mahlathini development foundation

Promoting collaborative, pro-poor agricultural innovation
2003-2024

MDF organisational profile

MAZWI DLAMINI
Area manager, Deputy director

TEMA MATHEBULA
Area manager

NQOBILE MBOKAZII
Field worker

NOXOLO SIBIYA
Field worker

NQE DLAMINI
Microfinance support

ERNA KRUGER
Director

SARIKA RAAMSEWAK
Finance Manager

LUNGELO BUTHELEZII
Field worker

S'PHUME MBHELE
Field worker

HLENGIWE HLONGWANE
Lead field worker

BETTY MAIMELA
Area manager

THABANI MADONDO
Field worker

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Vision

To support the **harmonious living** of people in their natural, social and economic environments in a way that supports and strengthens both the **people** and their **environment.**

To assist the **rural poor** to better their lives, to **diversify** their livelihoods and to face their challenges with **resilience.**

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Mission

To design and implement **innovative projects and programmes** which promote **collaborative**, **pro-poor** agricultural innovation, working in partnership with other organizations and communities.

To work at the cutting edge of development methodology and processes, integrating **learning** (training), **research** and **implementation** into new models and processes, emphasizing synergy and integration.

CbCCA and innovation system development: For sustainable livelihoods and climate resilience

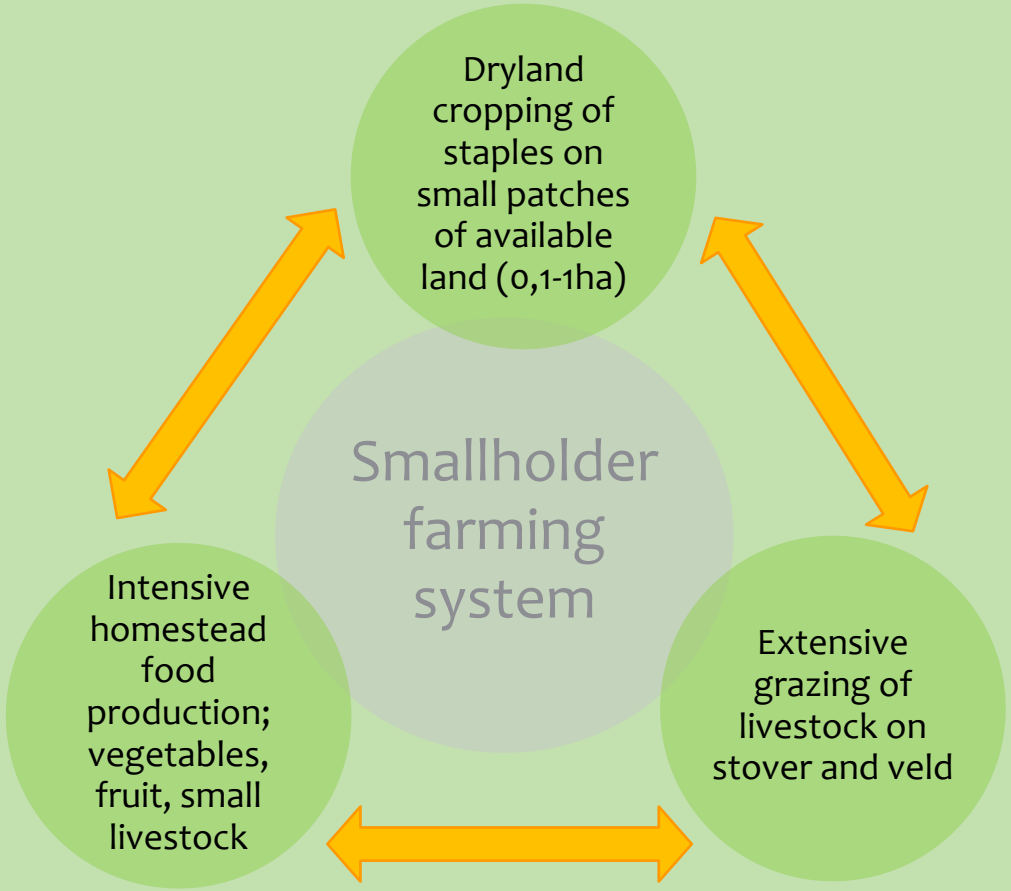
Funders

Partners

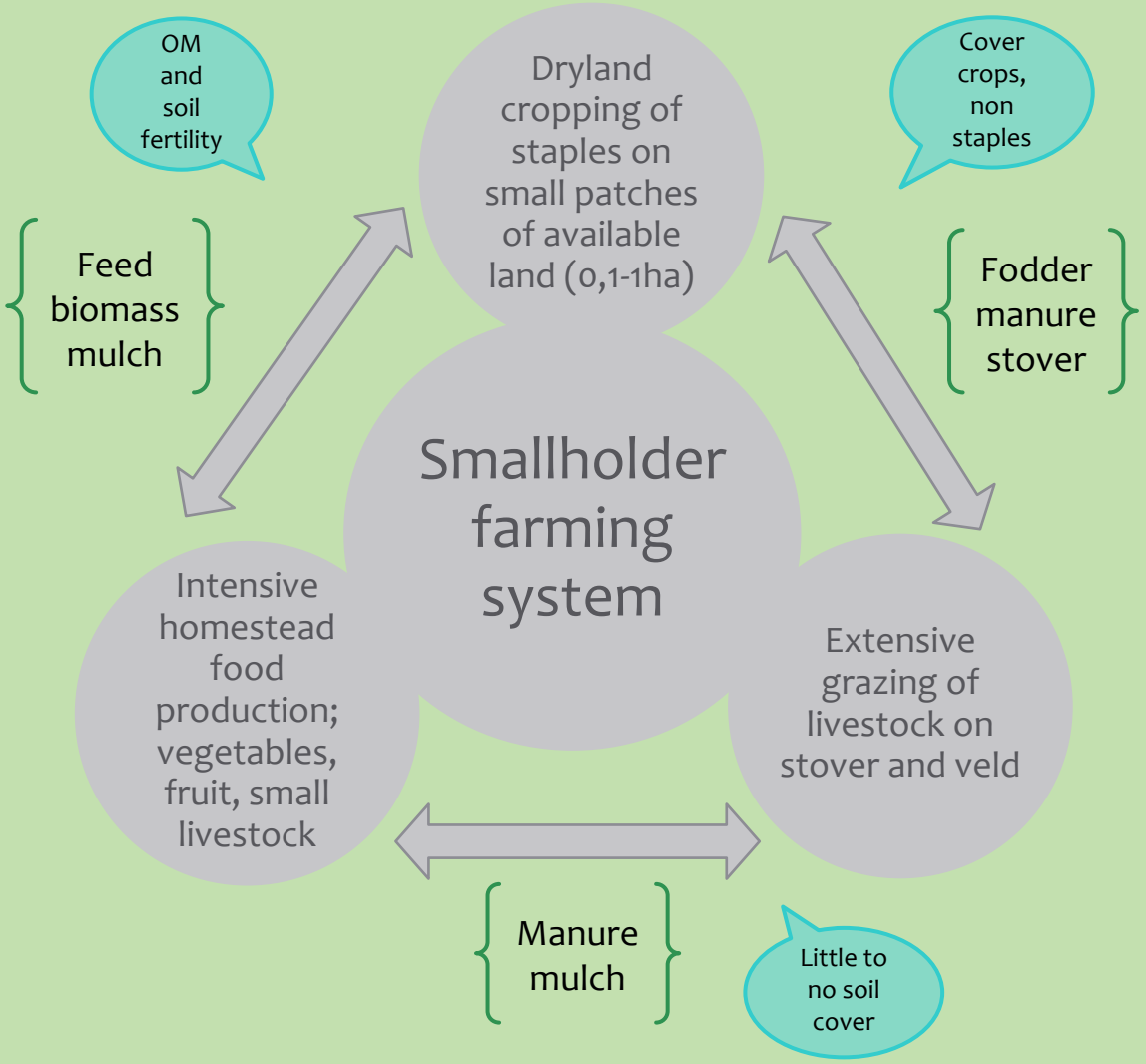
The smallholder farming system

Smallholder farming system

The smallholder farming system



The smallholder farming system

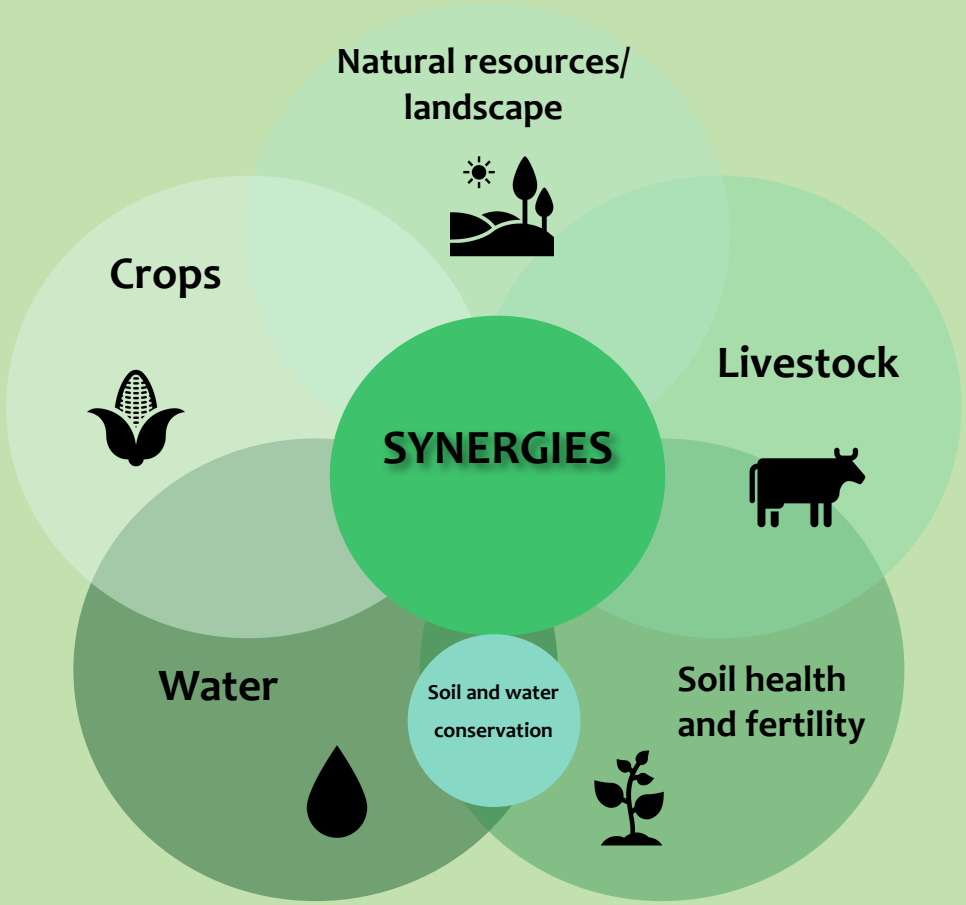


Guiding principles for innovation system development

SOCIO-ECOLOGICAL

- Encourage crop diversity and continuity
- Ensure healthy soil and focus on natural soil building techniques
- Use water and land effectively and efficiently for all purposes
- Protect natural resource base and ecosystem services
- Minimise external inputs
- Maximise internal diversity
- Enhance understanding and skills in storage, value adding, and marketing – go beyond immediate markets

