



Goat restocking and pass-on as a critical entry point to help vulnerable farmers



Photo: Sabine Homann-Kee Tui

How community initiatives are making a difference in goat farmers' lives in Central Mozambique

Sabine Homann-Kee Tui, Claudio Sixpence, Carlos Quembo

Summary

In risk-prone farming areas like Marara District, Central Mozambique, goats are a profitable and resilient source of income. A goat restocking and pass-on approach – providing goats to extremely poor farmers who would then pass on the goats' first offspring to other farmers – was developed, thus enabling the farmers to participate in local development pathways via goat farming.

Benefits were identified at different levels of participation. Selling goats enables smallholder farmers with the means to pay for food, education, human health and farm labor, enabling them to transition to better livelihoods. For communities, an activity such as restocking strengthens their capacity to respond to threats (drought, theft) by building a common knowledge base and developing assets. Stakeholder networks bring goat market partners closer for cost-effective collection and sale/purchase of goats.

Key messages

- Goats provide safety net options for low income members of the community, particularly in marginal and high-risk farming areas.
- Where farmers have lost goats due to many hazards and have failed to access traditional social support mechanisms, restocking and pass-on is a way for them to find their way into community-based development pathways.
- They benefit from existing market opportunities and build assets based on existing community knowledge for mitigating droughts. This expands their income options and potential.
- Against a background of market-oriented development, this entry point promotes equity in communities while empowering members to mitigate unsustainable land use and social conflicts.

Background

The MOREP II project on Nudging Sustainability Transitions Using Innovation Platforms and Market-Oriented Development in Mozambique has worked (2015-2018) through a farmer association, AAPACHIMA, with 60 farmers (representing different levels of resilience) in six villages in Marara District, about 80 km from Tete city.

It involved government departments for crop and livestock extension at district and provincial levels and a number of private abattoirs, traders and input suppliers.

ICRISAT*, BOKU/CDR# and IIAM§ worked together with the Government of Mozambique to understand and facilitate locally conceived change processes which could have significant impact for the farmers. The project was funded by the Austrian Development Agency And supported by the CGIAR Research Program Water Land and Ecosystems.

Context: Rearing goats helps vulnerable farmers access local development pathways

“Since my husband passed away in 2000, things have been difficult for me and my children. We are dependent on rains to farm. When my husband was alive things used to be smooth; we used to sell goats when we did not harvest crops; with the money from selling goats we were able to buy grain. I have now started to raise goats again.”

– Paulina Agostinho, Farmer

“I always dreamt that one day I would be keeping livestock again. I will breed my goats as long as it takes for me to have a larger flock size. Then I will start selling goats to pay for labor on my farm. This will help me as I lost my husband and am not coping with the workload on my own.”

– Fernanda Rocha, Farmer

For farmers like Mrs Paulina and Mrs Fernanda, life once meant struggling on a daily basis. They were helpless in the face of many threats – food insecurity, malnutrition, unreliable weather, pests/diseases, rising food prices, theft and violence – which cut them off from other income-generating resources and opportunities. The only other source of income in the area was selling charcoal.

Then they joined the MOREP II project and became goat owners.

However, access to goats has become difficult for them. Unlike earlier, when affluent farmers loaned goats to their struggling neighbors, these days farmers fear permanent loss of livestock and therefore do not loan it to anyone. Extension services focus on farmers with large cattle herds, neglecting the needs of the vulnerable.

*International Crops Research Institute for the Semi-Arid Tropics

#Centre for Development Research, BOKU

§Mozambique Institute of Agricultural Research

On the other hand, due to a growing demand for goat meat in Mozambique buyers have an insufficient supply of goats, creating the potential to upscale goat restocking and pass-on. The prospects for rearing goats are, therefore, promising and, can play an important role in helping vulnerable farmers, especially women and young farmers, by creating buffers against crises and building assets.

Definition of restocking and pass-on of goats: Restocking and pass-on is an approach designed to help individual households and communities build up lost herds and flocks in a sustainable manner. Animals are distributed to very poor farmers under locally defined obligations for immediate relief from poverty, as part of a longer-term rehabilitation/development process (Ojala et al., 2010).

Challenges with previous restocking and pass-on efforts: While it is widely acknowledged that livestock directly assists the most vulnerable farmers in society, with strong proven links between livestock and poverty alleviation, most interventions remain limited to technological inputs and fall short of integrating community development approaches (Heffernan et al., 2004).

Rearing goats to substitute selling charcoal: To earn income, vulnerable farmers sell charcoal at US\$1.3/bag. Selling goats at a price of US\$25/goat can substitute income from charcoal. To supplement the feed for these goats, a farmer needs to store and feed cereal and legume residues, supplementary feeding for three months of the year. Farmers like Mrs Paulina started intensifying crop production, and with more biomass per unit land she feeds her goats. During drought years, even if crops grain may not reach maturity, crop fields will produce some biomass that can then be fed to goats.



