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Trees for a Song

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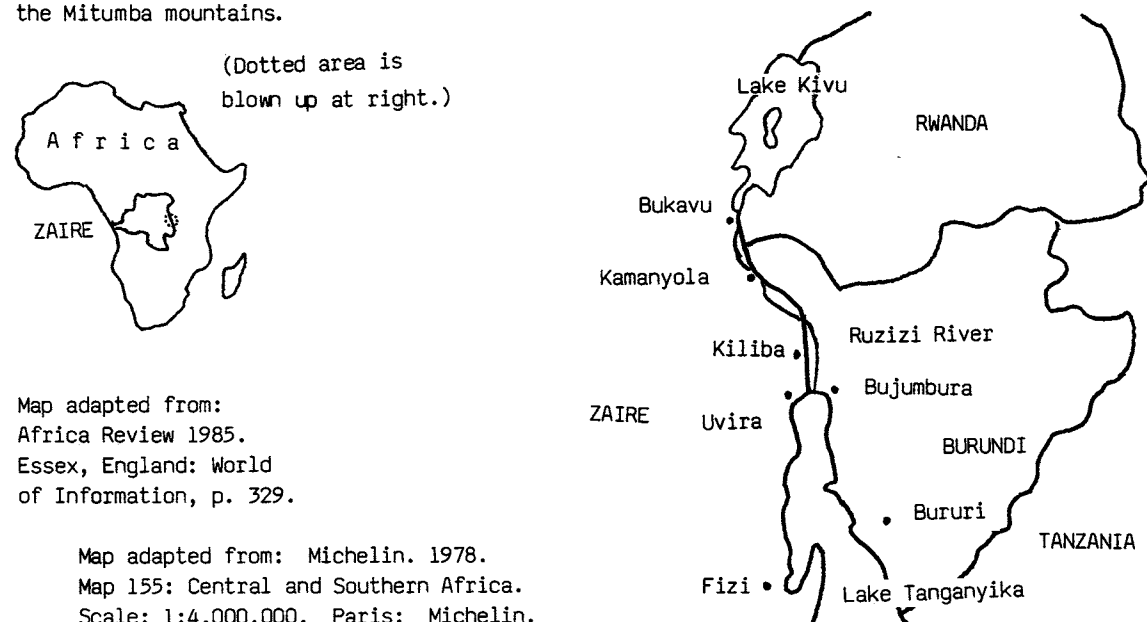
Dear Peter,

A decade ago, the international forestry development community became very excited about the concept of "community forestry", whereby rural communities would plant trees in woodlots for the community members' needs. Many subsequent community forestry projects demonstrated, however, that it is often difficult to attain community consensus, participation, and continued commitment. A major constraint in such projects is the uncertainty of future benefits. Oftentimes participants lack guarantees that they will ultimately benefit, either as a community or as individuals.

This past weekend I visited a promising community forestry project in eastern Zaire. Roger Van Otterloo had invited my husband LeRoy Duvall, a forester, and me to visit. Roger drove us from Bujumbura to Kiliba, where we stayed with Roger, his wife Karin, and their three young sons.

The reforestation project has been started by the local church, the Evangelical Pentecostal Community of Zaire (CEPZa). This church was founded by, and continues to collaborate with, the Swedish Free Mission. Swedish missionaries have been working in the region since the early 1900s.

The reforestation project is located in the southern Kivu region of Zaire. It is located within and adjacent to the Ruzizi Valley, which extends from Lake Kivu to Lake Tanganyika, along the Zaire's eastern border with Burundi and Rwanda. The project area stretches from Kamanyola 220 kilometers (135 miles) south to Fizi, and from Lake Tanganyika 40 kilometers (25 miles) west to the Mitumba mountains.



Map adapted from:
Africa Review 1985.
Essex, England: World
of Information, p. 329.

Map adapted from: Michelin. 1978.
Map 155: Central and Southern Africa.
Scale: 1:4,000,000. Paris: Michelin.

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Zaire has the largest tropical hardwood reserves in Africa. Most of Zaire's 121.7 million hectares (300.6 million acres) of forests and woodlands, which comprise 52 percent of the country's land area, are found in the central, western, and northern regions, and in the mountains of eastern Zaire (Irving 1979). Because of poorly-developed transport systems and high fuel costs, the Ruzizi Valley is effectively isolated from these forested regions.