PHYSICAL ENVIRONMENT



Guiding principles for innovation system development

SOCIO-ECONOMIC

- Focus on local solutions and economies
- Build on community-based criteria, indicators and priorities
- Generate transitional strategies
- Assess costs and benefits
- Link national and local planning mechanisms
- Strengthen local networks
- Promote values other than financial values
- Prioritize locally appropriate actions
- Work together, learn together, plan together

ACTIVITY: Water and Natural Resource Management for sustainable and productive use of land and water

- **Community owned local water access:** Water committees, spring protection, water reticulation, pipes and tanks at homestead level
- **Soil and water conservation:** village-based learning groups in Climate Change Adaptation undertake resource conservation activities

48 villages in EC, KZN and Limpopo

850 small holder farmers

3500 beneficiaries

ACTIVITY: Climate Resilient Agriculture and innovation system development for sustainable and productive use of land and water

- **Conservation/ Regenerative Agriculture:** (LEI) Quantitative research support to the Smallholder Farmer Innovation Programme; intercropping, crop rotation, cover crops, fodder production
- **Livestock integration:** Winter fodder supplementation, hay baling, conservation agreements, local livestock auctions
- **Intensive homestead food production:** Agroecology; tunnels, trench beds, crop diversification, mulching, greywater management, fruit production
- **Village savings and loan associations:** Village based savings groups for savings and small loans for productive activities
- **Local marketing and food systems:** Monthly produce market stalls organised per village, exploration of further marketing options, small

  mills for maize

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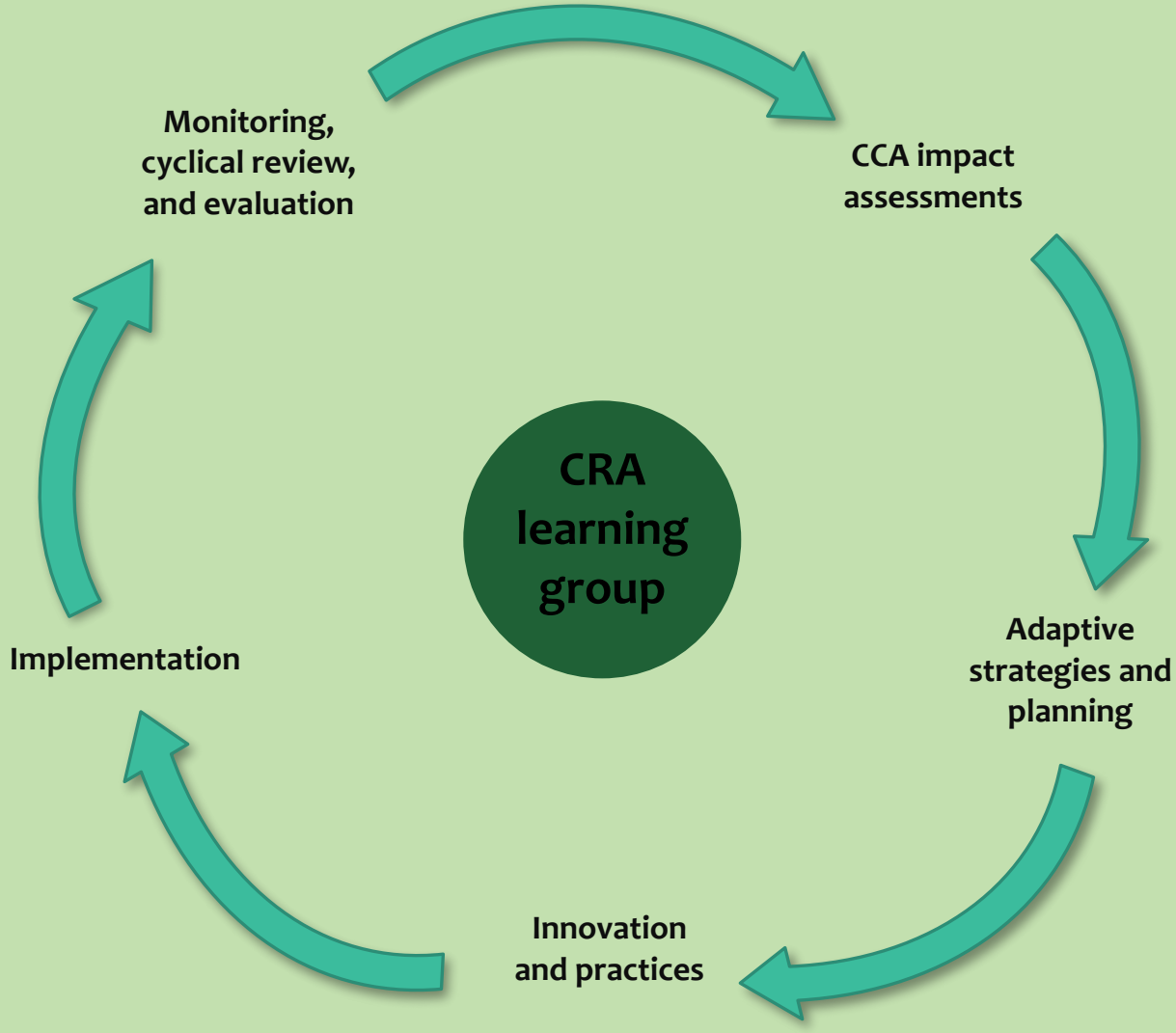
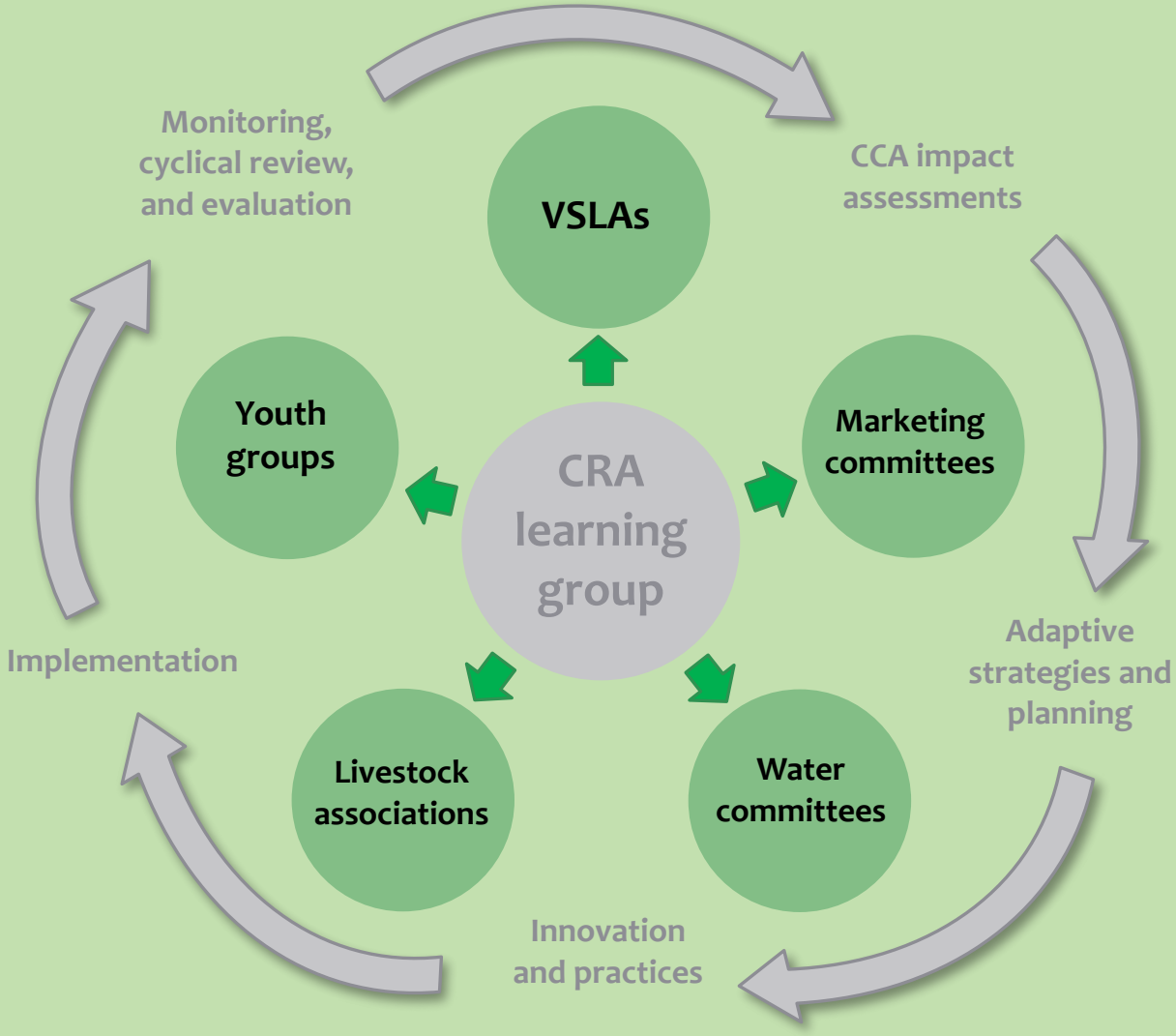
CRA learning groups: Process for development of social agency



