



The Society tackles **Maendeleo**





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Dan Stiles assesses the achievements, at three different sites in Kenya, of a recently concluded joint project undertaken with support from the **German Agency for Technical Cooperation**.



Maendeleo is the Kiswahili word for 'development'. Why would the East African Wild Life Society, dedicated to wildlife conservation, engage in economic development activities?

The answer lies in the fact that the major threat to biodiversity in Africa today is poverty. Poor people cannot afford to buy their food in supermarkets, or their building materials at a hardware shop; nor are they connected to the national electricity grid. All too often these days, they find their meat on the hoof in the bush. Likewise, poor people find the timber they need for housing and furniture, and their fuel for cooking and heating, in the forest. Poached game meat and felled trees are 'free', thus affordable.

These practices were not harmful to the environment when human population numbers were low, but at today's soaring levels living off the land in this way is not only highly destructive; it is unsustainable.

The East African Wild Life Society therefore teamed up with the German Agency for Technical Cooperation (GTZ) in January 2003 to carry out a two-year programme of grassroots development activities in three areas of Kenya's Coast Province – Lake Jipe, the Shimba Hills, and the Lower Tana Delta – where the over-exploitation of natural resources is threatening biodiversity.

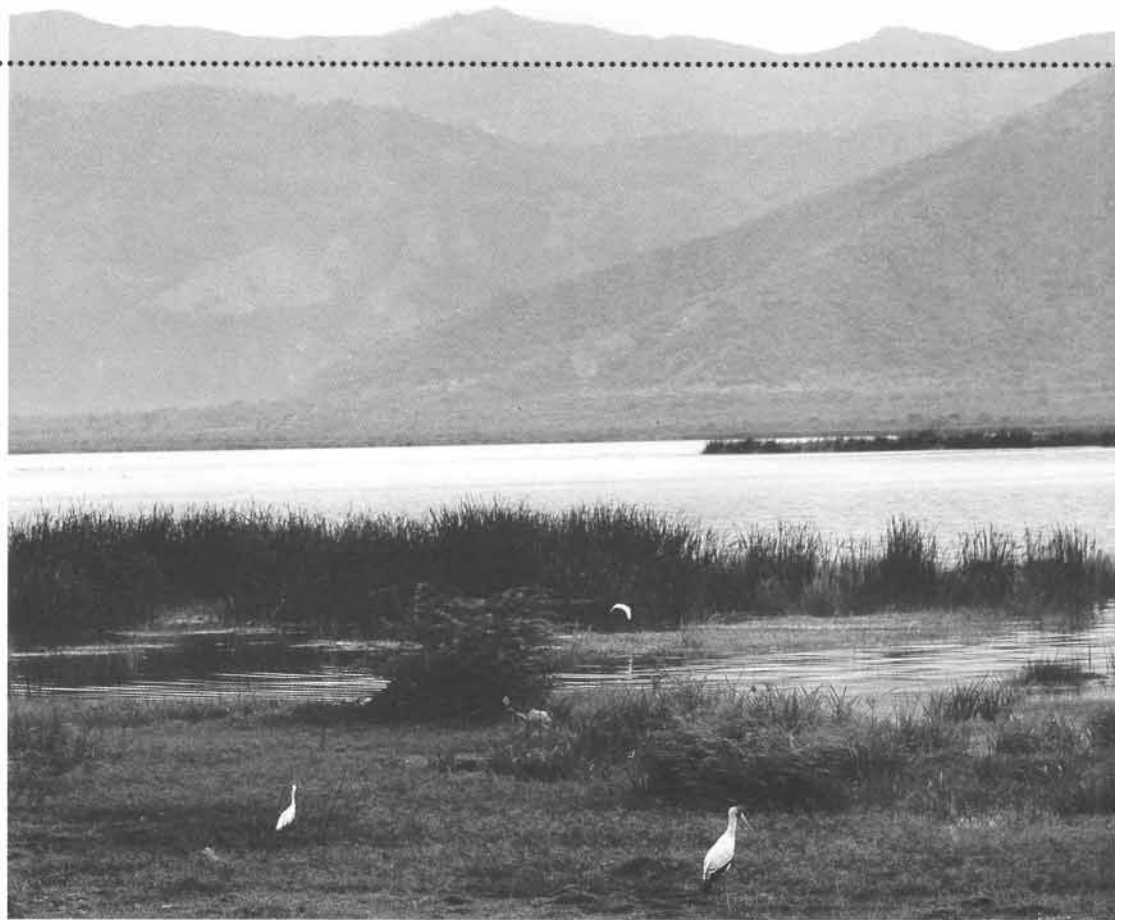
The GTZ formulated a bottom-up community approach, subsequently endorsed by the EAWLS. The GTZ then provided the funding that allowed the project to proceed. The overriding goal was one of educating people about the importance of natural resource conservation, and of ensuring that all stakeholders were given access to – and could use – the information, knowledge, and skills needed to carry out active conservation measures. In addition, the GTZ/EAWLS project provided training, spanning several income and food generation activities aimed at helping to alleviate poverty.

