

REVIVING NATURE'S SYMPHONY

The triumph of participatory rangeland management in transforming a degraded landscape

Ethiopia, June 2024



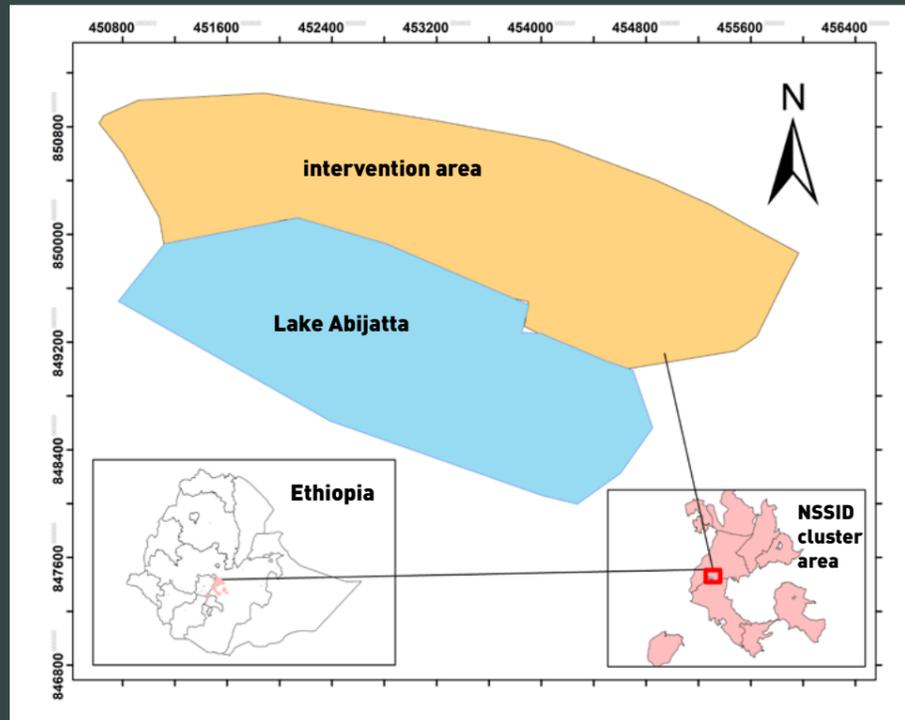
 **FARM AFRICA**

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As part of the Nature-based Solutions for Sustainable and Inclusive Development (NSSID) programme, funded by the Embassy of Sweden in Ethiopia, Farm Africa is leading a consortium to develop sustainable livelihoods that protect and restore ecosystems in three eco-region clusters across Ethiopia.

This case story describes the success of the Mansa Participatory Rangeland Management Cooperative in restoring degraded grasslands at Abijatta-Shalla National Park in the Great Rift Valley. The rapid transformation showcases what can be achieved by combining innovative techniques, collaborative effort and community engagement.



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INTRODUCTION

This case story showcases the transformative impact of implementing sustainable practices in restoring degraded rangeland ecosystems. It illustrates how rangeland restoration contributes to biodiversity conservation, improved soil health, carbon sequestration, water quality improvement and sustainable livelihoods for local communities. It serves as a beacon of hope, demonstrating that with effective management and community involvement, degraded rangelands can be transformed into thriving ecosystems that benefit both people and nature.

Through this narrative, we aim to highlight how collaborative efforts, innovative techniques and community engagement have revitalised ecosystems, enhanced biodiversity, mitigated desertification and improved livelihoods.

By showcasing and sharing successful restoration efforts, we aim to inspire stakeholders, policymakers, civil society organisations, donors and the public to support similar further initiatives and actions towards restoring and conserving nature worldwide to benefit both people and the planet.

BACKGROUND

The Ethiopian Central Rift Valley covers one million hectares, part of the Great African Rift Valley, south of Addis Ababa. It hosts three main lakes: Ziway, Abijata and Langano, with Lake Ziway (Hara Dembal) as the primary freshwater source. Elevations range from 1,600 m to over 3,000 m. Rainfall varies from 550 mm to 1,250 mm, and temperatures range from 14°C to around 19°C.

