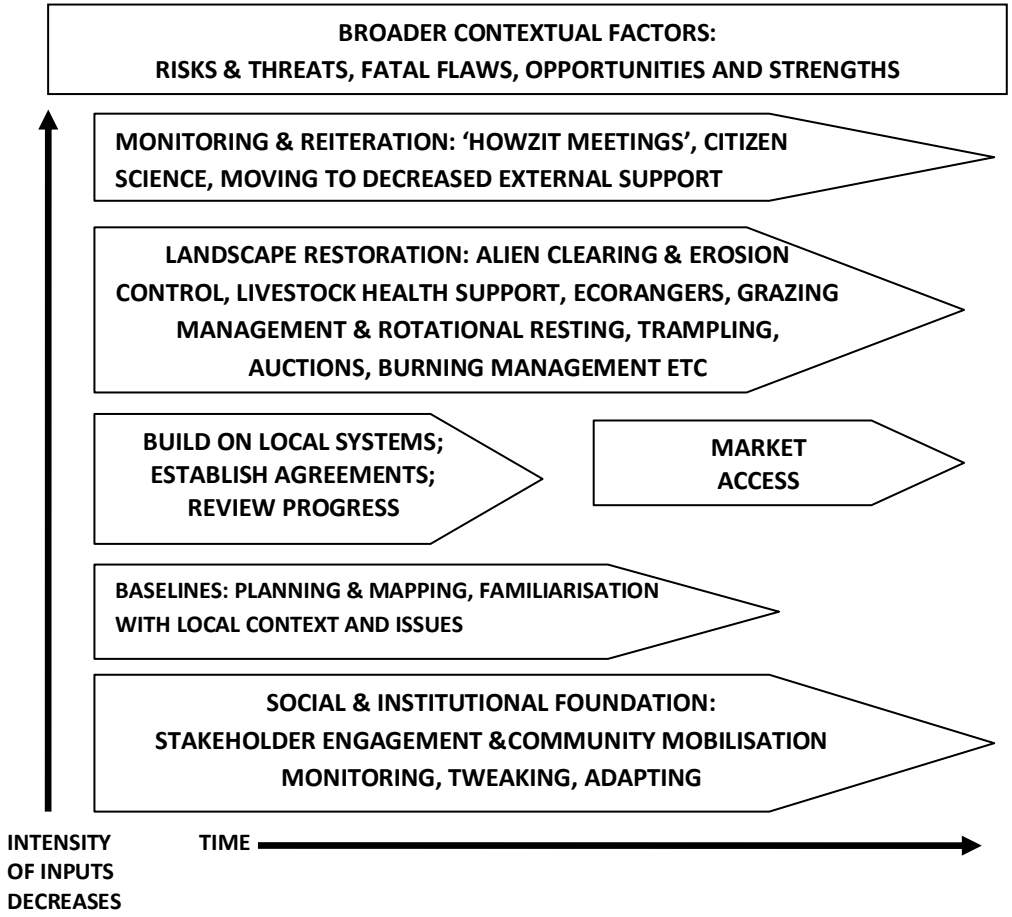

Figure 4: schematic guide to sequence of implementing model components

Tools & methodologies

The tools and methodologies for facilitators provide a skill set which will enable implementers to get started and to provide support for 'unrolling' the toolkit for the eleven components listed under each Stream. An almost unlimited spectrum of tools and micro- methodologies is available to implementers and facilitators, ranging from PRA (Participatory Rural Appraisal) techniques developed in the 1980s, participatory citizen science awareness and monitoring, through to detailed scientifically based vegetation and livestock health recording techniques. Those which have proven useful in the experiences of the facilitators who developed this model have been collated into a collection / compendium, referred to under each component in the Toolkit Matrix in Annex 1, and are listed in more detail along with references and further useful reading and records in Annex 2. These are available in an electronic format or compendium, for which Annex 2 is a catalogue or reference guide.

The core methodology for catalysing the model is the 'Community Mobilisation'approach for facilitators, which is fundamental to introducing the model to a new community or interested group. This forms the 'starter pack' or introductory kit for component 1, within stream 1: *"social, institutional and marketing elements"*.

The approach makes use of several other pre-existing tools and techniques to equip facilitators to support integration of the approach within a willing group: these are consolidated into a set of modules which focus on mobilisation of participant communities, through providing practical field-based interactive methods for understanding more about the enabling and limiting conditions facing the beneficiaries and their governance systems. The other support tools and micro-methodologies for facilitating the elements in stream 1 are listed according to their relevant components in Annex 2.

