In 1987 the Chepareria area of West Pokot in the Rift Valley was an arid steppe. Bare and cracked, the ground resembled the skin of a hippo. It was land eroded down to the bedrock.

Today we find ourselves in a transformed landscape. A park-like landscape meets the eyes. Fences made of thorns, euphorbia, sisal and agave

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enclose pastures green with trees and perennial grasses. Livestock move from one enclosure to another instead of being herded on an open landscape. Earlier all livestock had to be brought out of the area to find forage during the dry season. Now they can remain at home for far longer periods.

The change is both stunning and encouraging. The livestock keepers of Chepareria have found a way to transform their land, and their economy, in a way that is so successful that lowland West Pokot constitutes a shining example of land rehabilitation in arid and semi-arid areas. Their story is of significance for some seven million people in Kenya living in dry lands, and for many more people in other parts of East Africa and beyond.

That this major transformation should happen was totally unexpected, and it is therefore instructive to examine how it occurred and what the starting parameters looked like. There is a lesson to be learned in Chepareria.

The background

Back in the 1980s, the time when I first came to West Pokot, the people there did not plant trees; they saw trees as part of the landscape, not being consciously planted. Some trees were indeed protected: these were the sacred trees, where meetings are held, and where sacrifices are made. God resides there, and such trees cannot be felled. The *Ficus natalensis* of the highlands and the *Ficus sycomorus* of the lowlands both belong to this category. Trees good for placing beehives were likewise not cut. Fodder trees were lopped but not felled.

A particularly valuable tree is the desert date, *Balanites aegyptiaca*. At the time of the year when it is hot, dusty and nothing is left in the stores — at that time the *tuyunwo* (as the tree is known in Pokot) produces its sweet fruits, even in very dry years, and people can prepare a vegetable relish from its leaves. Livestock feed on its fruits and leaves until the new grass appears with the rains.

I saw a vivid illustration of the importance of the desert date on one of my first days in Morpus village back in 1987. A small group of men told me how the livestock were away on dry season grazing at the Uganda border, that they were waiting for the rains to arrive and that there was no food in the area. One of the men said, “We eat trees”, referring to the only fresh food available, the green leaves of the desert date.

Later I came to think that the phrase ‘we eat trees’ was true also in another sense. Trees were felled as fields were cleared to cultivate crops for the growing population. Trees were ‘eaten’ to build houses, and to turn into firewood. Trees provided fencing material. The many goats of the area contributed to their non-regeneration. The impoverished environment was well captured in the phrase ‘we eat trees’.

Some trees were valued, but the idea of planting trees in order to preserve the land was definitely not part of Pokot life. They preferred open pastures and in cultivated

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2 I had come to Chepareria Ward to suggest ways to promote tree planting in cooperation with the management team of VI Agroforestry, a Swedish non-governmental organisation (NGO) started in 1983 that aimed, through agroforestry, to contribute to poverty reduction, increased biodiversity and climate adaptation. Today VI Agroforestry works in four countries, Kenya, Rwanda, Tanzania and Uganda. In 1987 it was a rather small organisation active in the Trans Nzoia and West Pokot districts in Kenya. My field studies came to focus on two lowland villages, Morpus and Pserum, situated in the lower parts of Chepareria Ward, where livestock production dominates. The events of this article refer to this part of Chepareria Ward and not the upper parts of Chepareria, where the climate is more humid and farming plays a bigger role.

3 The phrase was poignant and I came to use it as title for my report from Chepareria Ward (Östberg 1988), which suggested ways to promote land rehabilitation and tree planting in the area.
fields the Pokot felt that trees competed with the crops for water, nutrients and light.

Against this background, it seemed unlikely that preaching the general value of environmental care, tree planting or land rehabilitation would be understood or well received. The conclusion was that outside interventions had to be productivity-oriented to have a chance of success. There was just no point otherwise. There had to be direct gains involved.

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**The planning context**

The colonial government had organised various land rehabilitation efforts in the area in the 1930s and 40s, with limited success. One of the last interventions, two years before independence in 1963, was the construction of a major cut-off drain dug across a slope to divert excessive runoff from fields in Morpus village. Reports confirmed that it had successfully protected the eroded area below. But by 1987 the sizeable cut-off drain had completely silted up, and could only be traced as a vague contour on the hillside. The gullies below it were encroaching into cultivated fields and homesteads.

