CE-6 1998 THE AMERICAS

Chenoa Egawa is a Fellow of the Institute studying the marketing of Native American products, crafts and produce in MesoAmerica.

Setting Examples

GUATEMALA CITY, Guatemala

October 1998

By Chenoa Egawa

My mind wandered far away as I stared past the open window. The landscape assisted me on my mental journey; sometimes it resembled the moon. This was my second day visiting the wide, arid expanse of barren hills and mountains that make up the *Mixteca Alta* (the High Mixteca) in Oaxaca, Mexico.¹ As Anacleto Sajbochol and I drove along the dirt road, we passed a little old lady off in the distance with hair as white as cotton, her deep brown skin a pleasing contrast to

her pink sweater. She was walking toward the green, chest-high stalks of her *milpa* (cornfield). The surrounding hills were a pale, terra-cotta red, the exposed land dotted with white and gray stones that had not yet been washed away along with everything else. From high above the sun beat down, opening up huge crevasses in scarred, cracked land, seeking every trace of moisture, then drawing it skyward. Except for the occasional passing of school children, or a single goat herder in the midst of 40 or 50 *chivos* (goats), signs of life were rare between the many towns hidden in the folds and valleys of the Mixteca Alta. We continued down the dusty, chalk-colored road that ran like a dry vein through the red earth.

"Earth is a living being," Anacleto told me. "We have to learn how she works, learn her habits, customs and limitations in order to participate *with* her. Nature has its own balance, its own justice. It is a reflection, a mirror for human beings and our actions upon it. Here the earth is showing us a negative response to how we have treated her." "Nature has its own balance, its own justice. It is a reflection, a mirror for human beings and our actions upon it. Here the earth is showing us a negative response to how we have treated her."

Anacleto Sajbochol, Coordinator for the World Neighbors (WN) project in the Mixteca Alta, was my guide. He is originally from Chimaltenango, Guatemala,

² WN is currently working in Boliva, Burkina Faso, Ecuador, Ghana, Honduras, Haiti, India, Indonesia, Kenya, Mali, Mexico, Nepal, Peru, Philippines, Tanzania, Togo, Uganda and Vietnam.

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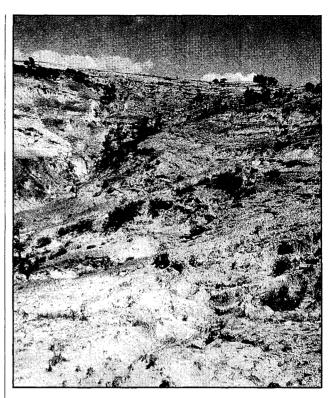
¹ The Mixteca comprises of three distinct areas in the western part of the State of Oaxaca: the Mixteca Baja (the Low Mixteca), the Mixteca Alta (the High Mixteca) and the Mixteca de la Costa (the Mixteca of the Coast). The Mixteca Baja is the northern border of the Mixteca near Huajapan de Leon stretching east to the State of Puebla with altitudes fluctuating between 1000 and 1700 meters. The Mixteca Alta is the area between the Mixteca Baja and the Oaxaca Central Valleys to the south. Most of the Mixteca Alta is above 2000 meters. The Mixteca Alta to the southwest all the way to the Pacific Ocean north of Puerto Escondido.

a Kaq'chiquel Maya who has been with the project since its inception in 1982 when WN first began working in Mexico. WN was founded in 1951. It is a privately funded organization currently working in 18 nations throughout Asia, Africa and Latin America.² The main thrust of WN's work is community capacity-building in order to strengthen the people's ability to analyze and solve their own problems. This is most often achieved through developing, testing, and extending simple technologies at the community level and training local leaders to sustain and multiply results. Of more than 400 workers paid by WN and partner agencies, only four are not local to the area or country in which they work. Many have little formal education and began as volunteers at the village level. Programs vary from country to country, but because WN works primarily with people living at subsistence levels, agriculture or food security is a key element to all of their programs. Other activities include: naturalresource management; community-based health and reproductive health; micro-credit and community based lending; water and sanitation; environmental protection; literacy and women's support groups.³

During my visit to WN's Oaxaca project, Anacleto took me throughout the Mixteca Alta to visit sites where alternative methods of organic agriculture, soil conservation, reforestation and animal husbandry are being put into practice. Each area of work is linked to the next, demonstrating the interdependence of the people's health with that of the land. The goals of the project cover many areas, but major emphasis is given to the importance of relearning the cycles of nature and how people can support those cycles to improve their own quality of life. Education on alternative solutions to current problems is provided through ongoing training sessions in the communities, training and capacity-building of community promoters and agricultural extentionists, and hands-on application of techniques in the field. For this project to succeed, the people of the Mixteca Alta⁴ are seen as the key. There are many forces, both internal and external, that present constant challenges to the people. Getting out from under these forces is no easy feat. Positive change takes time; in the Mixteca Alta, it is slowly beginning to take hold, bringing with it a renewed sense of hope and pride among the people, and the chance for a better life.