Around 1.9 million people, mainly in rural areas, inhabit the area. The area faces food insecurity and recurrent droughts, impacting livestock productivity and increasing mortality rates.

In recent years, lake levels in the Central Rift Valley, particularly in Lake Abijatta, have significantly decreased, shrinking by 66.6 km² between the years 1972 and 2015.¹ This decline highlights the urgent need for improved resource management and conservation actions and integrated land and water management strategies to address the negative impacts on communities and the ecosystem.

Local policymakers and stakeholders appear to have limited capacity to respond effectively to the ongoing natural resource degradation, underscoring the necessity for collective action considering the area's ecosystem risks coupled with climate change pressure.

Abijatta-Shalla Lakes National Park (ASLNP) is located within the central portion of the Great Rift Valley, in the Oromia Region, 207 km south of the capital Addis Ababa, at an elevation of between 1,540 and 2075 m above sea level. Established in 1963, ASLNP spans 887 km², primarily focused on bird conservation. It encompasses aquatic and terrestrial ecosystems, hosting over 450 bird species, representing 52.5% of the country's bird species, and serving as a nesting and breeding site for European and Asian migratory birds during the winter seasons.^{2,3} Thus, the value of Abijatta-Shalla from a conservation point of view is as one of the sites of the highest wetland bird diversity in Ethiopia.

Conflicts between local communities and park management, population pressure,

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Opposite: Land under management of the Mansa Participatory Rangeland Management Cooperative in 2023, with sustainably harvested grass for animal fodder in the background.

Cover: Members of the Mansa Participatory Rangeland Management Cooperative walk across grasslands restored under their management (Photo: Farm Africa).



Photo: Farm Africa/Medhanit Gebremichael

unsustainable resource management, weak enforcement of laws, uncertain land tenure and limited public awareness of climate change and biodiversity importance are some of the key social and environmental challenges of the park and its surrounding areas. These have led to the conversion of natural vegetation areas into cultivated and bare lands, overgrazing of the grasslands, soil erosion, siltation, depletion of shrubs for fuel and deforestation for construction and charcoal production. Consequently, there is experience of heightened erosion and nutrient depletion, while the Abijatta-Shalla Lake ecosystems and their unique bird species in the park face endangerment due to habitat disturbances.^{4,5}

To tackle these challenges, Farm Africa, with funding from SIDA through the Swedish Embassy in Ethiopia, spearheaded a project under the Growth for the Future Programme II collaborating with five consortium member organisations. The initiative was focused on natural resource management for resilience and economic development, aiming to bolster sustainability and resilience in the Central Rift Valley (CRV).

The project showcased best practices in integrated natural resource management and rural development, employing an Integrated Landscape Management (ILM) approach that integrates social, economic and environmental goals through a holistic and participatory framework.

PROJECT INITIATION/PLANNING PROCESS

In April 2022, Farm Africa, through the CRV Landscape Management project funded by SIDA, established a participatory rangeland management cooperative (PRMC) called Mansa Participatory Rangeland Management Cooperative (Mansa PRMC) as an adaptation strategy to resolve conflicts, improve community livelihoods and ensure sustainable management of park resources. The journey towards forming this cooperative began

with discussions with various stakeholders, including the Adami Tulu Jido Kombolcha Agriculture office, Woreda Administration, Cooperative Promotion office, Abijatta-Shalla National Park, and community representatives.

Initially, the proposal was met with skepticism within the community. There were doubts about the feasibility of land rehabilitation and collaboration due to historical tensions with park management. Facilitated by Farm Africa, extensive discussions ensued, leading to a mutual agreement between the community and the park to collaborate.

To garner community interest, Farm Africa organised an experience-sharing event, showcasing successful rangeland management initiatives previously established in the West Arsi Zone, Negele Arsi Woreda, Keraru Kebele. Key figures, including elders, influential individuals, community representatives and woreda rangeland management experts attended the event, motivating participants to disseminate knowledge and fostering community consensus in forming a cooperative to manage the degraded pastureland.