Goats to substitute charcoal selling, last-resort income for vulnerable farmers.



Photo: Sabine Homann-Kee Tui

Raising goats, vital source of income.

Why goats?

Access to goats enables vulnerable farmers to participate in otherwise unattainable local development pathways.

Low risk: Goats are resilient to harsh environments and drought conditions; selling goats for grain buffers farmers against food insecurity.

Easy to manage: Raising goats is possible with little capital investment, less labor and easily met feed requirements. Selling one goat at a time helps to meet immediate cash needs, particularly where there is no formal banking system.

Ideal for women farmers: Since goats are low-maintenance livestock, raising them helps women to balance farm work with family care and household duties. Goat-rearing lowers barriers for women's access to markets, and it builds their self-esteem.

Open opportunities in agriculture: Alternative income is scarce for most smallholder farmers, despite booming mining investments nearby. Selling charcoal is a short-term coping strategy rather than a livelihood. Raising goats reduces dependency on such unsustainable/illegal practices.

Encourage community collaboration: Restocking goats for vulnerable community members by more affluent farmers, extension services and local government, creates a sense of community support. This is critical because although weaker farmers may sometimes receive seed/handouts, providing them technical advice is beyond extension service delivery.

The vital role of goats in developing rural communities is finally being recognized by the government. In May 2016, the president of Mozambique, Honorable Filipe Nyusi, visited Marara District, his home area, and stated that every rural farming family should start with at least three goats. He reiterated the high potential of the District and said that in years of poor harvests goats represent an important backup to ensure food security.

How to embed goat restocking and pass-on into the capacity development of communities

Vulnerable farmers find it difficult to invest in agriculture and require support in order to build up their assets. Goat restocking, as a safety net support, is best designed as a component of community development and not as a stand-alone policy.



Photo credit: Rosana Kral

At reconnaissance IP workshops recipient and mentor farmers discuss modalities for receiving and passing-on goats.

At Innovation Platform workshops, the following critical steps were identified:

- 1. Ensure that restocking is part of a larger community vision:** Market-oriented goat production was defined as a process involving all farmers. Participating in knowledge sharing gave farmers an opportunity to test solutions and enjoy exposure to extension, business services and the private sector.
- 2. Differentiate farmers' needs and aspirations:** Extremely vulnerable farmers perceived poor access to goat markets as a principal barrier to their development. They need to easily access a market with fair and transparent conditions. They benefited greatly from decentralized satellite sales, with the market process helping build momentum to enhance local organization.
- 3. Encourage farmers to define knowledge gaps and test alternative technologies:** Farmers learn more effectively from each other than from extension. Hence there is a need to stimulate farmer-to-farmer learning geared towards their own training requirements, testing alternative management through demonstrations. Those with large flocks have found it easier to test and promote alternative technologies, and the knowledge exchange helps those with small flocks to increase their learning.

Paulina Agostinho: *“I learned how to produce more biomass from less land by increasing planting densities and applying manure and crop rotation. Diversifying my crops gave more nutritious feed for my goats”*. Paulina mixes crop residues and, where she has spare land, grows pigeonpea for supplementary feeding of her goats. Her biggest challenge is to improve her goat *kraal* (enclosure) and she counts on the help of her neighbors in order to do this. This will ensure that her kids stay healthy and in good condition and she does not experience losses during cold and rainy periods.

4. Address conflicts in the wider context: Livestock theft was an unresolved issue resulting in social conflicts and loss of trust within communities. Affluent farmers stopped loaning their goats to the more vulnerable. Through the IP, provincial decision makers helped the farmers’ association present its case to the police. Road control was enforced, leading to substantial curbing of theft. Though beyond the project’s core focus, theft control was seen as necessary to regaining confidence in restocking and pass-on.

What procedures are required for successful goat restocking and pass-on?

For restocking and pass-on to be successful, the IP highlighted the importance of creating suitable conditions on the farm and in the wider social network.

Selection of restocking and mentoring farmers

One of the greatest risks of restocking is that when vulnerable farmers are faced with family emergencies, they sell the goats. Other risks are farmers lacking sufficient knowledge of goat rearing, and the animals dying due to feed shortages, disease and lack of care.

At an IP workshop, farmers stipulated their own criteria for being selected as a restocking and pass-on candidate, and approved the first six restocking farmers and their mentors. The conditions were identified as follows:

- The vulnerable farmer must be a member of the farmer association with a real interest in goats; he or she must have participated in agricultural crop and livestock training sessions and have established good co-operation and relationships within the community. The farmer must have demonstrated a willingness to share knowledge from the experience.
- The mentoring farmer must be experienced in raising and selling goats, willing to assist restocking of several nearby farmers, regularly verify the well-being of the goats, provide technical advice and be available for consultation on management decisions.