In the mountains west of the project area, forested areas are being cleared and burned to increase the availability of land for maize production. During the dry season, haze obscures the mountains from view in the valley. But even from Bujumbura, across the valley, one can easily see glowing orange spots through the grey-white haze -- fires on the mountains.

The Ruzizi Valley is, in contrast to the mountains, hot, dry, and dusty. The Zairian side of the valley has noticeably less vegetation, fewer people, and a more desolate appearance than the Burundian side. Approximately 200,000 people live in this region. Many people originally migrated into the valley out of the mountains to escape rebel attacks during the three uprisings in the 1960s and 1970s, and eventually decided to relocate permanently. Within the past twenty-five years, most of the trees have been cut and burned to produce charcoal (for cash income) and to clear land for agriculture and grazing livestock. Most people cultivate manioc (cassava) and other crops, such as beans, maize, and bananas. Many people raise cattle, sheep, and goats.

The project began rather accidentally. Roger is an American linguist, who has been working with the CEPZA church, translating the Bible into the local language, Kifulero. He decided in 1983 to grow some trees to plant on his own land. As Roger explains it, this was a hobby -- giving him an excuse to get out of his office in the late afternoons and get some fresh air. The first year he produced approximately one thousand tree seedlings. After planting 300 on his own land, he gave the rest away to a local church. Church members planted the trees next to the church, to provide shade for outdoor church meetings.

Subsequently, other churches asked Roger for help. The Swedish Free Mission discovered a dormant tree planting account, and so was able to provide funds for a pilot project. Monies covered the purchase of plastic sacks (pots for tree seedlings), tree seed (for species that could not be collected locally), and small amounts of insecticide. While a variety of tree species were tried, the majority of seedlings produced were either Eucalyptus spp. or Grevillea robusta.

The Swedish Free Mission also set up an "incentive fund". They offered to purchase musical instruments in Europe and import them for the churches that participated in the tree-planting. The formula agreed upon was that a church would receive a credit of 10 cents (US) for each planted tree surviving after one year. When a church had enough credits, the credits could be "cashed in" for a musical instrument. A guitar, for example, required approximately \$150.00, or 1500 trees.

The church hierarchy set up a committee to oversee the project, and chose Roger to preside. Each member church set up its own tree committee, which has organized the church members' participation. Roger conducted a series of seminars on setting up nurseries and tree-planting, distributed the materials, and left the actual work up to each church.

This incentive has worked extremely well in motivating church members not only to produce tree seedlings and plant them, but also to care for and protect their trees. Churches have hired guards to keep goats out of the plantations. Any goats caught are impounded: the owner has to pay a fine, equivalent to one-third the average value of a goat, or forfeits the animal.

Church members have also learned that cultivating between the trees promotes tree growth and survival. Uncultivated trees tend to be outcompeted by grasses and grow very slowly. As the valley is very hot and dry, grasses are highly flammable during the dry season, posing another risk to tree survival. Where church members cultivated peanuts between the trees, however, tree growth was enhanced.

In 1985 twenty-six churches participated in the project, planting a total of 26,000 trees, with an average of one hectare per church. As the first organized tree-planting effort within the valley, these achievements were significant. So significant, in fact, that the Zairian government then came to Roger and asked for his help in expanding the program. The government has subsequently agreed to provide ten hectares of land for each church in the valley. As there are 312 churches, this amounts to over 3,000 hectares of land, requiring over 3,000,000 trees.

The government has previously recognized that the Ruzizi Valley has been heavily deforested, and that remedial steps needed to be taken. President Mobutu had, in fact, decreed in 1984 that trees be planted in the valley. But until the CEPZA project began, the means had been lacking. The few government agronomists that work in the region have been very happy to cooperate with the project, as has been the Ministry of the Environment. The project registers the trees planted with the government, so that the churches will have the legal right to harvest the trees in the years to come.

As the project has grown, its nature has begun to change. In addition to the original objectives of planting trees for shade, the churches are now viewing their plantations as possible future sources of revenue. They anticipate that they will be able to sell timber, firewood, and charcoal to urban markets in Bukavu and Uvira.