* * * *

The Mixteca Alta faces severe land erosion, deforestation, poverty, malnutrition and other health problems. Soils are extremely poor, most rivers have dried up and very few trees have been left standing. The majority of the



Land erosion in the Mixteca Alta

population in the Mixteca Alta consists of small farmers who work individual or family plots of land, planting primarily corn and beans. Because of poor soil, however, most people are able to grow enough food only for six to eight months out of the year. Many then migrate to find work elsewhere. Nearly 40 percent of the Mixtecan population has gone to the United States at one time or another in search of work.⁵

There are three main causes for the condition of the land in the Mixteca. Many families have anywhere from 20 to 100 goats. Goats are extremely destructive to the land, eating all vegetation within their reach. Free grazing of animals has been the standard practice in the region for over 400 years,⁶ and it has taken a big toll on the land. Deforestation has also been a problem. People continue to cut down trees for firewood (all food is cooked by fire), housing and other basic needs. Agricultural methods have contributed to erosion as well, particularly the practice of burning all crop residue following a harvest.⁷ Since most farmland runs along the hillsides, unprotected soils are left exposed and are swept away one layer at a time by rains and wind.

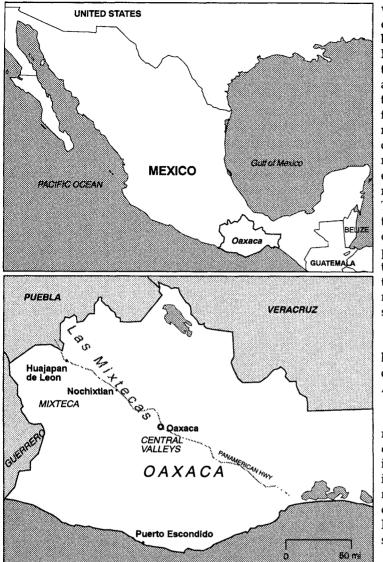
Distances between homes and communities are long. In three days, Anacleto and I covered a lot of territory.

³ Information obtained through World Neighbors' support staff in the San Francisco office.

⁴ There are nearly 500,000 Mixtec Indians. The Mixteca, in the State of Oaxaca, is their traditional homeland and the majority of Mixtecs still reside there. Smaller populations of Mixtec people also live in the bordering States of Guerrero and Puebla. ⁵ From my conversations with Anacleto Sajbochol.

⁶Dominican Friars of Spain introduced goats to the Mixteca over 400 years ago when they came to settle.

⁷ Information obtained from World Neighbors reports.



Driving along the dirt roads through the Mixteca Alta, we occasionally passed someone walking or riding a bicycle, far away from any conceivable destination. Usually they would wave us down, hoping for a lift to shorten their journey. They would jump on the back of the truck, ride with us for awhile, then hit the top of the truck cab a few times with one hand, quietly jump off, smile, wave, give a word of thanks and continue on their way. Some of the children we passed walked anywhere from two to four hours a day to attend school.

* * *

After a quick breakfast of *tamales* and *atole* (a thick corn drink) at the local market, we left the Catholic Parish in Nochixtlan, where WN has its local office.⁸ The sun

was already heating up the land; the only clouds in the sky were far to the south. It would be another dry, hot day. About 30 minutes out of Nochixtlan, Anacleto stopped the truck. "I want to show you something," he said. We got out and walked over to a tiny, miserable looking tree. It was a Eucalyptus. "In 1983, a technician from Oaxaca came to the Mixteca Alta to promote reforestation in the region. A lot of technicians come out here to do studies. Usually they run tests, tell us about the land, what the mineral content is, what is missing, and so on; they never suggest how to make improvements." This technician from Oaxaca City apparently thought he could make improvements, and over a two-year period, he supervised the planting of 6,000 Eucalyptus and Casuarina trees. Most of the trees died years ago, and those that were still barely surviving were hardly more than a foot or two in height. They were the smallest 16-year-old trees I had ever seen.

"I like to bring visitors and other technicians here so that they can see the results of the kind of technical expertise we have had," said Anacleto.

Although the project was a failure, the experience was valuable. Through it, the WN team decided to set up their own *viveros* (tree nurseries) using seeds collected from local tree varieties. The Eucalyptus and Casuarina trees were not native to the region. Native trees, on the other hand, had adapted to the conditions of the Mixteca Alta over time and would seemingly stand a much better chance of survival.

The people were against the idea of planting native varieties. They did not understand why they should plant more of the same. Shouldn't they plant something more exotic, such as fruit trees? At least then they would have something to harvest.