The technical element support tools under Stream 2 aim to equip facilitators with necessary skills to provide support for effectively implementing the more 'hands on' physical components, focussed on restoration and livestock husbandry activities, to provide support to both ecorangers as well as livestock owners and land users. LIMA and several other UCPP partners are exploring conservation agriculture options as a complimentary activity to augment the livelihoods of both stock owners and non-stock owning beneficiaries. The Savory Institute again provides excellent training on holistic grazing management, while there are several service providers who provide training in livestock husbandry and alien plant management.

Implementers must differentiate between training for their facilitators to equip them for effective outreach and mobilisation support, and training for beneficiaries and ecorangers. The Umzimvubu Catchment Partnership's website has a cache of the documents comprising this compendium of tools, techniques, methodologies and references for further reading an context, which are live linked from the catalogue in Annex 2. The compendium of tools is not exhaustive, nor limited to those listed here, and facilitators, planners and implementers are encouraged to explore further links and to share them through this basic compendium framework.

Above & left: ecorangers and site supervisors are key for facilitating restoration and livestock-based activities within beneficiary groups' landscapes, and ensuring continuity of such activities on a sustainable basis beyond funded project interventions.

Effective equipping of such people through appropriate mobilisation, capacity building and training in appropriate skills, such as alien plant control, livestock management and citizen science monitoring, is crucial to the success of the "Landscapes & Livelihoods" rangeland restoration model