The Mansa Participatory Rangeland Management Cooperative, comprising 462 members, including 92 women, was subsequently established by developing bylaws to address a degraded area of 558 hectares within Abijatta-Shalla National Park, an area which had remained barren for decades. Following its establishment from scratch, the cooperative obtained certification from the East Shewa Zone Cooperative Promotion Office through legal processes.

To ensure effective management, a steering committee of 13 cooperative members, including three women, was formed. Under this leadership, the group began implementing a strategy to protect the area from human and animal interference. The cooperative divided its members into 11 subgroups, each tasked with rotational protection of the area.

Opposite: Lake Abijatta is a vital resource for people and wildlife.

Every member dedicates one day per week to safeguarding (conducting patrolling and monitoring with a group of people) the land, demonstrating their commitment to its preservation and sustainable management.

Notably, the cooperative has adopted a novel approach of mental enclosure. Instead of using physical fences, this approach prioritises strategies such as community engagement, education and incentives to encourage responsible land use practices. This is a shift in mindset or perception, emphasising the importance of cognitive boundaries or conceptual frameworks over physical barriers, showcasing their dedication to conservation.

IMPLEMENTATION

After enclosure and formalisation of the cooperative, efforts to rejuvenate the rangelands were made by overseeding with 200 kilograms of Rhodes grass. Initially, results seemed moderately successful, however, the area eventually regenerated entirely from the local grass variety of soil seed banks after protection from human and animal interference by applying paddocks and the cut and carry feeding system.

The community actively safeguarded the area, supported by technical assistance from the project and government sectors such as the Agriculture Office, Cooperative Promotion Office and Environmental Protection Authority. The Abijatta-Shalla National Park office contributed by demarcating and

mapping the rangeland, providing technical assistance such as awareness creation on the importance of biodiversity conservation and ensuring ongoing follow-up. The kebele administration played a vital role in resolving administrative issues and enforcing relevant laws.

Challenges arose during implementation, including attempts to dissolve the cooperative, particularly by individuals from distant places and other woredas with large livestock holdings aiming for free grazing. Discussions with the woreda and kebele administrations resulted in the formulation of robust bylaws including the fair utilisation of rangeland among cooperative members, implementing cut-and-carry methods and rotational grazing, and securing rangeland ownership solely for members with legal certificates, with the kebele administration receiving support through law enforcement measures. Conflict resolution committees, comprising three elders, were established, leading to agreement by dissenting individuals to adhere to the bylaws.

Additionally, to foster a sense of ownership and enhance alternative livelihoods, the project provided 20 Borena breed bulls for the cooperative as start-up capital for fattening post-rangeland improvement. This support aims to assist cooperative members in managing their business endeavours and generating sustainable income.

¹Hailu, Binyam & Girma, Shimelis. (2019). Spatio Temporal Lake Level Change of Lake Abijata, Ethiopia: A Remote Sensing Approach. Environmental Analysis & Ecology Studies. 6. 10.31031/EAES.2019.06.000627.

²Rezenom, A. (2012). A Checklist of the Birds of the Abijata-Shalla Lakes National Park of Ethiopia. Ethiopian Wildlife Conservation Authority (EWCA) and ASLNP.

³Fekadu, T. and Fekadu, B. (2014). Indigenous claims and conflicts in managing the Abijata Shalla Lakes National Park, Ethiopia. Int. J. Biodiver. Sci. 10(3): 216-227.

⁴Flower, R. (2011). Abijata-Shalla Lakes National Park: Assessment of Factors Driving Environmental Change for Management Decision-Making.

⁵Temesgen, H., Nyssen, J., Zenebe, A., Haregeweyn, N., Kindu, M., Lemenih, M. and Haile, M. (2013). Ecological succession and land use changes in a lake retreat area (Main Ethiopian Rift Valley). J. Arid Environ. 91: 53-60.



Photo: Farm Africa/Medhanit Gebremichael

RESULTS AND IMPACT

Environmental impact

Within a year, 95% of the lands within the Mansa rangeland boundary have been restored to grassland (Figures 1 and 2).

