

Empowering Women One Community at a Time



Biodiversity Conservation Through Sustainable Farming and Fishing Practices in Mount Kenya



Project Description

The Sagana Women's Group was formed in 1977 by a group of women who wanted to address basic issues that affect them and their families, such as housing, water supply, education and poverty alleviation. The group also wanted to engage the local community in environmental conservation activities and improve livelihoods by establishing a sustainable environmental conservation enterprise. The current project, initiated in 2003, aimed to create measurable improvements to the nearby forests and generate income for member households through the improvement and scaling up of the group's tilapia fish farming enterprise.

Through the establishment of a tree nursery and a tree-planting initiative, the group is rehabilitating degraded sections of the forest as well as helping to monitor human settlement and the extraction of timber from the forest. The group has also established additional fish ponds, in a leased section of forest, for the rearing of tilapia as a conservation enterprise and constructed a Community Training Center to educate the local community on environmental conservation issues.

Background

Located approximately 200 kilometers to the north-east of the capital city of Nairobi, Mount Kenya is the second tallest mountain in Africa, with the highest peaks reaching up to 5,199 meters above sea level. With its rugged glacier-clad summits and forested middle slopes, Mt. Kenya is one of the most dramatic landscapes in East Africa. The ecosystem is home to a variety of flora and fauna, including several endemic species. As a result of its impressive landscapes and outstanding ecological processes, Mount Kenya National Park and the surrounding forest reserve was designated as a UNESCO World Heritage Site in 1997.

However, in the last two decades the Mt. Kenya ecosystem has experienced considerable environmental degradation as a result of deforestation from over-exploitation of timber and fuel wood; land degradation; conversion of forests into farmland; and water pollution due to the lack of proper sanitation and waste disposal facilities.



Implementing Organization: Sagana Fish and Bee-Keeping Women's Group

Location: Mt. Kenya, UNESCO World Heritage Site, Kenya

SGP Contribution: US\$ \$32,171 (initial grant) and US\$16,920 (second grant)

In Cash Co-financing: US\$16,184

In Kind Co-financing: US\$6,000

Number of Beneficiaries: 40 families, 240 persons approx.

Duration: December 2003 – December 2005;

August 2008 – March 2010

Awards and Recognition:

The project has been recognized by government officers, donors and community groups as one of the most promising community fish farming projects in the country, and consequently, many groups organise exchange visits to learn and be inspired. The project has also been featured on radio programs and aired on some of the national TV stations.

To address these environmental threats, the Mount Kenya COMPACT Initiative commenced in 2001 with the objective to protect the biodiversity of Mount Kenya and help maintain its status as a World Heritage Site and Natural Reserve while improving the livelihoods of the surrounding communities through 70 community-based conservation projects. As biological diversity is a global asset of tremendous value to present and future generations, reduced deforestation helps preserve forests and all of the benefits they provide, such as a healthy ecosystem and maintenance of water quality.

Implementation

With support from SGP COMPACT, the District Fisheries Office and the local community forest association, the Sagana Fish and Bee Keeping Women's group implemented the key activities below:

- Establishment of a tree nursery to supply seedlings and planting of over 60,000 indigenous trees in the Hombe Forest to rehabilitate degraded forest areas and riparian areas.



- Improvement and expansion of the group's existing fish farming enterprise from three unlined ponds to ten concrete-lined ponds.
- Construction of a lined channel to provide water to the fish ponds from the Sagana River.
- Improve the fish market, accommodate the increase in production and construct a cold storage facility to store the harvested fish before it is shipped to customers.
- Construction of fencing around the ponds and overhead netting to keep predators (e.g., rodents and birds) away from the fish ponds.
- Construction of a community training center for seminars related to fish farming, water use, forests, agriculture, HIV/AIDS and other health-related issues.

Environmental Impact

The tree nursery has supplied indigenous tree seedlings which have been planted in degraded areas of the nearby Hombe Forest and in riparian areas along the Sagana River. From 2004 to 2010, over 60,000 trees have been planted by the project. The rehabilitation efforts have improved the condition of the forest and water catchment and have also reduced soil erosion resulting in improved water quality, necessary for the fish rearing enterprise.

Over the last five years, the fish stock has increased from 600 to 33,000 annually through the expansion and upgrading of the group's fish farm which is located on a communally managed plot of land leased from the nearby government forest.

To build the capacity of the local community and increase awareness, the Sagana Women's Group also built a Community Training Center, which has already hosted over 20 training seminars and events, and provided a venue to educate group members, local community members, and visitors on environmental conservation issues and fish farming.

Most importantly, the project has demonstrated that by establishing strong linkages between conservation activities and livelihoods, communities living near forests can create income-generating activities and improve their livelihoods while also utilizing natural resources in a sustainable manner. As a result of community intervention and participation in conservation efforts, the area now enjoys a much greater level of protection from the environmental degradation caused by overexploitation of natural resources, thus helping to preserve the diversity of flora and fauna of the Mt. Kenya World Heritage Site.

