

GEF PROJECT TO SUPPORT CATTLE REARING THAT HEALS, NOT HURTS

by Frank A. Campbell



Before

Look at this picture. The farmer looks lovingly and possessively at his cattle grazing in the field. He can see them clearly. No trees block his vision. He cleared those long ago. There are only the small patches of grass and the fields of corn green with the sufficiency of modern fertilizer and protected from insects by state-of-the-art insecticides. Except for the company of the cattle and an occasional hired help, the farmer has his farm to himself. When the farm machines are not operating, all is silent. The birds no longer sing, no longer take up residence or even visit. Come to think of it, even the frogs and crickets no longer at eventide. And in much of the field, the farmer can see the brown, dry and dusty earth. Nature is barely alive on this farm.

Look at this other picture. The farmer and his cattle are here too. There are also the hired workers, more of them since there is more to do like planting trees, storing manure to protect the drinking water and to replace most of the synthetic fertilizer. The trees planted to replace the fence posts when they get old are already a source of shade for birds and small animals. Birds sing, animals scurry, worms work their way through the soil. Butterflies flutter their colorful wings in the sunlight and bees from the farmers hives seek nectar from the fruit, vegetable and ornamental flowers which proliferate on this farm. Birds sing, animals scurry on the ground and up and down trees. Leaves and shrubs cover the ground and the soil, even where it can be seen is firm, held tight by the roots and trees. Birds sing, animals scurry on the ground and up and down trees and even the branches provide background music as they sway in the breeze. On this farm, nature is alive and well.



After

You have just looked at before-and-after pictures expected to result from a Global Environment Facility project in Colombia, Costa Rica and Nicaragua and entitled "Integrated Silvopastoral Approaches to Ecosystem Management." The \$8.45 million project, to which GEF has allocated \$4.5 million, will be implemented by the World Bank, one of the three GEF Implementing Agencies. The project, prepared with support from LEAD, has been approved and will start activities in July 2002.

"The project will change the landscape from degraded grasslands or pastures with just one or two species of plants," hopes World Bank Agricultural Adviser Cees de Haan, "to a much more varied vegetation with grasses, herbs, shrubs and trees and, as one of my colleagues says, perhaps with cows happily munching in the pastures." Mr. de Haan is sharing responsibility as Task Manager for the project with his colleague Paola Agostini, an environmental economist.

If Mr. de Haan's vision of ecological nirvana becomes reality, Latin America and the Caribbean will be

on the way to solving one of its most crucial problems. "Despite significant efforts to reduce destruction of tropical forest and protect the natural habitats and the wildlife populations in Latin America, the beginning of the new century does not look more promising for the preservation of tropical rainforest and biodiversity than the preceding years," says a preliminary document on the GEF project. The document also notes that "cattle production has been questioned for a long time because of its association with deforestation and subsequent degradation of soils."

The project through which GEF and its partners seek to help address the issue is as innovative as it is potentially far-reaching. It is set to become one of the first, if not the GEF's first integrated ecosystems projects which emphasize a co-ordinated, holistic approach to dealing with environmental problems. The development objective of the project is to turn degraded pasture lands in Colombia, Costa Rica and Nicaragua into ecologically functioning units. It will do so by "more intensive pastoral systems that provide global environmental services and local socio-economic benefits." Usually intensive agriculture refers to the tendency to overwork a given plot of land. In this case, intensive means that rather than merely rearing cattle which eat a plot of land dry, the farmer does other things which makes everybody happier - the cows, because there is more to chew on; the farmer because his undertaking becomes more profitable; and the farmer's family and the rest of the community because firmer soils mean less erosion and therefore less contamination of the pure-water-supply systems, not to mention greater on-farm productivity.

Those concerned with environmental issues - including a growing number of shoppers everywhere who want less fertilizers and insecticides hanging on to their fruits and vegetables - will also have much to smile about. The global environment benefits, which are what allow GEF to get involved in this project, are also likely to include greater carbon sequestration -- as well cultivated soils absorb more carbon - and therefore less carbon going into the atmosphere to include global warming and other disadvantageous environmental impacts.

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Then, of course, there is greater biodiversity - more animals crawling and flying about the farm because of the improved habitat represented by the improved vegetation. From the point of view of GEF and from the perspective of global ecology, more is at stake than providing a lively working environment for the farmer. There is the question of ensuring that these animals - and plants, too, and flowers, all living matter - do not die out and become unavailable just when we or our children realize that they are of vital dietary, medicinal or ecological value.

One of the innovative aspects of the project, according to both Mr. de Haan and World Bank Senior Operations Officer Theresa Bradley, is the use of incentives to both encourage and enable farmers to adopt the new, holistic approach to cattle-rearing. Mr. de Haan and Ms. Bradley, who stresses that "this is not a typical GEF project", note that some details of the incentive plan are still being worked out. However, the idea is to reward farmers for performance - whether that means increasing biodiversity or helping to reduce the greenhouse effect. The plan is likely to include some way of reducing the amount spent on incentive over time so as to reduce the likelihood of dependence and increase the likelihood of sustainability.

Another important aspect of the project is the kind of partnership involved. The executing agency will be the Centro Agronomico Tropical de Investigacion y Ensenanza (CATIE), an international non-profit civil association operating throughout Latin America and the Caribbean with considerable experience in carbon sequestration. CATIE will sub-contract the Colombia part of the project to the Centre for Research on Sustainable Agricultural Production Systems (CIPAV), an NGO recognized for its excellence in science and technology, including experience in silvopastoral systems. Nitalpan, which is the Institute of Research and Development of the University of Central America located in Nicaragua which has experience in credit payments, will be awarded the sub-contract for the project in that country. "We deliberately chose to do the projects in three countries deliberately because we wanted to operate in three different systems and work with different partners with different strengths," says Mr. de Haan.

Mr. de Haan also stressed that the dream being sought by this project is not as elusive and far-off as may first appear. In fact, the integrated systems planned under this project have been tried and have produced the results hoped for by the present project designers. The difference, he said, is one of scale. Often, the silvopastoral approach has been tried on individual farms where the result is interesting but the overall environmental impact not very noticeable. A farmer who replaces barren pastureland with a mini-forest will not really have established a new habitat for certain animals if there is again barren land as soon as one leaves the perimeter of that farm. Also, ending erosion on one farm

is not enough to make the drinking water change from brown and dirty to clean and crystal. "So," he says, "we take a watershed approach and this project covers five watersheds." It is also expected to involve about 500 farmers cultivating about 3,500 hectares of land - about as much as a medium-size city.

Yet, even in this project the success of a single farmer will be important in spreading the word that the silvopastoral approach is superior to the conventional approach. Mr. de Haan talked about taking representatives of the American Bird Conservancy (ABC), another partner in the program, to look at the changes which a committed, ecologically minded Nicaraguan had made on his farm. He said they were amazed when they saw, for example, the huge number of birds which had returned to the once neglected farm. So, in a way, the planners of this project have seen their dream manifest itself in reality. However, they will like to see it happen not on one farm, but on 500 - for now.