The rangeland ecosystem has transformed remarkably, evolving from barren land into a diverse landscape teeming with herbaceous and woody vegetation, including acacia species. This improvement has led to thriving wildlife populations, while also significantly reducing soil and wind erosion. Although exact figures are unavailable, there has been a noticeable enhancement in both soil fertility and organic carbon content, contributing to carbon sequestration.

The revitalised rangelands and enhanced ecology have strengthened the connection between terrestrial and lake ecosystems, effectively acting as a buffer zone against siltation and sedimentation in the lake, thereby improving water quality and benefitting aquatic life, including fish.

A joint assessment report by the Ethiopian Institute of Biodiversity, Batu Fish Research Center, and Abijatta-Shalla National Park confirms the increase in fish stocks, witnessed by both community members and park staff at Lake Abijatta. Previously depleted fish resources have rebounded, attracting fishermen from distant areas.

Lake Abijatta, once renowned for its migratory bird populations, faced challenges such as reduced water volume and declining water quality due to silt accumulation and pollution. However, successful ecological restoration efforts have reversed this trend, underscoring the significance of this achievement both locally and globally, and supporting significant biodiversity conservation, particularly of European migratory birds.

Economic and social benefits

Cooperative members engaged in two rounds of bull fattening. The project provided 200,000 Ethiopian Birr (ETB), approximately 3,500 USD, start-up capital, which enabled the cooperative to buy 20 bulls, which they sold for 685,000 ETB (12,000 USD) after fattening. In the second phase, they purchased 37 bulls, selling for 1.5 million ETB (27,000 USD), yielding a net profit of 1,265,000 ETB (approximately 23,000 USD) within a year. Each member received a year-end dividend of 1000 ETB (approximately 17 USD) and the remaining revenue was reinvested.

Furthermore, the cooperative harvested 7400 grass bundles from 40 hectares of their 558 hectares, from which they anticipate revenue of about 1,036,000 ETB (18,667 USD). Upon completing the harvesting of the remaining 396 hectares, the projected



Photo: Farm Africa / Medhanit Gebremichael

“The lake, which was almost dry, has now recovered; fishes that had disappeared for 30 years are now back. To our surprise, bird species have returned. These birds had been gone for many years.”

Ato Aschalew Tsegaye, Chief Warden of Abijatta-Shalla National Park

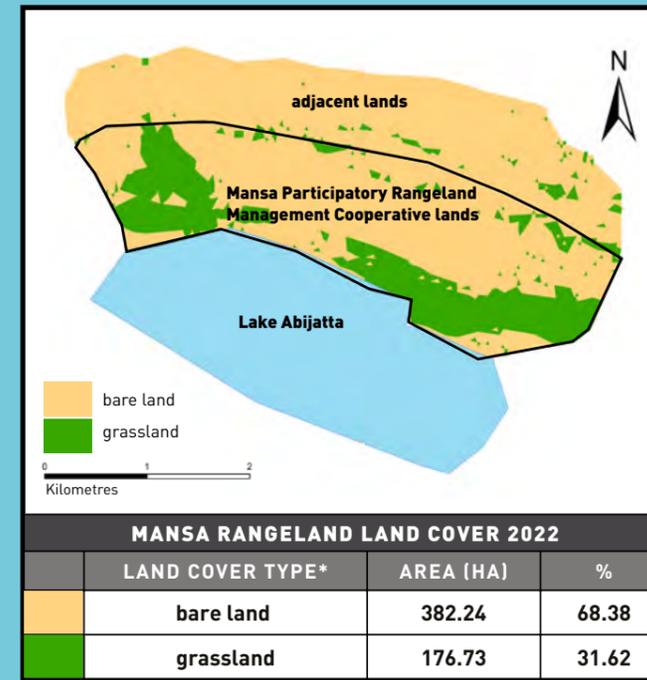


Figure 1: land cover within and adjacent to the newly demarcated Mansa Participatory Rangeland Management Cooperative boundary in October 2022.