Why had this obviously useful cut-off drain not been maintained?

Was it because people did not know what was required to keep it functioning? Nonsense. The Pokot around Sigor, northeast of Morpus, desilt irrigation canals as a matter of routine.

Was it because it required too much work? No, in fact not much work was required, compared to the benefits that the cut-off drain brought the community.

Was it because the cut-off drain was nobody's direct concern? Perhaps that. If so, the lesson for our project was that it was not enough for something to be technically sound, it also had to fit into the local organisational setup, and the colonial cut-off drain had not been integrated into the local decision-making system. Here was something to consider when planning how VI Agroforestry could promote tree-planting in Chepareria.

In 1987 VI Agroforestry, or the VI Tree Planting Project as it was then known, had already taken its first initiatives in West Pokot. It had established a couple of tree plantations, and was searching for ways to support land rehabilitation and improved livelihoods in the area on a considerably larger scale.

I had worked among the Marakwet, the neighbours to the south with whom
the Pokot share a language, basic social institutions\textsuperscript{4}, and also a very interesting hill furrow irrigation system, established in the late 1700s, that still functions today and forms the basis for farming in the arid Kerio Valley. It is a large-scale irrigation complex, consisting of more than 90 main canals, totalling over 300 km, which takes water down the steep Cherangany escarpment to the Kerio Valley where it is used for irrigated agriculture.\textsuperscript{5} This large irrigation complex operates without any centralised form of management. It is organised in local water management meetings where residents meet, reason, plan and decide on which land to cultivate the coming season, how to divide the water, agree on responsibilities to remove sediment from the canals, make repairs, etc. Big and small issues are solved in the same manner, which is that people meet in the shade of a tree and discuss.\textsuperscript{6}

It beggars belief that this vast and sophisticated complex can be run without any centralised authority, but this is exactly what happens. It may appear equally remarkable that the land can be cultivated for generations without major problems of salinization of soils.\textsuperscript{7} Certainly, the area suffers from soil erosion. But again, the land continues to be cultivated generation after generation and people subsist from it.

The hallmarks of the Marakwet irrigation system can also be found, more or less, among the Pokot, although not in the Chepareria area itself.\textsuperscript{8} It seemed reasonable to take this striking capacity of the Pokot to undertake major projects, and also the efficiency of what may appear a haphazard and unstructured decision-making system, as a point of departure for drafting a strategy for tree planting in West Pokot. Our conclusion was that the Pokot had in place the planning capacity and decision-making structures to undertake large-scale projects. It was, of course, important to work with these structures, and not to sidestep them.\textsuperscript{9}

Making deals

In 1987 the agroforestry project had been around for a bit more than a year. It had carried out trial plantations on land belonging to primary schools and churches. Now it was time for expansion. The manager, a professional forester, Tor Nyberg, had an idea that appeared practical: “We now have young trees growing in some places. After just three to four years, these small plantations will represent a significant value. They contain a wealth of fodder in an area where there is seasonally absolutely no grazing. There is thatching grass, as well as bee forage. There will soon be timber. Could this wealth somehow be traded with the local communities, so that they themselves start to plant trees and to rehabilitate land, if they were offered the use of the fodder in the enclosures?”

In practical terms this meant we would enter into dialogue with local communities and create binding agreements with individuals who were prepared to create new enclosures in exchange for the available resources in the existing plantations.

\textsuperscript{4} The Pokot are divided into two sections, the mainly pastoral East Pokot and the agro-pastoral West Pokot. They belong to the larger Kalenjin group of peoples which includes their neighbours the Marakwet, the Sengwer and the Tugen, and also the Keiyo, the Nandi, the Kipsigis, the Sabaot and the Tenik.

\textsuperscript{5} See “Life among the Marakwet” by the author, in Kenya Past & Present issue 42.


\textsuperscript{7} Caretta et al. 2015.

\textsuperscript{8} Davies 2008.

\textsuperscript{9} The report (Östberg 1988) contained numerous practical recommendations. These were chiselled out in close cooperation with the VI management team, and are thus not my thoughts and judgements alone. I much appreciated the creative and intense interactions with Anders Carlsson, Norman Kimanzu, William Makokha, Gert Nyberg, Tor Nyberg, Margret Silali and Bo Tegnäs.
Traditionally, the Pokot would close off some areas with termite-resistant grass to prevent grazing during the rainy season, in order to have something to rely on later in the year and thus be less dependent on migrations with the livestock.\textsuperscript{10} The colonial government had tried to create rotational grazing blocks in the area\textsuperscript{11} but these had not survived. While I was in the area in 1987 a local decision was taken to remove all cattle from the area west of the river Tatwa, but it was never implemented.