CRA learning groups: Process for development of social agency



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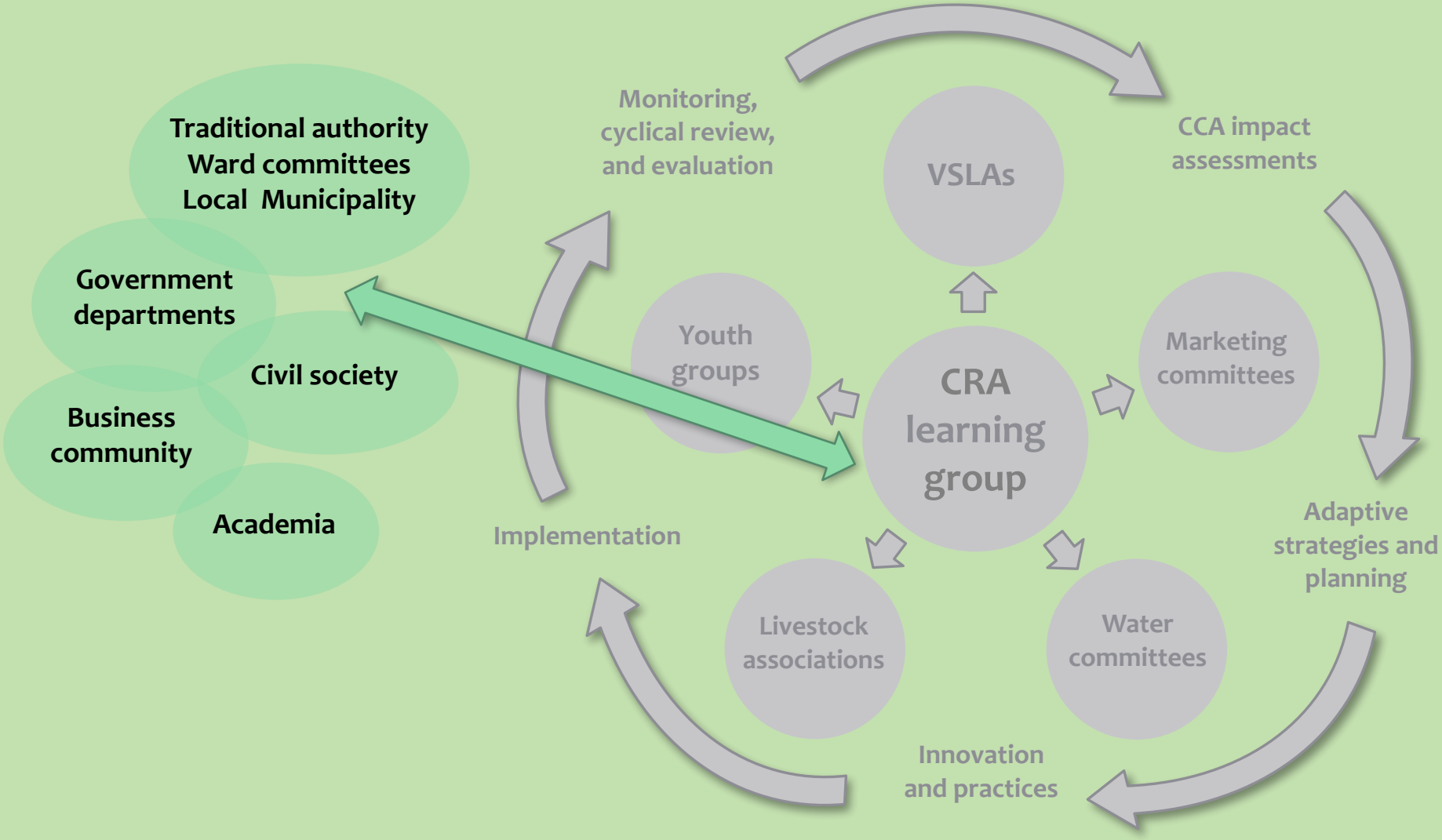
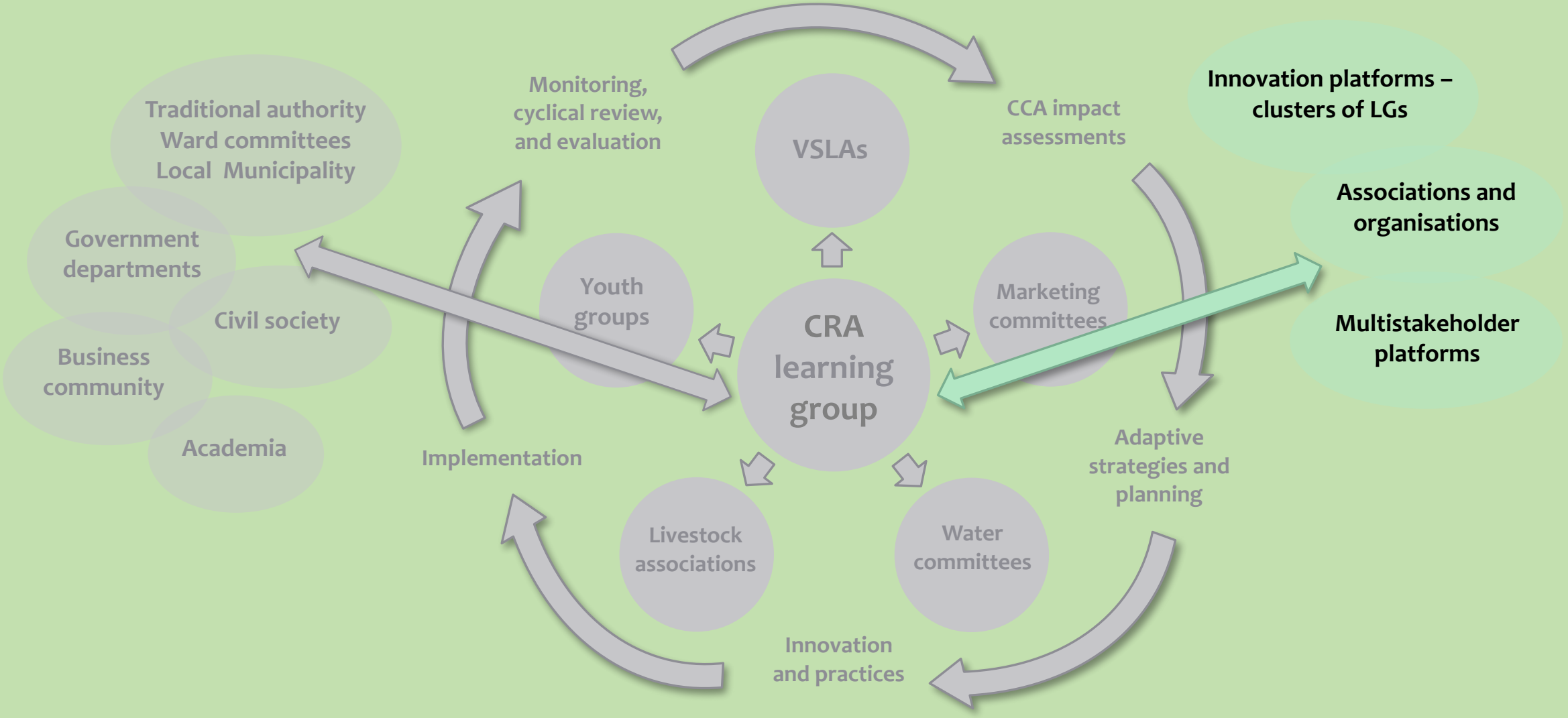


CRA learning groups: Process for development of social agency



Putting the bits together for locally led adaptation

Build improved systems and social agency

Identify options and implement

Collect and analyse information

PRESENT SITUATION

Collect and analyse information

- Focus group discussions
  - Land use and management
  - Social organisation
  - Mapping: social-ecological patches
- Individual interviews
- Expert ecological mapping (GIS)
  - EIA and veld assessment
  - Water resources and sources
- Village walks for detailed resource discussions and mapping (key informants)

PRESENT SITUATION

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  - Village walks for detailed resource discussions and mapping (key informants)
- Joint analysis
  - Present situation in land use and management, including needs and issues
    - Local structures and decision making: Community and individual