October 2022

October 2023

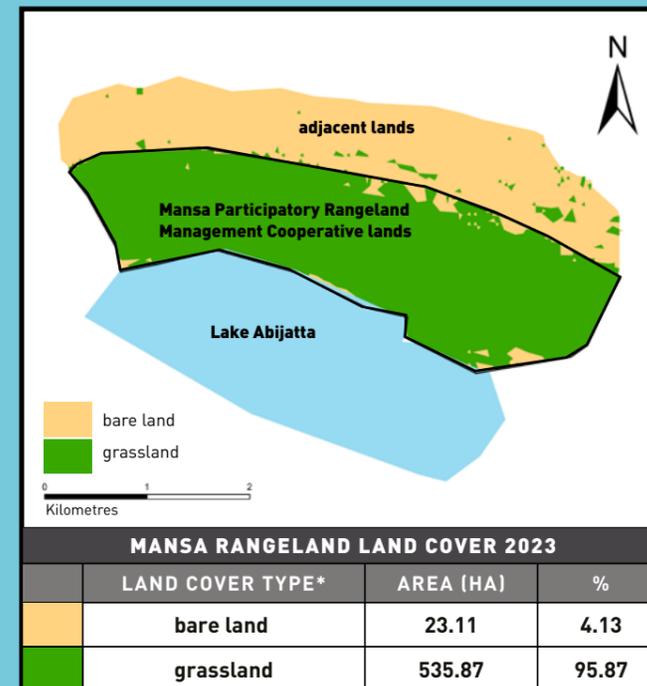


Figure 2: land cover within and adjacent to the Mansa Participatory Rangeland Management Cooperative boundary in October 2023.

* Derived through analysis of time series sentinel (satellite) images using Normalised Difference Vegetation Index (NDVI). Bare land = NDVI < 0.2; Grassland = NDVI 0.2-0.5.



March 2022



Mansa PFMC established

April 2022



February 2024



May 2024

revenue from sales could increase to 7.77 million ETB (approximately 136,000 USD).

All revenue generated from grass sales will be reinvested into cooperative businesses to enhance sustainable income generation. Dividends are then distributed annually according to cooperative law, sharing net benefits from the cooperative's various business enterprises. Some members also benefited from fish harvests for household consumption and extra income.

The community of Desta Abijatta Kebele, known for its large livestock population and frequent droughts, has notably improved its social cohesion, bolstering resilience to drought, a persistent challenge in the area. Baba Edasa, chairman of the cooperative, recalled significant livestock losses due to drought four years ago; however, improved measures such as guaranteed feed for cattle have made the community more resilient. The longstanding conflict between the park and its neighbouring areas, spanning three decades, has finally been resolved, fostering increased trust among the parties involved and leading to collaborative efforts toward sustainable resource management.

Sustainability and long-term impact

The Mansa Participatory Rangeland Management Cooperative is now legally established and institutionally strengthened, with a steering committee and subcommittees. Besides collective benefits, individual member benefits like dividends are emphasised. A partnership with the Oromia Cooperative Bank has been established to access financing for a dairy business, marking significant progress.

Additionally, the Abijatta-Shalla rangeland site managed by the Mansa PRMC is recognised as a centre of excellence, visited by various government bodies and featured in broadcasts by government media outlets like Fana and the Oromia Broadcasting Network (OBN).

KEY LESSONS LEARNT

By integrating rangeland management with alternative livelihood options, we can ensure sustainable resource management practices. Interventions designed based on community needs, coupled with active participation and representation, result in lasting impact. Leveraging successful and tested models through experience sharing facilitates achievement. The collaboration of key stakeholders synergises to yield tangible outcomes in restoring rangelands. Moreover, resolving resource-based conflicts through co-management approaches not only promotes environmental preservation and biodiversity but also fosters peace and socio-economic wellbeing.

CONCLUSION

This restoration effort demonstrates the impact of sustainable practices in reviving degraded rangelands through collaborative, inventive and community-driven approaches. It emphasises the importance of ecosystem revitalisation, biodiversity conservation, desertification combat and local livelihood enhancement. We hope to inspire global investment, policy support and collective action for natural resource restoration and conservation by sharing this case story.



“Previously, I didn’t engage in fishing due to the prolonged decline in fish resources. I now fish seven days a week. Additionally, the use of boats benefits around eight to ten jobless youth groups per day.”