The first step for the GTZ/EAWLS project officers was to gather community perceptions on local environmental and natural resource problems generally. Many difficulties were identified: human-wildlife conflict; meat shortages leaving people with no option but to resort to bushmeat poaching; destruction of forests for farmland, timber, and fuelwood; the deterioration of waterways and wetlands, and over-exploitation of marine resources.

The Society and other conservation organisations were also concerned about continuing destruction of the habitats frequented by threatened species such as the Tana River Red Colobus and the Tana River Crested Mangabey, and about the disturbance of turtle and bird breeding sites. There was a need to sensitise the people to these conservation issues.

After analysing the respective communities' own perceptions of the problems they face, GTZ/EAWLS officers prepared a series of environmental education and training seminars to address the problems. To sustain community actions, stakeholders were encouraged to form networks and associations.

Belonging to registered community-based organisations makes people eligible to receive direct funding, while also creating the management structures necessary for such groups to operate effectively. Primary schools were selected at which



education and awareness activities would be carried out with pupils, exciting them at an early and impressionable age to the wonders of nature, while inculcating in them an appreciation of how important biodiversity and intact habitats are for their own, and their children's, future well-being.

Lake Jipe

Located in the shadow Tanzania's North Pare Mountains, Lake Jipe lies just outside the SW corner of Kenya's Tsavo West National Park. Cloud-shrouded Kilimanjaro, NW of the Pares, looms to the NW, providing abundant quantities of run-off water to the area.

Raphael Omondi, Projects Officer at Lake Jipe, took me on a most instructive tour of the various activities of the GTZ/EAWLS project. The tour took in other community projects the GTZ/EAWLS project has catalysed, and which are now being funded by the UN Development Programme. The people here had identified four main resource problems: fisheries in the lake, water management, overgrazing, and a scarcity of farmland.

Two families own most of the land here, squeezing the majority of the people into one small area – or forcing them to become squatters. Illegal game snaring and tree cutting within Tsavo West are other problems caused by poverty and by resource deficiencies.

Lake Jipe's water level has fallen over the years because the River Lumi, the lake's main source, had changed its course, flowing instead into the River Ruvu, the lake's outlet. The siltation of the Lumi delta, coupled with weak dykes, had caused the river to alter its course. The resulting drop in the lake level had allowed immense beds of Typha reeds to develop at the Lumi inlet and around the lake's fringe.

The Lumi River now inundates tracts of farmland during the rains instead of flowing into the lake. People draw too much water from the river during dry periods, further reducing inflow. The farmlands between Lake Jipe and the town of Taveta, to the north, are rich and offer considerable agricultural potential – if the water can be managed effectively. And if the water can be managed right, then the lake will rise again and kill off the delta Typha, thereby also reinvigorating the deteriorating fisheries situation.

I inspected a fish catch while I was touring the area; every fish was a small tilapia of the same size. This indicates a looming population crash, as – clearly – only fingerlings now remain. As Raphael explained: "The fishermen know they are using nets with too fine a mesh, but they have to survive."

Raphael told me that, 30 years ago, fish from Lake Jipe were traded as far away as Dar es Salaam, Mombasa, and Nairobi. Today, however, the catch can barely feed the fishermen and their own immediate families. Since the southern lakeshore is in Tanzania, the project is trying hard to promote cross-border cooperation with the Tanzanian authorities. This is a classic 'tragedy of the commons' situation. A fish left to mature by a Kenyan fisherman might be caught tomorrow by a Tanzanian; better, then, to catch it oneself.

A fishing moratorium is urgently needed, but then the fishing community, which is in a staggering condition of abject poverty, would have to be provided for.