IDENTIFY OPTIONS AND IMPLEMENT

Co-learning and co-creation

Thematic workshops: Climate change, resources issues

Climate change workshops: impact, adaptive strategies, prioritization of measures practices

Choose thematic focus areas to work on: e.g. water access, resource conservation, wetland rehabilitation etc

Experimentation with new innovations and practices

Further engagement with stakeholders for expanded implementation options around water and resource management



IDENTIFY OPTIONS AND IMPLEMENT

- Co-learning and co-creation
  - Thematic workshops: Climate change, resources issues
    - Choose thematic focus areas to work on: e.g. water access, resource conservation, wetland rehabilitation etc
      - Further engagement with stakeholders for expanded implementation options around water and resource management
  - Climate change workshops: impact, adaptive strategies, prioritization of measures practices
    - Experimentation with new innovations and practices
- Action
  - Completed social-ecological maps with impact of human interventions
    - Set up village- based learning groups with list of prioritized practices
      - CRA learning and implementation

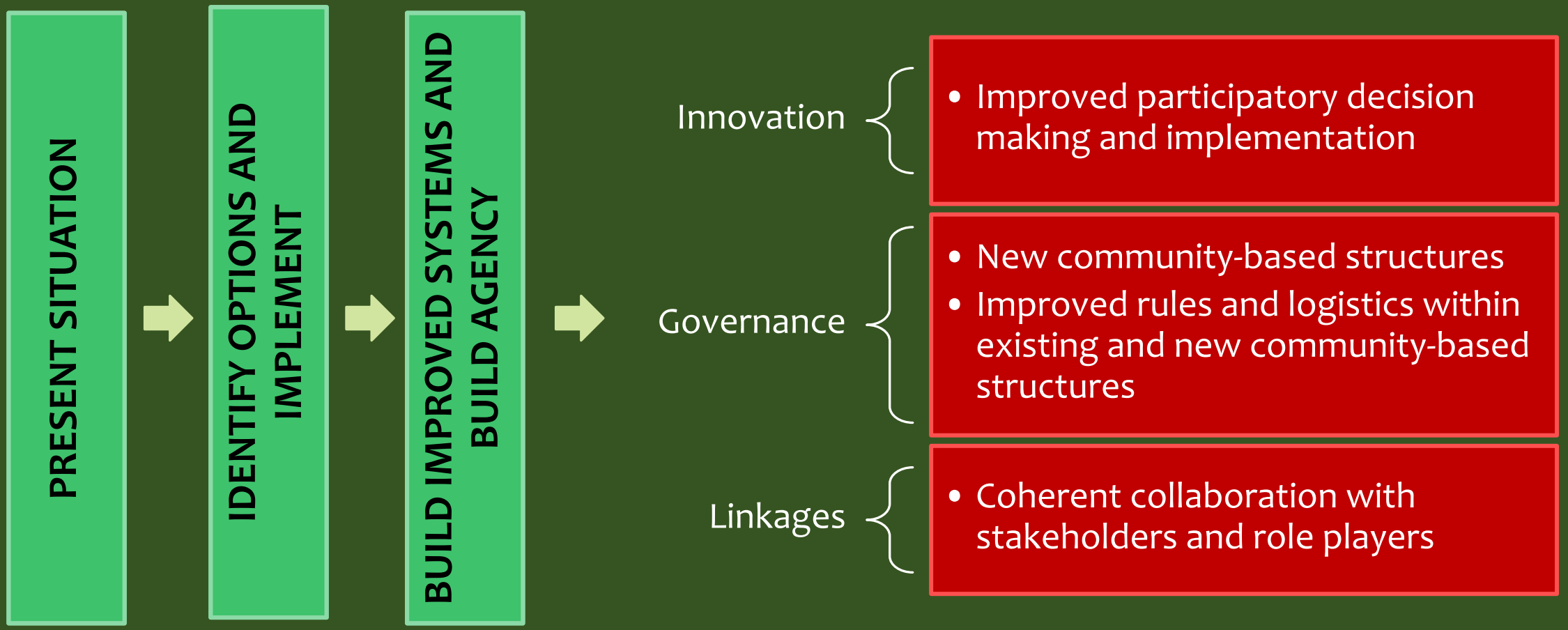
BUILD IMPROVED SYSTEMS AND BUILD AGENCY

Improved decision making

- Stakeholder engagement – innovation platforms and multistakeholder platforms
  - LGs, committees and community structures engage in resource management projects with a range of stakeholders
- Adaptive planning workshops using layered socio ecological maps
  - Committees discuss, plan and implement prioritized actions
- Iterative experimentation with CRA practices to tackle more complex issues
  - Improved land use and management

BUILD IMPROVED SYSTEMS AND BUILD AGENCY

- Improved decision making
  - Stakeholder engagement – innovation platforms and multistakeholder platforms → LGs, committees and community structures engage in resource management projects with a range of stakeholders
  - Adaptive planning workshops using layered socio ecological maps → Committees discuss, plan and implement prioritized actions
  - Iterative experimentation with CRA practices to tackle more complex issues → Improved land use and management
- Social organisation
  - Develop further organisations: e.g., water committees, marketing groups, VSLAs etc → Structures developed for improved governance with broader and equitable community involvement linked to local authorities
  - Link youth groups in resource management and enterprise development


PRESENT SITUATION
IDENTIFY OPTIONS AND IMPLEMENT
BUILD IMPROVED SYSTEMS AND BUILD AGENCY
Innovation
• Improved participatory decision making and implementation
Governance
• New community-based structures
• Improved rules and logistics within existing and new community-based structures
Linkages
• Coherent collaboration with stakeholders and role players

EMERGENT ACTIVITY: Governance

- **Social learning** and **knowledge co-creation**
- Improved **social agency** for local resource management; agreements, processes
- **Community level improvement of governance:** individual, group, village, and local stakeholder-based

Context:
Institutional Governance

Paradigms strongly **commodity focused** within agro-industrial complex.

