



GI AHS of Tanzania

Kihamba agro-forestry & Maasai Pastoral Systems

Firmat Banzi, David Boerma & Grace Mwaigomole



Kihamba agro-forestry on Mt. Kilimanjaro





System Characteristics:

- Multi-tier agro-forestry system (perennial trees, banana, coffee, vines and annual crops) on small plots (*Kihamba*)
- Intricate irrigation system with traditional storage ponds (*Nduwa*)
- Total area 120.000 ha. on southern slopes of Mt. Kilimanjaro
- More than 500 plants species (100+ species for human use)
- Kihamba is the focus of family life of the Chagga tribe, people are born, come of age, marry and are buried on their *Kihamba*
- The Kihamba's high biomass, biodiversity and sustainability are critical for the ecology of Mt. Kilimanjaro, including its function as a water tower for the surrounding region and as a carbon sink
- Historically supported highest rural population densities known in Africa without undermining sustainability (800 years old)







Site Characteristics:

Location: Shimbwe Juu Village, Kilimanjaro District, Northern Tanzania

Surface area: 619 ha.

Human population: 2 569

Environment: Montane humid tropical forest (elevation 800 – 2200 m.)

Selected for: Community's commitment for maintaining the system, integrity, biodiversity (mainly plant species and fruit and banana varieties)



Development and implementation process: As for Engaresero





Coffee and the Kihamba on Mt. Kilimanjaro

- Introduced in 1880's by German missionaries
- Fully compatible with Kihamba ecology
- Widely and quickly adopted by the farmers, while banana remained the staple food crop
- Allowed the farmers to adapt their household economy to emerging cash needs
- Today pests and diseases have multiplied, while prices of coffee fluctuate and prices of inputs are high
- Addressing this key threat is at the core of the action plan for the dynamic conservation of project area.



Dynamic Conservation Action Plan:

1. Strengthen community institutions for environmental management and marketing (CBO and organic coffee/vanilla cooperative)
2. Improvement of management of coffee through training in IPPM
3. Rehabilitation and increasing capacity of traditional irrigation ponds (*Nduwa*) and canals to address longer dry spells (climate change)
4. Introduction of vanilla as additional source of income (fits into Kihamba ecology)
5. Introduction of aquaculture (trout) as additional source of income/protein
6. Erosion control (terraces, soil cover)
7. Development of the area as a agro-tourism destination
8. Community conservation and transmission of traditional knowledge
9. Establishment of a Kihamba heritage museum
10. Recognition of the area as a National Heritage



Lessons Learnt / Recommendations (Kihamba)

The ongoing degradation of the Kihamba will transform Mt. Kilimanjaro from a lush and biodiverse area into a heavily eroded and barren area. Upscaling of the present efforts on Mt. Kilimanjaro would be highly desirable

This system, like most GIAHS areas, is intricate. Interventions in one component of the system often require adjustment of other components in order to be effective and to maintain the balance of the system. Working across sectors and levels is therefore essential. This has also been an extremely valuable learning experience for the agencies and people involved



Lessons Learnt / Recommendations (General)

In many countries there is no comprehensive exit strategy for farmers and livestock keepers if their agricultural heritage systems fail. In most cases other economic sectors are not (yet) in a position to absorb such populations. The social and economic costs of a rural exodus loom large over the future if GIAHS are allowed to fail. Agricultural development policies could do more to address these concerns.

As in Kenya the project carried out a national assessment of GIAHS areas, in Tanzania 4 other GIAHS were identified to date. There is a big potential for national upscaling.



Project Partners

Ministry of Agriculture, Food Security and Cooperatives (lead)

Ministry of Livestock Development and Fisheries

National Environmental Management Council

Ministry of Natural Resources and Tourism (Antiquities Div.)