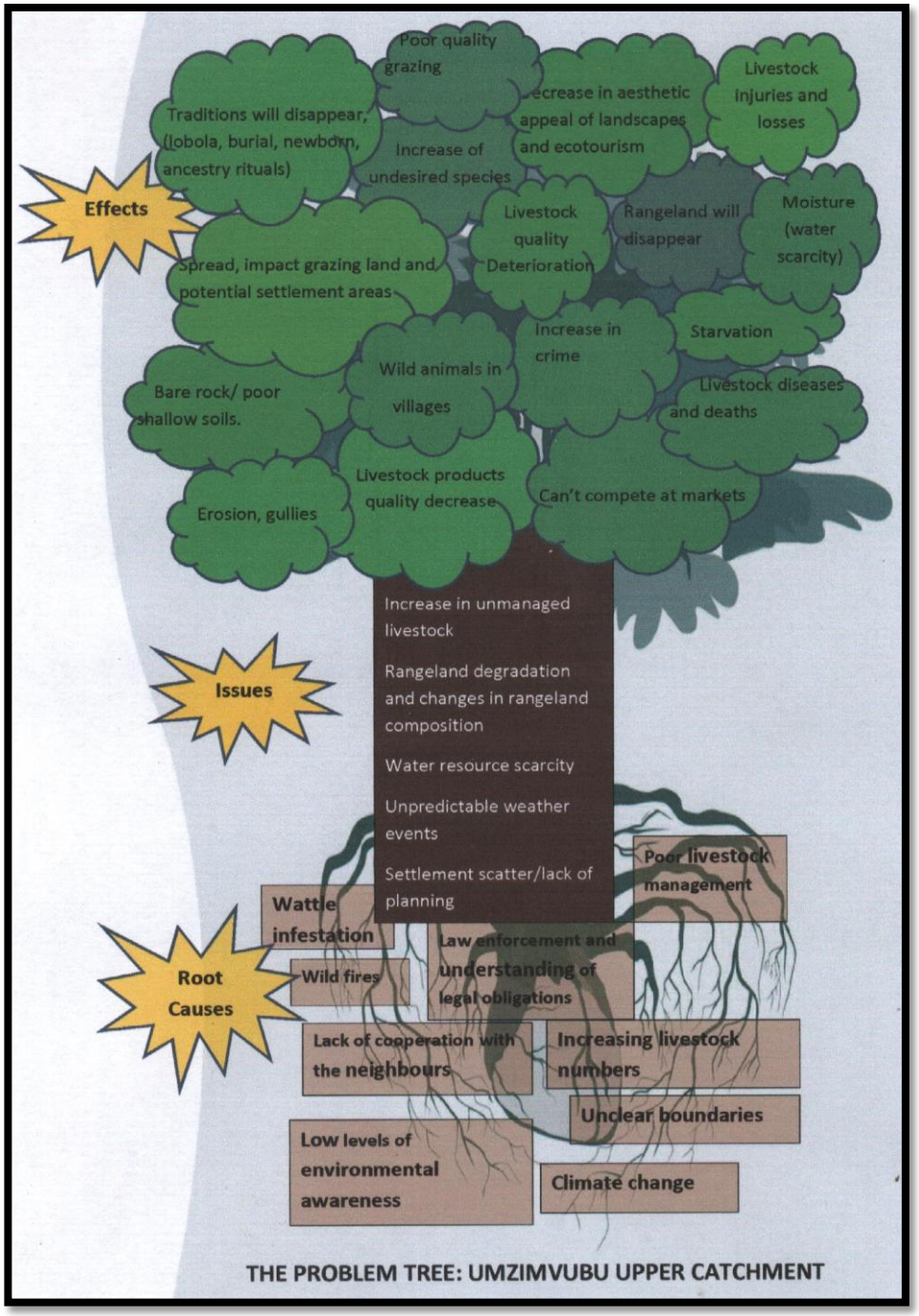

Figure 5: sample problem tree, a key tool in community mobilisation and identification of core issues

FURTHER SUPPORT AND TRAINING OPPORTUNITIES

The participating partners in the upper Umzimvubu rangelands of Matatiele have developed several informal and accredited hands-on support modules for assisting their own and other facilitators to implement this approach. These are drawn largely from the partners' collective experience, and provide support for streams 1 and 2 as follows:

STREAM 1: SOCIAL, INSTITUTIONAL AND SUSTAINABILITY ELEMENTS

Conservation International's CSP unit (Conservation Stewardship Programme), which aims to develop sustainable agreements between conservation agents and communities, offers a 3 day training module for facilitators in the CSP design approach, from feasibility and design, agreements and incentives, sanctions for non-compliance, through to re-negotiation and monitoring;

ERS offers an 8 day Community Mobilisation training module which fully equipsfield staff / community facilitators with participatory techniques to mobilise beneficiary communities, through awareness, problem identification and designing action responses and monitoring. The content is based on proven PRA and facilitation techniques and experience in the former Transkei grasslands and Lesotho highlands over 20 years, and which have been adapted for livestock-owning communal groups.

The Savory Institute offers a 6-week intensive version of Community Mobilisation, based on the Holistic Land and Livestock Management concept.

STREAM 2: LANDSCAPE RESTORATION & PRODUCTION TECHNIQUES

Conservation SA, LIMA, INR, EWT, WESSAand ERS all offer a variety of services and practical support training modules aligned with the stream 2 components, which are mainly aimed at beneficiary groups and ecorangers, but which can be adapted for implementers and facilitators. These include, livestock health, auction management, setting up agreements, rotational grazing and trampling, mapping andplanning, monitoring and citizen science, and erosion control.

At present (November 2015) only a few of these modules are officially accredited according to SAQA, but efforts are being made by the partners to address this and to develop a nationally accredited course of modules for orientation and skilling of ecorangers, as key 'sustainability facilitators' of the model within beneficiary communities: this is also aimed at developing a career path for youth with limited access to tertiary education, who can participate meaningfully in the conservation sector through involvement in the rangeland restoration programme.

Some of the key themes and modules which have been included to date, to support livestock owners, wider community participants and ecorangers, include the following:

- Basic Environmental practices
- Alien plant awareness, management and control techniques
- Basic livestock husbandry and health (including 'paravet' functions)

- Basic veld and soil management and rotational grazing/resting concepts
- Basic mapwork and monitoring, including GPS use
- Health & Safety; First Aid level 2
- Community liaison and consultation
- Citizen sciencetools and toolkit
- Basic Ecology and Biodiversity, including bird and snake identification
- Fire awareness and safety
- Financial literacy
- Basic nutrition, cooking skills & food production

The collection of supporting tools and references under component 6 in annex 1 and 2 will provide further guidance on the training elements of both **community mobilisation (stream 1)** , as well as **technical landscape management, production and conservation (stream 2).**

This support, within the bigger rangeland restoration and meat naturally initiative, encourages both livestock owners as well as local youth with limited literacy skills, but good local knowledge and accountability, to become part of the conservation and rural agricultural economy and to pursue careers based in their home areas, reducing the need for unemployed youth in rural areas to travel to cities in search of work opportunities, and simultaneously contributing to a healthy, productive and functional natural landscape.