We could draw a conclusion from these experiences: large-scale changes were unlikely to succeed; therefore enclosures should be relatively small areas, and they had to be based on contracts with farmers who had undisputed usufruct rights to the land that would allow them to make unhindered decisions on its use.

It was not possible to subsist only on crop production in Pserum and Morpus — keeping livestock was a necessity in this area. But again, in 1987, the area could only support livestock for part of the year. Animals were seasonally moved to higher ground where it was still possible to find forage and still later in the year people were forced to take the livestock to the Mt Kadam area in Uganda, a much-disliked migration that was dangerous for both the herders and the animals. We also knew of cases where children were sent away seasonally because it was difficult to feed them in Morpus and Pserum. If more fodder was available for the milk cows remaining at home during the dry season, this would be a real bonus. Livestock was an integral part of the local economy, and any plans for tree planting had to take this into account. We decided that to improve fodder supplies for livestock seemed a fruitful path to follow.

**The neighbourhood meeting**

The neighbourhood or korok was the most important social unit. Most of the daily work was carried out together with neighbours, as was most of ritual life. This was the obvious social unit for the project to cooperate with. It was characterised by intensive social and work interaction. It was easy to convene meetings within the korok.

There is no formal authority in Pokot society, no kings or chiefs, no priests. Authority rests with men assembled for a neighbourhood meeting, the kokwu. Here disputes are resolved, decisions made, and news exchanged.

There are diviners, and also the kirwokin, someone who becomes noted for his skill in resolving disputes. Such men could be
termed ‘good talkers’. This may sound somewhat superficial, but it is an apt description of how they exercise influence. Both the diviners and the ‘talkers’ have important roles in Pokot society. But they cannot command others. Authority is never passed on from people assembled in a meeting to an executive office, because none such exists.

Elders are respected, and they are the ritual leaders in ceremonies. They also lead the blessings. But again, they do not command. To tell others how to organise their affairs was not done.

One problem we faced with using the kokwo, the neighbourhood meeting, as a principal venue for promoting tree planting, was that it is the men’s world. Women will only participate if something of direct concern to them is to be discussed. In that case they sit separately and do not rise when they wish to speak, as men do, but remain seated. Since women generally are more involved in farm work than men, we reasoned they should have a leading role in the tree planting campaign. They also spend more time around the home and are better able to protect young trees planted close to the homestead. As things turned out, the project came to focus in particular on women.

Pokot men and women live rather separate lives. The project had to plan separately with each group on its own terms. To create arenas for interacting with women, the project would develop an extension service, and initiate small on-farm nurseries. If women became well informed about the tree planting initiatives, they would influence their husbands, who would see to it that their opinions reached the kokwo. Or so we reasoned.

Did it work?

Yes, it did. A number of the women employed in the tree nurseries soon went on to work with the project’s extension service, which grew rapidly. The project made it a point that at all times at least a quarter of people employed to fence new enclosures and to dig terraces and micro-catchments had to be women. There were attempts, often, to bypass this but the project did not compromise on this point, and on the whole it worked. Women’s groups were encouraged to collect and sell seeds from local trees, and to start small nurseries and sell seedlings to the project.

If a women’s group collected a kilo of seeds they earned KSh 300, which at the time was a fair amount of money. More one kilo bags with seeds meant money enough for a group to invest in a hoteli serving tea, snacks and often also simple meals, or to buy land and grow maize to raise cash to buy cows and get milk. The history of the VI project has its grand success stories. But in particular it
Bringing back the trees
documents the many, many everyday stories of women who planted trees around their homes, grew nitrogen-fixing bushes and beans and peas, enriched the soil, increased their harvests, found easily obtainable fuel wood and fodder for the animals, and reaped fruit that they sold in the local market to pay school fees for their children. So, it was women who benefitted most from the project. Or was it the environment? The point perhaps is that when a whole area has changed its resource base it becomes somewhat pointless to try to judge who benefitted most.