"We put on workshops in some of the communities to try and convince people that trees, with or without fruits, are beneficial," said Anacleto. "We talked with them about the cycles in nature, how trees produce oxygen, bring shade, create rich soils, hold moisture, attract birds and animals, and so on."

Even though the people spend a great portion of their lives working the land, a lot of basic knowledge about the balance of nature and the interdependence of ecosystems had been forgotten, or at least disregarded. With the struggle to survive from one day to the next more urgent,

⁸ Nochixtlan is a small town on the Pan American Highway that is a strategic base for further travel throughout the Mixteca Alta. The Catholic Parish in Nochixtlan has provided WN with office space in the church for many years now and has been very supportive in assisting WN realize project objectives in the region. Three other Catholic parishes in the Mixteca Alta also work in support of WN. WN, itself, does not have any religious affiliation.

there was not always the time or the resources for long-term planning. Convincing the people was not easy, particularly in the wake of the Eucalyptus/Casuarina project. Those trees produced no organic matter, drained all the nutrients and moisture from the soil, and then died.

In 1984 the first tree nursery was set up. Native species did indeed take to the land. Today there are three nurseries in the Mixteca Alta that provide tens of thousands of trees each year to approximately 26 communities. People can come to the nurseries, make a request for any number of trees and take them to plant on their own lands.

Reforestation is being done on communal lands as well, but it has been more challenging. Because these lands are of the community, people argue that they have a right to let their animals graze there. If lands are left unprotected, however, the animals end up eating entire reforestation efforts. In order to demonstrate to people how devastating their animals are to the land, test areas are set up. For example, two areas are reforested at the same

time with the same type and number of trees; on one section animals are permitted to graze and on the other they are not. Where animals are kept out, new forests are beginning to grow. Where they are allowed in, the land is again barren. People are brought to these areas to see for themselves how free-grazing animals negatively impact forests.

I asked if deforestation has come to a halt in the region as a result of these demonstrations. The answer was no. "It is not that people do not respect reforestation efforts," said Anacleto. "They do when they are informed ahead of time, but we are unable to reach everyone." There is a need for more trained promoters, who can spread these ideas and techniques to more families.

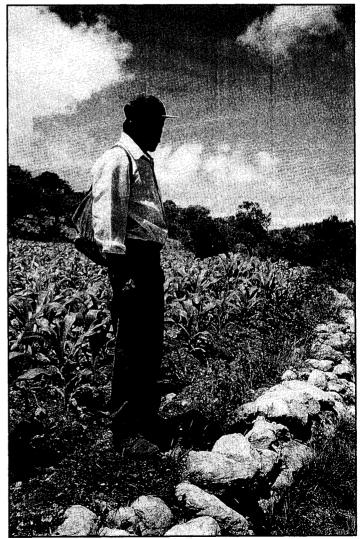
"We can't tell people that they need to give up their animals. It is a way of life and a source of income." Most animals are raised and sold to *coyotes* (middlemen). The *coyotes* are the ones who realize most of the profit from the business. Very few of the animals actually go to feed the families who are raising them.

Because goats are a lot more destructive to the land than sheep, WN and promoters are encouraging people to replace goats with sheep. Decreasing the number of animals each family owns is another goal. As Anacleto put it, "it is better to have 20 healthy, fat goats or sheep, than 60 ragged, skinny ones."

* * * *

Alfonso Lopez-Lopez, an agroforestry extensionist, stood waiting for us by the side of the road. We stopped to pick him up, then headed on a bit farther to see some of the agricultural techniques he was applying in his own fields. Over the years, WN has trained local extension agents, who themselves are Mixtecan small farmers. Training includes courses in soil conservation, use of organic fertilizers, control of insect plagues, improvement of crop yields and seed selection. The agents apply what they have learned in the field, running their own experiments and testing alternatives. Most have surfaced naturally, due to an interest and ability in finding solutions that will allow Mixtecan people to improve their quality of life. They play a key role in implementing change, leading others through successful examples of practical applications in the field. Alfonso was one of the people whose hard work and dedication provided methods that others could follow. Many families are interested in alternative organic-agriculture techniques to improve crop yields and the health of the produce, but they are often unwilling to risk experimentation in their own milpas.

As we walked his land, Alfonso talked about the work he was doing. "I donated this land to demonstrate



Alfonso Lopez-Lopez next to one of the milpas protected from soil erosion by a rock wall barrier



Moises Reyes Garcia, Agroforestry Extensionist, planting Ocote at one of the tree nurseries

the benefit of adding organic matter to the *milpa* in order to enrich the soil and provide nutrients for the corn," Alfonso told me as he pointed out bundles of weeds that had been placed neatly among the rows. Weeds and grasses are collected locally, placed in the *milpas* and then turned into the soil to decompose, providing organic fertilizer to the plants. Animal manure and composting are other sources of organic fertilizers being used.