Terms and conditions for accessing and passing on goats

The restocking and mentoring farmers collaborated with local extension services to define clear terms and contractual conditions for goat loans. These included modalities for purchasing goats, mentoring role by a nearby farmer, management and sales decisions, repayment and pass-on agreements and monitoring schedules involved, specific to the local situation. In Marara District, for example, flexibility in procurement, mentoring and pass-on is essential.

The goat restocking package was designed to ensure that in each village one farmer who did not have goats, received five animals (four females, one male), along with contractually binding management instructions (feeding, health, housing) to provide favorable conditions for goat productivity:

- Construct a *kraal* as a precaution for the health and safety of the goats.
- Mentoring farmers to visit the farm every two weeks for monitoring.
- Pass on five goat kids after weaning to selected pass-on farmers. No sales before kids are passed on; group liability.
- If only male goat kids are born, farmers could swap among themselves for females.

The role of government and support organizations

The government or development agency involved in the initiation and facilitation of a restocking project helped to ensure that all conditions are understood and adhered to. It solicits long-term commitment and gathered participants' feedback on progress. Technical assistance, ideally by a team of experts, involves:

- Linking selected farmers to ongoing agricultural training and capacity development programs
- Verifying goat breeds adapted to the specific environment and making selections based on age, sex and health
- Ensuring transparent acquisition and distribution of goats, as well as their monitoring and evaluation
- Informing farmers about improved nutrition, health and housing as key factors in enhancing reproduction and reducing mortality
- Promoting integrated intervention packages that support productivity and profitability
- Facilitating selection of pass-on farmers in close proximity to mentoring farmers
- Responding to external disturbances, environmental degradation, social conflicts and disease outbreaks

The date of the pass-on must be flexible, depending on when most of the goats have given birth and the kids are ready to be passed on. It should be created as an event to give restocking farmers the opportunity to illustrate their experience and, in this way, demonstrate their success and share lessons on the process.

Conclusions and recommendations

Restocking and pass-on helps goat farmers achieve sustainable income. Investments in high-potential agricultural commodities such as goats, are urgently needed to solve market access challenges. Multi-stakeholder engagement can help smallholder farmers tap into readily available growth potential in goat farming.

Restocking and pass-on in a new light

The IP-driven approach highlights the critical role of embedding restocking and pass-on in community structures. It emphasizes the importance of involving farmers from different resource levels in planning and designing strategies for goat management and market improvement. The diversity in perceptions and priorities gives better understanding of how socially inclusive market systems need to be set up while inspiring innovation. Enabling vulnerable farmers to rebuild their livelihoods and participate in real market opportunities also creates a sustainable entry point for social protection programs, paving the way for economic and social empowerment.

Lessons for agricultural development

- Interventions that improve inter-community relations are likelier to be adopted.
- Instead of promoting technologies that only address immediate food security, adopting a mid-to-long-term perspective helps better and faster knowledge sharing among social networks, farmers, private sector, government extension and policy makers.
- In Marara, farmer-to-farmer learning brought deep understanding and motivation to improve farm management, increase biomass production per unit of land and make goat farming feasible for the extremely vulnerable.
- Farmers of all resource levels reported improvements in productivity, increased biomass on less land and more feed for livestock.
- Extension services recognized the importance of including low-income farmers in their service portfolio.
- Fostering social networks helped farmers and extension services beyond the immediate target group to other farmers within a community, as well as to other villages and neighboring districts.

Implications for social protection programs

Goat restocking and pass-on was identified as an option for social protection programs. The approach assists vulnerable farmers to participate in goat market development as a viable pathway to real income opportunities and prevents them from falling deeper into poverty. Existing livelihoods are under threat from several factors and risks, and often become unviable. As this study shows, opportunities in agriculture do exist, even for the vulnerable. Investing in productive and risk-coping assets like goats, in conjunction with the appropriate market infrastructure and community-based organization, strengthens the resilience of the overall agricultural system.