Kilimanjaro Native Coffee Union

District and local authorities

The Community of Shimbwe Juu

Maasai Pastoralism at Engaresero Village



Oldonyo el Lengai



System Characteristics:

- highly flexible and sustainable mobile livestock keeping system, moving herds (cattle, goats, sheep, donkeys) and people in harmony with nature's unpredictable patterns in a semi-arid environment, including under conditions of climate change
- Approx. 1000 years old
- customary institutions managing natural resources, combined with vast traditional knowledge and strong cultural traditions on treating nature with respect have created and maintained one of Africa's most iconic landscapes
- significant synergies of Maasai management with wildlife conservation
- supports livelihoods of approx. 600.000 Maasai in Tanzania





Human-wildlife synergies:

Relationship historically evaluated as competition between people and livestock over natural resources, however:

- Joined interest in maintaining natural resources and habitats
- Controlled burning and seasonal grazing encourages general productivity of pastures wildlife co-dependes on
- Feed facilitation: Cattle, goats and donkeys are applied selectively to pastures and graze only certain species/parts of plants, allowing other species palatable to wildlife to grow
- Maasai harvest wood and medicinal species selectively. Strong cultural norms and institutions (re-)enforce this
- Maasai do not kill wildlife for food or other uses. This is taboo.
- Wild herbivores stay close to cattle herds and homesteads for protection from predators



Site Characteristics:

Location: Engaresero Village, Lake Natron, Ngongoro District, Northern Tanzania

Surface area: 104,550 ha.

Human population: 5 539

Livestock population: 19.000 (cattle)

Environment: Semi arid grassland, wooded grassland, forest, soda-lake shore

Selected for: Community's commitment for maintaining the system, integrity, biodiversity (species and habitats), Oldonyo L'Engai and footsteps (oldest of homo sapiens: 120.000 years) have high tourism potential





Development and implementation process





Development and implementation process

1. Developed standard site selection process and criteria for the project (Kenya and Tanzania)
2. Potential sites were evaluated in the field, based on shortlist developed through expert consultations: Engaresero village was chosen
3. A Free Prior Informed Consent procedure in the community was held. The community gave its consent by acclamation
4. Threats and opportunities presented by the site were analyzed and a draft Community Action Plan was developed by the project team
5. The draft Community Action Plan was presented to the community, to indicate priorities and to include suggestions for its improvement
6. The revised draft was presented to the Project Facilitating Committee and community for approval
7. Community set up committees for each of the components of the action plan to work with the project team
8. Implementation



Project Partners

Ministry of Livestock Development and Fisheries (lead)

Ministry of Agriculture, Food Security and Cooperatives

National Environmental Management Council

Ministry of Natural Resources and Tourism (Antiquities Div.)

Tanzania Natural Resource Forum

District and local authorities

The Community of Engaresero



Dynamic Conservation Action Plan:

1. Strengthen community institutions for planning, NRM and tourism (establishment of CBO, by-laws)
2. Improve management of pastures
3. Construction of water facilities for livestock in harmony with grazing cycles, to improve pasture productivity (2 dams)
4. Improvement of animal health care (treatment and vaccination)
5. Development of the area as a pastoral/cultural tourism destination
6. Establishment of women's arts and crafts cooperative
7. Community conservation and transmission of traditional knowledge
8. Establishment of a pastoralist heritage museum / botanical garden
9. Recognition of the area as a National Heritage
10. Assessment of nationally held GIAHS
11. National heritage law to include GIAHS considerations



Elements of the Tourism plan:

Goal: To promote Engaresero village as a special “pastoral heritage” destination, which is managed and “owned” by the local community

1. Sub-committee for tourism under CBO
2. Adjusting admission fees and revenue flow to the community
3. Professionalizing tour guiding (training and quality control by CBO)
4. Providing security/safety services to mountaineers
5. Museum & botanical garden, arts and crafts shop (also information and logistics hub)
6. Improving information and signage to tourists
7. Providing new activities, scenic walks, herding walks, cultural performances
8. By-laws on investment in tourism
9. Behavior standards for tourists and community members (begging, prostitution, cultural respect)
10. Fund for community investment and maintenance of infrastructure



Lessons Learnt / Recommendations (selected):

- Pastoral systems can be outstanding examples of sustainable agriculture. Other countries may wish to consider their own under the GIAHS Initiative
- In Engaresero, the community nursed a deep mistrust of outside actors, the Free Prior Informed Consent procedure provided the transparency that allowed the project to be accepted and owned by the community.
- Although scientific evidence is mounting to the contrary, policy, conservation and development interventions are still largely based on the prejudice that Maasai are mismanaging the environment. More evidence based policies and conservation programs are needed.
- GIAHS is playing a critical role in changing perceptions among policy makers and other actors. Collaboration with the government to “list” the project area as a national heritage under national heritage law will be a major success in this effort.



Thank you



GIAHS Contact Kenya and Tanzania: David.Boerma@fao.org