The plan to set the water flow aright began at Njoro Springs, a lovely tree-fringed pond formed by artesian waters passing initially through Lake Chala, after originating from the snows of Kilimanjaro. Njoro Springs is also the water source for Taveta town. Rocks have been positioned at the mouths of

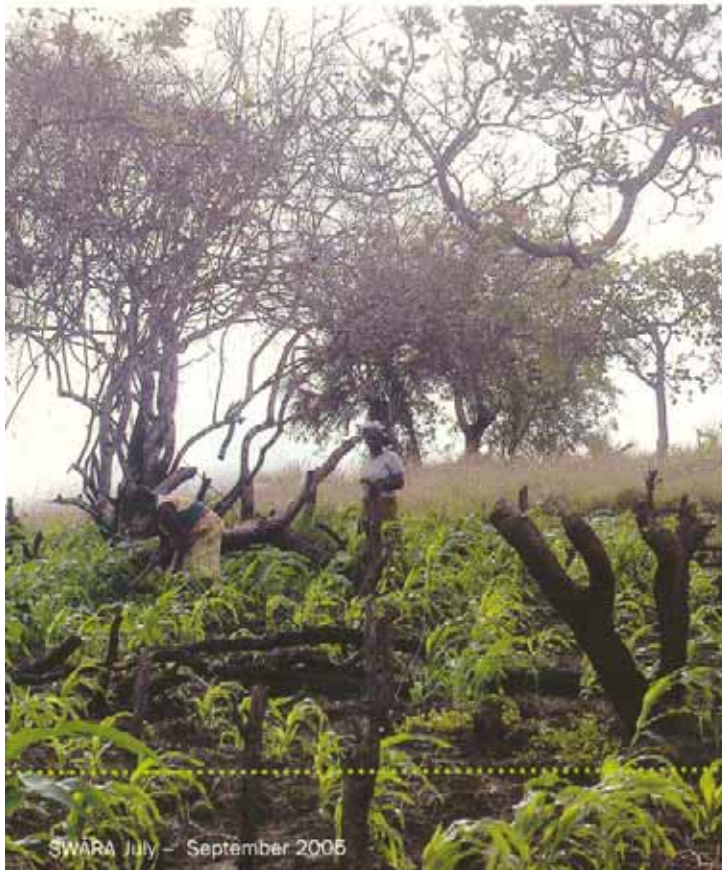
the many rivulets that feed the pond to prevent erosion and siltation, so the spring water can flow easily into the Njoro Kubwa Canal, which now feeds Lake Jipe. Efforts organised under the GTZ project have enabled the community to set the River Lumi back on course to flow into the lake – and the lake level is now rising.

There are plans to clean out the 23 km-long Grogan Canal, built in the early 20th century by Ewart Grogan to divert water from the Lumi to enter the southern end of Lake Jipe, bypassing the reed bed and providing irrigation water in the dry season. Farmers are also being advised not to cultivate close to the riverbanks, so as to prevent silt from washing in. There are plans to rebuild a dyke along the Lumi to prevent flooding and to ensure a constant water flow into Lake Jipe.

The project was also engaged in teaching environmental awareness at three local primary schools. As part of this work, pupils had planted trees in school nurseries. The seedlings will later be planted around the school to provide shade, and in some cases (eventually) fuelwood as well. The schoolchildren were taken on excursions to national parks, where the ecological relationships involving soils, plants, and wildlife were explained, and the children were encouraged to express their newfound knowledge at their schools through poetry, song, and traditional dance.

The capacity building and management training aspects of the GTZ project are enabling farmers and women's groups to engage in activities such as canal de-silting, beekeeping, and fish rearing in ponds. People have been able to irrigate crops, while also selling honey and fish to help alleviate poverty. These activities are being carried forward by the UNDP community projects that the GTZ work has inspired.

"If we are successful," says Raphael Omondi, "then the lost glory of Lake Jipe, as the bread and protein basket of Taveta, will be restored."



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Shimba Hills

The Shimba Hills form a low, undulating chain rising not more than 500 metres in altitude and running parallel to the Kenya coast starting a bit south of Mombasa. In the recent past, these hills were clothed in dense lowland tropical rainforest, providing a welcome habitat for large numbers of elephants, buffaloes, elands, Sable Antelopes, and other animals.

The forest captures rainwater and sea mists blowing in from over the Indian Ocean, and percolates this moisture into the underground aquifers and streams that supply water for the South Coast's resident human population – not to mention the thousands of tourists who visit beach hotels along this stretch of the coast each year.