Socio-Economic Impact

The project has provided a number of tangible benefits to project members and their families, including the generation of additional income from the sale of fish and tree seedlings; as well as improved water quality as a result of forest rehabilitation efforts.

50% of the profits from the sale of the fish and tree seedlings are reinvested to support the group's conservation activities while the rest is divided among the member households as dividends.

The community training center also provides another method of income as other community groups pay a nominal fee for the usage of the

facility. These sources of income have been used to improve member households' livelihoods in a number of ways, including helping to pay school fees, investing in livestock, upgrading housing, and purchasing household goods such as bedding and cooking equipment.

The harvested fish have also provided a source of protein and nutrients that has improved the diet and health of the local community. The water quality within the community has also been improved as a result of the group's reforestation efforts in the degraded riparian and forest areas. These efforts have reduced soil erosion and improved water quality in the Sagana River, which is used for domestic use as well as for the fish ponds.

Policy Impacts

The local community has engaged the government authorities (i.e., the Kenya Forest Service) in co-management of the forest resources and development of a forest management plan for the nearby Hombe section of the Mt. Kenya Forest. The management plan, launched in April 2010, is the overall regulation that will govern usage and management of the Hombe section of Mt Kenya Forest.

This plan and the collaborative management style it promotes serves as an example and roadmap for other communities living near the Mt. Kenya Forest who are facing similar environmental issues. The Sagana Women's Group is also working with the government authorities to integrate fish farming into the National Poverty Alleviation Policy of the country.

Gender Empowerment

The entire project is geared towards raising the capacity of the group, composed exclusively of women, to engage in conservation and income-generating activities.

The project has introduced several ways to support women to achieve these goals, including:

- Training the 40 group members on fish farming, fish preparation, marketing of fish products, and project management;



- Supporting the group to expand their tree nursery and conservation efforts through tree planting in degraded areas of the Hombe Forest and riparian area of the river Sagana.
- Construction of a Community Training Center which has created more opportunities for local women to access training and information sessions related to fish farming, conservation, agriculture, HIV/AIDS and other health issues.

Sustainability

The project has a high potential to sustain its positive impacts over the long term as a result of the group's well-defined management structure, strong governance, and the knowledge as well as the experience acquired by group members in fish farming.

Contribution to the MDGs



- Provided income-generating activities from sale of fish and tree seedlings and involvement in the Community Training Center.
- Created a continuous investment in the community– 50% of the profit in sales are distributed among the households as dividends.
- Improved household livelihoods through educational, agricultural, and economic means.



- Engaged 40 women in conservation and income-generating activities
- Improved access to training and information sessions related to environmental and health issues through creation of the Community Training Center



- Planted over 60,000 indigenous trees in the Hombe Forest from 2004-2010
- Improved forest and water catchment conditions
- Reduced soil erosion and improved water quality

Moreover, there has been a reversal of attitudes within the community from an apathetic view towards environmental conservation to one of understanding and active participation in conservation activities.

The group is also strengthening the project and ensuring its future sustainability by reinvesting a substantial portion of its income from the sale of fish and tree seedlings back into the enterprise and conservation efforts.

Replication and Upscaling

The Sagana Women's fish farming project has been replicated by many groups around Mt. Kenya, including the Fruitful Fishers Youth Group (31 members), the Nyanjara Fish Farming Group (approximately 30 members), Thuita Forest Network project (approximately 80 members), and the Jitunze Youth Group Fish Farming project (approximately 20 youth members).

Through mentoring and trainings held at the group's community training center at Sagana, these groups have learned important knowledge and skills related to fish rearing, harvesting, and preparation and have further developed their capacities to manage their own projects.

Several groups have also been supported by COMPACT to promote and emphasize different elements of fish farming enterprises. The Sagana Women's group is also helping to promote fish farming nationwide by working with government authorities to integrate fish farming into Kenya's National Poverty Alleviation Policy.

Lessons Learned

- Local communities can sustainably utilize protected forest land through lease agreements with government authorities to establish conservation enterprises such as fish farming. Such enterprises can generate income which benefits local households and create jobs.
- Conservation enterprises in rural settings can generate benefits not only in increased income for rural households but also act as a catalyst for conservation of World Heritage Sites and environmentally sensitive areas.
- Even in dense highland settlement areas, communities can engage in communal land-based conservation enterprises in a profitable manner.
- In many cases, government authorities alone cannot fully protect the entire area of UNESCO Heritage Sites the success depends on the collaboration between neighboring communities around the Site, other local actors and the active participation of the government by incorporating the Site as a priority in their national policy.



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Community Global Impact