Farmer statements on the restocking and pass-on approach

Laurinda Horacio: *Last year we had another drought year. I did not produce enough feed on my fields to supplement the goats. I presented the situation to my mentor farmer and he helped me by negotiating with my neighbor to collect some supplementary residues from his farm.*

Matheus Ferrao: *One female goat suffered from a disease. Fortunately, the mentor farmer helped me to identify the disease. It was possible for SDAE extension to treat the goat on time.*

Domingos Sombreiro: *I did not harvest any crops during the last season. In January I sold one female goat to buy food. The mentor farmer reminded me about the conditions to which I had agreed in order to receive the goats and the risk I ran of having all the goats taken away. I agreed to replace the goat and two days later managed to do so.*

Virginia Mateus: *After I received the goats, I realized that the kraal was not high enough to keep the goats inside. I lost one female and one male goat. Community members sat together and decided to support me. They replaced the lost goats.*

Paulina Agostinho: *One goat got out and got killed by a car. I sold the meat to replace the goat. Now I need to improve my kraal. I will ask my mentoring farmer to help collect the wood and find people who can assist in the construction.*

Acknowledgements

This work was implemented as part of the bilateral funding agreements with the Austrian Development Agency (ADA) and the CGIAR Research Program on Water, Land and Ecosystems (WLE), which is carried out with support from CGIAR Fund Donors; for details please visit <https://wle.cgiar.org/donors>. The views expressed in this document cannot be taken to reflect the official opinions of these organizations. Our thanks to Rajani Kumar and Violette Kee Tui for editing.

References

- Heffernan, C.** 2004. Livestock and the Poor: Issues in poverty-focused livestock development. Chapter 15, in: Responding to the Livestock Revolution: the role of globalisation and implications for poverty alleviation. Eds. E. Owen, T. Smith, M.A. Steele, S. Anderson, A.J. Duncan, M. Herrero, J.D. Leaver, C.K. Reynolds, J.I. Richards, J.C. Ku-Vera. British Society of Animal Science, publication 33
- Herrero, M., Mayberry, D., van de Steeg, J., Phelan, D., Ash, A., Diyezee, K., Robinson, T., Henderson, B., Gilbert, M., Wijk, M., Godde, C., Blummel, M., Prestwidge, D., Stephenson E., Power, B., Parsons, D.** 2013. Understanding Livestock Yield Gaps for Poverty Alleviation, Food Security and the Environment. The LiveGAPS Project. MBG.
- Ojala, R. Mugisha , A. Ocaido, M.** 2010. Factors affecting livestock restocking projects in Southern Teso of Eastern Uganda. Africa Journal of Animal and Biomedical Sciences 5 (2)
- Rutazihana R, Hendrickx S and Moyo S.** 2011. Overview of the livestock sector in Mozambique. ILRI, Maputo.
- Vernooij, A., dos Anjos, M., van Mierlo, J.** 2016. Livestock Development in the Zambezi Valley, Mozambique: Poultry, Dairy and Beef Production. Wageningen UR (University and Research) Centre for Development Innovation. Report CDI-16-027. Wageningen.
- World Bank.** 2012. Managing risk, promoting growth. Developing systems for social protection in Africa. The world banks social protection strategy 2012-2022. Washington DC.

Front cover photo: *Sabine Homann-Kee Tui, ICRISAT*

Caption: *A goat farmer in Marara District with her goats in a kraal.*

We believe all **people** have a **right** to **nutritious food** and a **better livelihood**.

ICRISAT works in agricultural research for development across the drylands of Africa and Asia, making farming profitable for smallholder farmers while reducing malnutrition and environmental degradation.

We work across the entire value chain from developing new varieties to agribusiness and linking farmers to markets.

**ICRISAT-India
(Headquarters)**
Patancheru, Telangana, India
icrisat@cgiar.org

ICRISAT-India Liaison Office
New Delhi, India

**ICRISAT-Mali
(Regional hub WCA)**
Bamako, Mali
icrisat-w-mali@cgiar.org

ICRISAT-Niger
Niamey, Niger
icrisatso@cgiar.org

ICRISAT-Nigeria
Kano, Nigeria
icrisat-kano@cgiar.org

**ICRISAT-Kenya
(Regional hub ESA)**
Nairobi, Kenya
icrisat-nairobi@cgiar.org

ICRISAT-Ethiopia
Addis Ababa, Ethiopia
icrisat-addis@cgiar.org

ICRISAT-Malawi
Lilongwe, Malawi
icrisat-malawi@cgiar.org

ICRISAT-Mozambique
Maputo, Mozambique
icrisatmoz@panintra.com

ICRISAT-Zimbabwe
Bulawayo, Zimbabwe
icrisatzw@cgiar.org

ICRISAT appreciates the support of CGIAR investors to help overcome poverty, malnutrition and environmental degradation in the harshest dryland regions of the world. See <http://www.icrisat.org/icrisat-donors.htm> for full list of donors.



About ICRISAT: www.icrisat.org



ICRISAT's scientific information: EXPLOREit.icrisat.org



/ICRISAT



/ICRISAT



/ICRISATco



/company/
ICRISAT



/PHOTOS/
ICRISATIMAGES



/ICRISATSMCO