Settlement schemes and other immigrants have carved out farms around the Shimba Hills National Reserve, resulting in large-scale deforestation and wildlife loss. The National Reserve is unique in being Kenya's only protected area encompassing a lowland tropical rainforest. The forest harbours more than 1,300 plant species, many of which are endemic and rare, making the hills a global Centre of Plant Diversity. The area also has the largest elephant population (at more than 600-strong) on the East African coast, and is the only place in Kenya where the regal Sable Antelope can be seen. As such, its conservation is of the utmost importance.

The goals and basic methodology of the GTZ/EAWLS project here were the same as for the Lake Jipe area, although rather more emphasis was placed on nurseries, tree planting, and building anti-erosion terracing. Moses Ziro, the Project Officer, showed me around. The project was working with farmers and women's groups in the Msulwa vicinity, on the eastern boundary of the National Reserve.

A priority challenge is that of dealing with the problems created by marauding elephants and other wild animals that venture out of the Reserve to feed on farmers' crops and fruit trees. Having once owned a farm in the area, I am well acquainted with the kind of havoc wildlife can cause a Shimba farmer. One approach to keeping the elephants at bay is to plant a buffer zone of Casuarina trees around the periphery of the National Reserve fence.

Moses explained to me, "If the jumbos can't see the maize, they won't be so tempted to break the fence." One of the community groups participating in the project, Zuia Ndovu na Casuarina ('Prevent Elephants with Casuarina'), was originally formed with that goal in mind. So far, this group has planted roughly 124,000 Casuarinas, with many more in nurseries and on the farms of other project stakeholders.

One 21-year-old farmer named Konga deserves special mention. Although born with deformed arms and hands, he has been increasing the size of his tree nursery each year. He somehow manages to plant the seeds, transplant the seedlings into plastic sleeves, and do all the watering himself. He weeds with his toes. In 2004 he sold 4,000 Casuarina seedlings to DANIDA, the Danish aid agency, and many more to the Bamburi-Lafarge cement factory.

At the time of my visit, Konga had more than 8,000 seedlings growing in the shade of an enormous mango tree. Each seedling represents 7–15 Kenya Shillings, so his current crop is worth KSh 56,000–120,000 (the equivalent of about

US\$ 747–1,600) – a huge sum in this poverty stricken area. With the money from his previous seedling sales, he was able to build himself a house with a metal-sheeted roof. Recognising his enterprise, the GTZ has rewarded him with drainage gutters to catch rainwater falling on his roof, and a 5,000-litre water tank into which to channel and store the water.

Helen Ochieng, a GTZ Programme Officer, told me after visiting the Shimba project in 2004: “I came away feeling that we were on the right track. If we can help people like Konga to achieve his dream of building his own house, and of supporting himself through hard work, then we can show that it’s possible for anyone to do it.”

Dick Knight, an entrepreneur living in Sable Valley in the Msulwa area, has for some years been experimenting with teak trees and with *Jatropha curcas*, a shrub producing seeds that yield an oil with properties similar to kerosene. Directly after pressing, the oil can be used in kerosene lamps, stoves, and Lister engines. With simple refining, the oil becomes bio-diesel, which can fuel vehicle engines.

Some of the project farmers have started growing these species on their properties, with encouraging results. The teak will be worth good money when it matures, while the *Jatropha* oil has the potential to reduce the need for fuelwood and charcoal, and to bring prosperity to the area. Tree poaching for timber is a serious problem in the Reserve, and the Casuarina and teak plantations should eventually help to reduce the pressures on the precious rainforest.

GTZ/EAWLS project officers in the area were working with three primary schools. They were providing environmental education, and establishing school tree nurseries, while also supplying and setting up modern beehives to promote honey production. Infestations of tsetse flies in the hills mean that livestock does not fare well here – one reason why some people turn to bushmeat for their protein. A future project could

address this problem by setting up small-scale game ranching enterprises with the communities, using species that are resistant to sleeping sickness, such as eland.

The 13 environmental community groups that participated in the GTZ/EAWLS project on the Shimba Hills have been organised into an umbrella grouping known as the Msulwa Community Environmental Conservation Association (MCECA), which now has roughly 100 household members. All these people, certainly, are ready – and willing – to step up their *maendeleo* efforts.