To adapt the project to such a large scale effort, the project needs to address the question of how the labor to cultivate 3,000 hectares can be obtained. As the ground in the valley is very dry and incredibly hard, the work of preparing the land for planting is extremely arduous. While men may plant trees, preparing and cultivating land is women's work. On the average, Roger has calculated, a woman can hoe a 10 meter length of a one-meter wide row in a morning: consequently, a hectare could require 1000 woman-mornings of cultivation. This represents an enormous contribution of labor, particularly for small village churches where the population of adult women may be only fifteen or twenty.

The Swedish Free Mission hopes to address this labor shortage by obtaining two second-hand Volvo tractors in Sweden, and shipping them to Zaire. They are also arranging for a Swedish volunteer to come to train Zairians in tractor use, maintenance, and repairs. While awaiting delivery of the tractors, the reforestation committee hopes to rent tractors from the local sugar factory to prepare land for the coming planting season in December and January.

Individual church members have also expressed interest in planting trees on their own lands. Although to date the project has only provided tree seedlings for the church woodlots, it may be possible to expand in the future -- perhaps to sell seedlings to the general public.

Roger is enthusiastic about possibilities for broadening the project to encompass some larger community development objectives. Developing written forestry extension materials in the local language, for example, could support not only the forestry program but also provide reading material for the functional literacy classes for adult women already started by the church.

The concept of providing a group incentive for tree-planting and maintenance could also be adapted to encompass other community development objectives. Roger cited several local priorities, such as obtaining machines to grind manioc tubers into flour, which would free local women from hours of pounding with their pestles, or obtaining saws and other equipment to set up a carpentry workshop and process the wood grown in the plantations.

The financing of the project on a larger scale also poses a major challenge. The Swedish Free Mission was able to furnish the monetary incentive for the 26,000 trees (\$2,600) planted this past year, and has provided an additional \$100,000 for this year. The prospect of planting 3 million trees, however, necessitates searching elsewhere for additional funds. Thus, Roger now finds himself not only working on his translations and growing trees, but also writing project funding proposals. He estimates that the project may cost three-quarters of a million dollars

over a four year period. Of this amount, \$300,00 will be for the incentive system. But if the incentives are tied into larger rural development objectives, it will be money well spent. Certainly such an incentive approach gets trees planted at a cost lower than many forestry projects spend hiring labor.

While visiting the project, we attended the Sunday morning services at the mission church in Kiliba. The services were conducted by several pastors in a mixture of Kifulero, KiSwahili, Kirundi, and French. The service was well attended, with over 700 people. Music was very important in the service, with three different choirs of women and men singing hymns in Kifulero, accompanied by male musicians playing three electric guitars and a traditional drum. (The amplifier for the guitars and microphone for the service were powered by a car battery.)

One pastor introduced us to the congregation and thanked us for coming to look at their trees. Another mentioned how the church members were planting trees to combat the drought that was attacking not only Zaire, but all of Africa.

Both during the church service and afterwards, when we met several of the pastors at Roger's house, the church's pride in their trees was evident. While church members have been motivated to plant trees to earn musical instruments for their choirs, they have also been motivated by the more intrinsic rewards of working together as a community towards common goals.

Throughout Zaire, churches have long been active in social welfare and development (Irving, 1979). In the Ruzizi Valley, the CEPZa church -- to which half the local residents belong -- is the only organization currently working on community development issues. In the past two years, for example, the Kiliba Mission has raised funds for a maternity clinic, to be constructed soon.

Successful development is, as Robert Packenham (1973) has argued, often more a question of possibilities than of probabilities. In the larger view, perhaps, the reforestation of 3,000 hectares is only, as Roger Van Otterloo mentioned, "a drop in the bucket". Perhaps the realistic probability of success in expanding the reforestation to cover the entire valley may be quite small. But rather than be discouraged, church members are acting on the possibility that they can make a difference. Whether or not their dream of a once-again verdant Ruzizi Valley is ever achieved, the tree-planting efforts may positively affect the local community, especially by enhancing other ongoing development efforts and inspiring the local people to seek other ways to develop themselves. Planting trees "for a song" may be a novel approach in forestry development, but it seems to hold much potential.

Sincerely,

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