Opening negotiations

There was also a middle-way between the kokwo and field activities, and that was the baraza. This is the Swahili word for the meetings called by the administration and in which information is passed on to local communities. On the surface it looks much like a kokwo: it is people meeting in the shade of a tree to discuss. However the conditions are different. In the baraza it is staff with formal authority that set the agenda. People may have a chance to ask questions and air opinions, but it all happens on the terms set by the administration. For cooperation where local authorities were involved, the baraza was the appropriate venue. An added advantage is that a baraza better allows space for women’s groups to air their opinions.

An episode captured the lay of the land. The Morpus plantation was started in haste just before the rains in 1987. A planning meeting was held with the headmaster of the school, five members of the school committee and staff from the VI Tree Planting Project. The committee had no specific demands regarding which trees should be planted around their school. The vice chairman of the school committee summarised their stand: “We are here and we wait. You may say what trees can be planted. We have agreed that you plant trees around the school. That is good. People must have an example to learn from. If other areas can be planted as well, is something to discuss another time. If it turns out well and people like it.”

This was a subtle statement. He had sensed that the project was interested in enlarging the area to be planted. The project needed land. The committee could not offer that, but it could bargain with the possibility. Maybe the committee would later on be able to convince people to make land available for tree planting — if people were now employed and thereby learned the benefits of tree planting.

At the same time he surrendered to the project all responsibility for the outcome. The project was to take the risks. It should hire people and prove that trees will survive. He designated the project staff the experts, “you may say what trees can be planted”. While being in favour of the idea of tree planting and land rehabilitation, he made no commitments.

The school committee did not need the project. They could do without it as they had done before. But if the project offered employment, this became attractive. They could wait and see how the plantation developed and in the meantime would earn a salary, and the whole thing could well develop into something useful for the future.

The villagers created a bargaining situation, and this was not a bad starting point for realistic planning. It was not ideas of land rehabilitation that caught the imagination but the employment offered. The rains were due. There was little time to get terraces and micro-catchments ready for planting. The only practical solution was to hire day-labourers. The trees survived in both the Morpus and Pserum plantations, grass was established, and the project had created a resource to start negotiations with. The venture was underway.
Of course, sceptics might say that in the end it was cash and employment that carried the day. What happened to the idea of fitting into local decision-making systems?

There was no contradiction. The project had established itself with a tangible offer, and could enter negotiations as a legitimate partner. This showed almost immediately. Some 20 people were to be hired at Morpus. The project said that it would appreciate if particularly needy families were considered, and if at least five of the 20 were women. On the day that work was to begin, some 60 people turned up hoping for employment. The assistant chief of the area had prepared a list of people to be hired. When the names were read out, no women were included and there was a disproportionate number of people from the assistant chief’s own group. A three-hour-long discussion ensued. In the end four women were employed, and seven people from the assistant chief’s group, and the remaining nine jobs were evenly distributed among other groups. Had the project opted for the easy solution and accepted the chief’s list, it would have reinforced feelings that aid always ends up with those better off. Now the 60 people present could see that the project did not intend to do things the usual way. Instead they discussed until a consensus was reached, in line with Pokot modes of decision-making. The project had passed its first credibility test.

To recall again the way it was in the late 1980s: The rain, when it came, skidded over hard and encrusted soil, unable to penetrate the ground, washing away whatever loose organic material lay on the surface. When the floods rushed down the slopes into the gullies, the ground was ripped open in a mighty and devastating spectacle.

Today the picture is very different. The open landscape has been complemented by private enclosures protected by live fences and thorns. Perennial grasses have come back, fodder trees have been planted, in places gullies have been stabilised and healed. The area looks green. Not all farmers use enclosures but very many do, and it is definitely possible to talk about a transformed landscape. Enclosures appear to have become a self-generating process. VI Agroforestry phased out its activities in 2001 and, interestingly, almost 40% of the present enclosures were established after 2004. The enclosures make sense, both ecologically and economically. Predictably the enclosures show increased soil organic carbon, better vegetation cover and improved biodiversity. There is more grass for livestock in the enclosed areas and land degradation is reduced.