Implementation for governance and support **virtually zero** – **Corruption** now almost completely systemic

The few actions undertaken are often **counterproductive**

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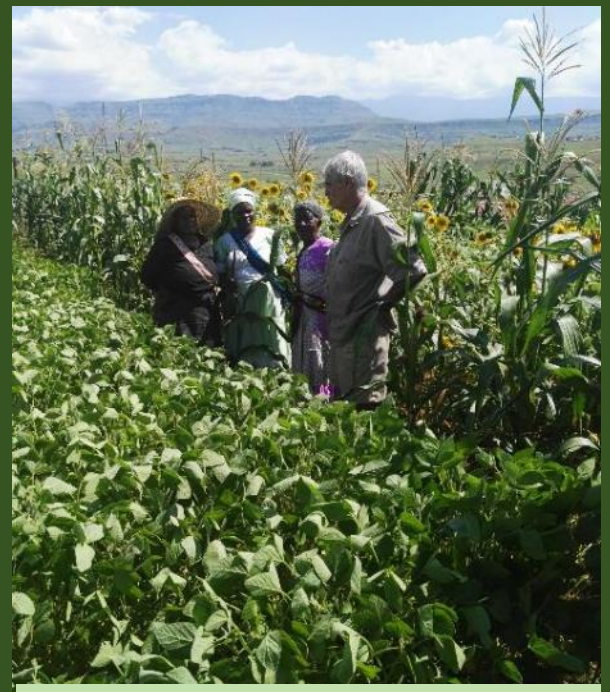
Conservation Agriculture

Local farmer centre for input supply and sales

Summer cover crops

Winter cover crop mix



Dolichos beans CA plot

Strip cropping perennial fodder with short season maize

Maize and cowpea intercropped plot

Late bean planting alongside short season maize and other CA plots

Intensive homestead food production practices

Mixed cropping

Improved irrigation practices: Drip irrigation

Crop diversification

Mulching

Microclimate management: Shade cloth tunnels

Improved irrigation practices: Irrigation scheduling (chameleon sensors)	Composting	Grey water management	Natural pest and disease control	Deep and shallow trench beds

Livestock integration: Fodder production

Sunflowers, Sun Hemp, millet

Turnips

Lespedeza

Bird resistant Sorghum

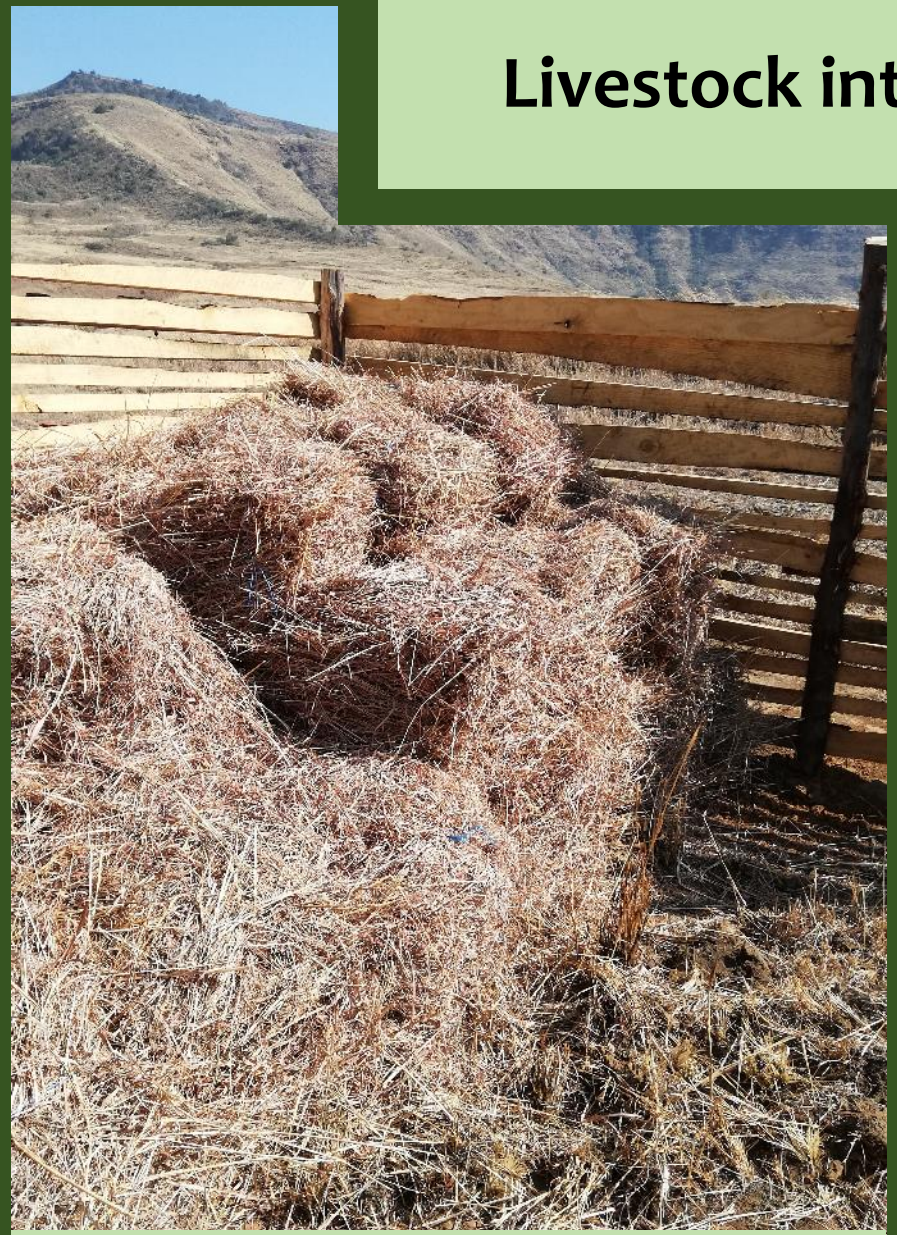
Tall fescue

Radishes, oats

Cover crop options:

- Blocks or strips of SCC mix (fodder sorghum, sun hemp, sunflower), Dolichos and WCC mix (Saia oats, fodder rye, and fodder radish)
- Strips of fodder species, annual (Teff, turnips) and perennial (Lespedeza, Tall Fescue

Livestock integration: Fodder management



Collection of stover and cutting of veld grass for baling and grazing,

Manual baler used at household level

Grazing cover crops or stover in situ

Use of bales with winter fodder supplements, e.g. LS 33, premix450, protein blocks

Return of manure to the fields
(carry or in situ)

Local water access: Spring protection and boreholes

Appropriate tech and low-cost options

- Springs secured and protected. Reticulated header tanks with either communal or household taps and tanks
- Water committees develop out of CRA learning groups and include traditional leadership
- These groups fully involved in assessing options, planning and designing the intervention, collection of monies , implementation, and maintenance
- Development of a water committee constitution with rules of operation, membership criteria, required contributions, etc
- Presently no legal option for providing such small schemes with any recognition and support (outside of a decree by the minister)
- Water Service Authorities slow and unwilling to recognize such options – but also not supporting communities

V-box

Header tanks

Digging offtake for slotted pipe

Slotted pipe

Covering with bidem, stones, and soil

Natural spring

Communal tap

Village Saving and Loan Associations (VSLAs)

- 29 VLSAs, 535 participants
- Combined monetary value of over R1 million
- Savings and small loans used for consumption smoothing, debt repayments, ceremonies, food, home improvements, small businesses and farming
- VSLAs are crucial for continued involvement in farming and for more sustainable livelihoods

~R255 / farmer/ month saved

New innovation: *Bulk Loan Funds* - larger savings and longer term for greater loan potential – specifically for production

Local marketing options (appropriate for smallholder farmers)

- **Food first**, income from surplus (80% of participants)
- **Expansion** of existing cropping areas and types and number of crops grown (10-15%)
- **Production** specifically for sale (1-5%)
- Development of **marketing** options for aggregating small quantities of a range of products
- **Farmgate** (within villages); small local potential with low-income ceilings

Presently the best option

- **Local market stalls** (combined across villages): much larger range of products and income potential, also now focus on labelling, branding, pricing, value adding and processing
- Bakkie traders, stores in local towns (individuals and groups within villages): generally commodity focused, and farmers are price takers – good for larger quantities but **no competitive advantage**
- Sale to local retailers and supermarkets (individuals): requires transport, intermittent, price takers, little stability, competitive – overall **low potential**

Improvement of livelihoods and incomes

Commodity	Average monthly income /participant	Annual income potential
Broilers	R1 025	R12 294
Layers (eggs)	R641	R7 692
Field crops:		
Maize	R210	R3 713
Beans	R238	R2 850
Vegetables	R247	R2 964
All commodities	**Average monthly value of food/ participant**	
Estimate based on interviews	R700	R8 400
Commodity for a selection of participants only	**Average monthly income/ participant**	**Annual income potential**
Green Maize	R1 300	R15 600 to R24 000
Stall fed calves	R750	R9 000 to R50 000
Total value of production (excl. the selection)	**R3 060**	**R36 713**

Averaged from production records. From further individual interviews actual averages Between R1 000- R3 300.

More than doubled production and incomes over a 2 -year period.

Shows what is possible but much broader support required (more people, more villages)

Impact: Resilience snapshots (individual interviews)

Resilience indicators	Increase for EC (21)	Increase for KZN (45)	Comment
Increase in size of farming activities	Gardening; 231% Field cropping; 0% Livestock: 8%	Gardening: 18% Field cropping: 153% Livestock: 6%	Cropping areas measured, no of livestock assessed Dryland cropping has reduced significantly due to drought conditions and infertile soil
Increased farming activities	Yes	Yes	All involved in gardening, field cropping and livestock management
Increased season	Yes	Yes	For field cropping and gardening- autumn and winter options
Increased crop diversity	Crops: 31 new (Ave11) Practices: 24 new(Ave10)	Crops: 21 new (Ave 7) Practices: 20 new (ave8)	New crops are ones not previously grown in the area Management options include; drip irrigation, tunnels, no-till planters, JoJo tanks, RWH drums,
Increased productivity (per season)	Gardening: 116kg Field cropping:-218kg	Gardening: 167kg Field cropping: 506kg	Based on increase in yields (mainly from tunnels and trench beds for gardening).CA for field cropping
Increased water use efficiency	6	6	Access, RWH, water holding capacity, irrigation efficiency and water access rated. *Scale:0= same or worse than before; 1= somewhat better than before, 2= much better than before x 4 criteria (values of 0 to 8)*:
Increased income	R1 031	R1 801	Increase in average monthly income (Rands): Mostly through local marketing and small businesses. *A number of participants have lost employment and grant incomes and replaced these with farming. Around 10% of participants have not improved their incomes*
Increased household food provisioning (Kg/week)	Vegetables: 23kg Dryland crops:10kg Poultry: 2kg	Vegetables: 17kg Dryland crops:18kg Poultry: 2kg	Food produced and consumed in the household Dryland crops include maize, legumes, sweet potatoes, potatoes
Increased savings	R322/month	R262/month	Average of savings now undertaken
Increased social agency	3	3	Learning groups, farmer centres, local water committees
Increased informed decision making	2	2	Own experience, local facilitators, other farmers, facilitators, extension officers
Positive mindsets	2	3	More to much more positive about the future: Much improved household food security and food availability