Tana Delta

Kipini, a small coastal village nestled beside huge sand dunes just to the east of the rich and hotly contested wetlands of the Tana River Delta, was the third project area. Here, GTZ/EAWLS project officers were working with communities in about 10 villages, as well as in Kipini town, and with students in one secondary, and three primary, schools.

Representatives from both the fishing and the farming communities participated. Educational presentations at the schools included lectures and video shows on marine resources, forests, land degradation, and wildlife conservation.

Methods of establishing tree nurseries and woodlots were also demonstrated. Woodlots were planted in two of the primary schools. An inter-schools environmental contest was held, involving a debate and a quiz on environmental issues. All four of the target schools participated, together with two neighbouring schools from the area.

The community programme, while including educational presentations in each of the villages on aspects of marine resources, forests, and land degradation, also focused on imparting other helpful skills: such as group leadership, management, and governance, proposal writing, conflict resolution, team building, networking, and communication.





of 45 beehives were distributed among six groups. Two of the groups received additional training in information management, so as to enable them to start a conservation education and communication resource centre.

Ecological initiatives included a mangrove replanting exercise with a group that focuses on marine turtle conservation. In all, more than 1,000 mangrove seedlings were planted. The project also collaborated with groups on beach clean-up activities.

To help strengthen the capacity of local fishermen, further training was undertaken with officials from the Kipini Fishing Co-operative. The focus here was on the management of co-operatives and fishing operations. This work has contributed to the subsequent revival of the Kipini co-operative, while helping to promote the sustainable harvesting of marine resources.

A study tour was undertaken to the European Union-funded Farm Forestry and Natural Resources Conservation Project in Malindi. Forest extension officers joined 33 Kipini farmers on the tour, whose objective was to expose the farmers to the practice of farm forestry as a conservation and income-generating activity.

Klaus von Mitzlaff, the Country Director of GTZ Kenya, visited the Kipini project in November 2003 with the Head of the Department for Economic Development in the German Embassy, Heiko Warnken, to demonstrate their commitment to the people's endeavours.

Mr von Mitzlaff expressed his satisfaction with the project's progress, adding that he had been particularly impressed by the dedication shown by the young EAWLS staff, and by the willingness of the community to participate in enacting conservation measures.

The future

The two-year joint project has since been wound up. The EAWLS, however, will go on working with the communities of Lake Jipe, the Shimba Hills and the Tana Delta, in the hope of further consolidating the spirit of conservation through community cooperation that the GTZ was instrumental in establishing in all three areas.

The project has demonstrated that rural people – once informed, organised appropriately, and given the capacity to make decisions – really *can* alter their behaviour and conserve their natural resources, rather than over-exploit them.



Deutsche Gesellschaft für
Technische Zusammenarbeit (GTZ) GmbH

Again, video shows were combined throughout with sessions of open discussion.

Training on alternative, nature-based livelihood strategies (beekeeping, plant nurseries, community woodlots) was administered in collaboration with the pertinent Government departments. In the process, five community tree nurseries were established, along with seven Casuarina woodlots. A total

What is GTZ?

GTZ stands for *Deutsche Gesellschaft für Technische Zusammenarbeit* (German Agency for Technical Cooperation), and is a well known acronym across Africa.

Owned by the German Government, the GTZ is an international cooperation enterprise whose numerous projects and programmes around the world are implemented mainly on behalf of the German Federal Ministry for Economic Cooperation and Development. However, the GTZ also carries out contracts for other German ministries, as well as for various international aid agencies and institutions.

Based in Eschborn, Germany, the GTZ has been operating globally for more than 30 years. In this time, it has been responsible for enhancing the capacities of organisations and institutional structures in partner countries, enabling millions of people around the world to improve, through their own efforts, both their living conditions and livelihoods.

The GTZ has been an active development partner in Kenya since 1975. Its programmes in the country have until now been concerned primarily with rural development, agriculture, health, education, water sanitation and supply, and structural and regulatory policy advice.

Today, German bilateral development cooperation with Kenya focuses on three priority areas:

- Water sector reform;
- Private sector development in agriculture, and
- Reproductive health, and health financing.

The GTZ also supports Kenya through a wide range of projects aimed at achieving better governance, strengthening public sector financial management, enhancing peacekeeping and conflict resolution measures, and promoting youth development.

HIV/AIDS prevention is mainstreamed in all GTZ programmes and projects.