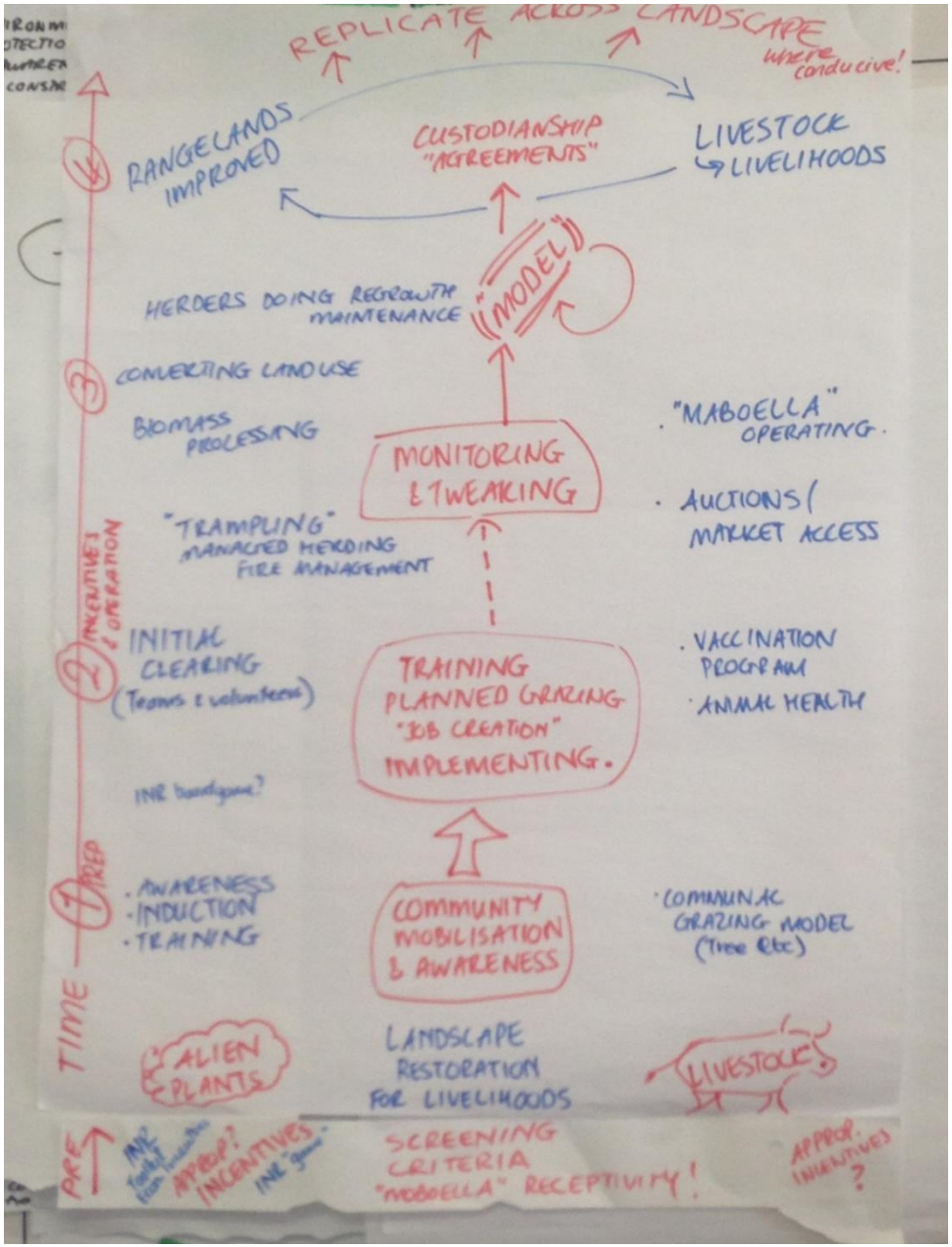

Figure 7: sample of planning exercise undertaken by implementers to integrate alien plant clearing and livestock interventions within a draft model concept, 2014. Such an exercise forms a vital part of intervention planning and mobilisation strategies, and must take both community needs and available resourcing and capacity into account within a sustainability framework

ANNEX 1

TOOLKIT COMPONENTS MATRIX

ANNEX 2

COMPENDIUM OF TOOLS AND REFERENCES