Farmers with enclosures appear to migrate with the animals during the dry season much less than those who do not use enclosures. When farmers rank the benefits derived from enclosures this factor is given prominence, followed by healthier livestock and improved livestock productivity. The enclosures also generate direct income as

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12 Nyberg et al. 2015.
13 Recent research reports note many more changes such as increased incomes, increased milk production, poultry development, changing gender roles, land tenure changes, etc. However, my focus here is on landscape changes.
14 Grönvall 2015, Saxon 2014.
both grazing rights and fodder, and also roof thatching, can be sold. Furthermore, farmers with a longer experience of enclosures tended to have considerably more animals.\textsuperscript{15} Everything seems to indicate that enclosures provide opportunities for improved living standards, and that in particular it is the livestock-based activities that generate income. Admittedly, much more could still be done to improve livestock productivity.

There are, of course, also problems with enclosures. They require an initial investment, they need constant maintenance, and it becomes more difficult to water the animals. The enclosures make it (even more) difficult to transport household water from rivers to the homesteads. Possibilities for free forage have diminished, which can increase conflicts, as can trespass and encroachments.\textsuperscript{16} Enclosures can also be used to lay claim to land that one does not have undisputed rights to. And, as predicted, enclosures lead to economic stratification — incomes rise with increasing holdings, so that it seems that enclosures drive a process of income differentiation.\textsuperscript{17}

The potential and real drawbacks have been less investigated than the obvious advantages. The research focus this far has largely been on studying the effects for individual households, coupled with general observations at a landscape level. There obviously is a need for studies into how the altered property regimes and the changed forms of natural resource management will affect both ecosystem services and social institutions. This is a very real knowledge gap.

Worries have also been expressed that the new opportunities might paradoxically lead to rehabilitated range lands reverting to their previously degraded state.\textsuperscript{18} In November 2015, I visited Morpus and Pserum together with one of the pioneers of the area’s land rehabilitation efforts, William Makokha of VI Agroforestry. For good reasons he is satisfied with the results, but he shares

\textsuperscript{15} Grönvall 2015.
\textsuperscript{16} Saxer 2014, Wernerson 2013.
\textsuperscript{17} Wairore et al. 2015(b).
\textsuperscript{18} Wairore 2015(a).
concerns that the success could also have negative consequences. The improved soil quality encourages farmers to put more and more effort into growing maize and beans. In a year with good rains, quick profits can be realised. However, tractor ploughing means cutting trees and this makes the land more vulnerable to soil erosion. The county administration used tractors when it prepared a large grass-bulking plot. In Makokha’s opinion, that was setting a bad example. Another impending threat is a projected dam intended to service the lowlands below Chepareria with water. Much needed, of course, but it may also lead to plans for cotton growing, for instance, that could jeopardise agroforestry activities and the traditional livestock economy.

Thus, as the benefits of the restored lands are reaped, the paradox is that the success might also carry within itself the seeds of its demise.

In the mid-1980s few imagined that the barren lands of lowland West Pokot would one day look like a park. It had all started with forester Tor Nyberg’s idea that if forage could be reserved in small enclosures and offered to local livestock keepers on the condition that they enclosed similar areas on their own land, then the likelihood of survival on these bad lands would improve. He used methods that were at odds with established development discourse; he did not cooperate with national organisations but instead organised his own small team of foresters, an ecologist, a soil scientist and two community organisers, hired local labour to establish the soil conservation structures needed, and successfully tried direct sowing of a number of species. Bypassing tree nurseries in this area where water is scarce also proved to be the right decision, as was the strategy of involving the women in all phases of work. But more important than anything else: the team was sensitive to local decision-making processes and managed to make fair and transparent deals with local farmers and livestock keepers to enclose and restore lands. It turned out that the productive capacity of the restored lands substantially improved the lives of those who had joined the programme. The idea worked, and this was noticed by others in the community. Perhaps not even Tor Nyberg had envisaged how wider and wider areas were gradually becoming enclosed until a rehabilitated, productive landscape developed. After some 15 years the process
had become self-generating and the VI project withdrew.

The farmers and livestock keepers of lowland West Pokot have proved that even very badly degraded lands can become productive again. Their enclosures, and their experiences, cannot be disregarded in any forthcoming discussion of land rehabilitation in dry areas. What happened in Morpus and Pserum is that remarkable.

**ALL PHOTOGRAPHS BY THE AUTHOR**

**References**


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Schneider, H. K. (1953). *The Pakot (Suk) of Kenya with special reference to the role of livestock in their subsistence economy.* PhD dissertation. University Microfilms, Ann Arbor, USA.