Obbo Dita Akawak
member of the wider community



MANSA PARTICIPATORY RANGELAND MANAGEMENT COOPERATIVE TELL THEIR STORY

"The park has been inscribed in our hearts and minds. As you can see, it's not fenced with wire or any wooden material, but all members of the cooperative, men or women, elders or youngsters, are protecting it."

This is how Ade Rameto, a member of Mansa Rangeland Cooperative, describes her community's relationship with Abijatta-Shalla National Park. It was not always the case.

Before the cooperative's establishment, "we had never felt that the park belonged to us," says Meke Abegaz Uga. The land within the park had been deteriorating for decades and the community had become frustrated at losing their sense of ownership.

"We had tried to approach the park management. The leaders of the community offered to manage the land and generate income by setting up a cooperative. However,

we were told this is impossible as the park was under the control of the Federal Government," says Obbo Alito Merke. "We, the residents, and the park management had come to see each other as enemies", adds Dabi Elemo.

As relationships with the park deteriorated, illegal grazing increased, and it wasn't just the local community breaking the rules; livestock herders from nearby provinces were encroaching too, often stealing cattle when they departed. To make things worse, the area was then hit hard by dry seasons, causing the community to lose their animals.

When Farm Africa offered to mediate between the park management and local communities, community members were skeptical. Alito remembers: "At first we declined, telling them not to bother us with an impossible idea, but they persisted."

After Farm Africa facilitated an experience-sharing visit to the role model cooperative, feelings changed. "Community representatives including elders attended the visit and that helped us learn a lot. Their success story motivated us for action," explains Alito.

Now well established, Mansa Participatory Rangeland Management Cooperative has members from 462 local households. The lands under their guardianship are

"The park has been inscribed in our hearts and minds. As you can see, it's not fenced with wire or any wooden material, but all members of the cooperative, men or women, elders or youngsters are protecting it."

Ade Rameto
member of Mansa Participatory Rangeland Management Cooperative



Members of Mansa Participatory Rangeland Management Cooperative gather in front of bales of sustainably harvested grass that will be used as animal fodder.

Photo: Farm Africa/ Medhanit Gebremichael

flourishing again and the size of the lake, which had been almost dry, has significantly increased.

Meke Abegaz says: "With the recovery of the lake, fish have returned in abundance. It's thanks to these fish that we survived the shortage of food we faced over the past two years. Almost every household was mainly eating fish as the harvest was not good.

"Additionally, the fish have now become a source of income for members of the community including fishermen, daily labourers and traders."

The group's diversification into cattle fattening and fodder production has also been highly successful. "Within two and a half years, our cooperative has managed to secure ETB 1.5 million capital from cattle

fattening", Kedir Bedasso, Secretary of the cooperative explains. On top of that, 7400 bales of animal feed have been sustainably harvested from 40 hectares of the restored land, generating additional income for the community.

The long-term disagreement between the community and park management has also resolved. "We are no more in conflict; we are working together as one entity," says Barba Chiri.

Ato Aschalew Tsegaye, Chief Warden of Abijatta-Shalla National Park, agrees. "The problems that caused the long-term conflict have been well addressed. We have made sure that the community is now benefitting from the park," he says. "The results achieved through this project are tremendous. We would like to scale up this success to the other part of the lake."



Photo: Farm Africa/Medhanit Gebremichael

Barba Chiri is among the cooperative members who have diversified their income through fishing. "That loss of cattle has still affected my family. However, thanks to the rehabilitation work, I'm able to survive the loss by generating income from fishing. Not only this but I've also created job opportunities for more than 20 workers. Many of our cooperative members have been engaged in fishing and they have created job opportunities also. On average, one person employs 30 labourers."

Photo: Farm Africa/Medhanit Gebremichael



“That barren land, which had been neglected for many years, has now become productive and earns us income.”

Ade Rameto
member of Mansa Participatory Rangeland
Management Cooperative



Photo: Farm Africa/Medhanit Gebremichael

This project is part of the Nature-based Solutions for Sustainable and Inclusive Development programme, funded by the Embassy of Sweden in Ethiopia.

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