"Five people are working with me here; three of them are very dedicated and show up regularly," said Alfonso. The *milpa* was divided into two sections. Weeds and grasses were worked into the soil in one; the other was left alone. It was easy to see the benefit of adding organic nutrients; the corn was both taller and healthier in that section.

We walked on. Boulders from the surrounding hillsides had been collected and neatly stacked by hand to create a protective barrier around each *milpa* so that crop soils would not be washed away by rain. When it rained, the water could pass through the barrier, leaving the soil intact. Other "live barriers," made by planting different types of grasses, had also been planted to protect soils. Some of the grasses are apparently well known for their ability to thrive even under the poorest of conditions. The ones I saw were struggling, though, the drought affecting even the hardiest of plants. Unfortunately, the rains had not yet started in the Mixteca Alta, and another year of drought threatened the survival of all of the crops.

Planting corn and beans in rows is another technique being put into practice. Instead of scattering handfuls of seeds through the fields, people are being taught row planting. More space between plants makes crops quicker to weed and it's much easier to monitor and control insect plagues. "Of all the crops planted now, 50 percent of the corn and 80 percent of *frijoles* (beans) are being grown in rows," said Anacleto. "People used to plant this way long ago, but over the years they have gotten away from it."

Further along, we came upon an elderly woman who was out weeding her *milpa* and stopped to greet her. When she and I shook hands, she smiled and asked, "Are you here to supervise us?"

"No," I replied, realizing how I must have looked with my yellow notebook and pen in hand. "I am just visiting."

"Oh," she said, "I thought you were here to make sure we were working."

"No," I said with a big smile.

* * * *

The next morning we headed out again, this time to meet Mario Rodriguez Gaytan, an agroforestry extensionist and caretaker of one of the three tree nurseries. We passed Don Tino's land on the way out of town. Don Tino is a wealthy *ladino* (a person of European descent) who is renting his land out for government tests and experiments with new hybrid seeds. The corn was tall, bright green and healthy. Water from high-powered sprinklers showered the field, a sharp contrast to the thirsty *milpas* I had been seeing throughout the rest of the Mixteca Alta.

"These experiments with hybrid seeds are virtually useless to the majority of farmers," Anacleto told me, "because most of them do not have good land, a limitless water supply or the money to buy seeds and chemical fertilizers. I am not saying that hybrid seeds don't work. It's just that in order for them to work right, they have to be planted and grown in a set of ideal conditions." The necessary conditions are almost never natural to the land, and most *campesinos* do not have the means to alter their environment to create them.

Anacleto gave me a funny example about sheep to emphasize his point.

Apparently, several years back, yet another ambitious program was introduced to the Mixteca Alta. This one provided people with sheep. The sheep were raised in pens, where they were kept clean, healthy and well-fed. They were cared for with immaculate attention and then given to the *campesinos*. The *campesinos* sent the sheep out to graze, letting them roam free to fend for themselves. "The poor animals got really sick." Anacleto said.

I asked him what sickness they had contracted. He looked over at me, pausing dramatically for a moment, and then, with a straight face and dry sense of humor, he replied, "They were starving to death." Just because a project works under certain conditions, does not mean that it will work under others.

Like Alfonso the day before, Mario stood at a strategic pickup point along the roadside waiting for us to drive by. He smiled when he saw the truck come up over the rise. We stopped and he jumped in.

A few moments later we were on foot and I was following Mario down a hill to where the first reforestation effort using local species had been done back in 1984. *Ocote Oaxaqueno* trees were thriving.⁹ Birds darted in and out of the trees and the warm air was filled with white butterflies.

"Goats and sheep are kept out of this area," Mario said. He pointed to where the original trees had been planted, and how the young forest was now regenerating naturally as a result "These ones took to the earth well and are heading for the sky," he said, looking at this achievement with pride. Some little *Ocotes* had even managed to take root in what looked like pure rock.

The ability of nature to sustain life and regenerate in an area that was before completely barren and dry amazed me. I remembered reading somewhere that the color green relaxes and soothes one's vision. Maybe that was what I was feeling when I walked through the young forest. Whatever it was, seeing those trees "heading for the sky" was comforting and reassuring. I could not help but smile.

Nearby, in San Pedro Tidaa, we stopped at the tree nursery that Mario manages. Each year this nursery alone provides 13 communities with 28 to 30 thousand trees per year. The nursery was full. Seven or eight varieties were being grown; all were ready to be planted, but nobody had come for them. Everyone was still waiting for the first good rain. Some of the saplings had outgrown the small, black plastic bags that held their roots.

* * * *

According to Anacleto, acceptance of new ideas and methods by the people is slow in coming for a number of reasons. In addition to the issues aforementioned (poverty, erosion, poor soils and severe climatic conditions),



Anacleto at Fidel Cruz Pablo's place. Fidel is one of the agroforestry extensionist who has motivated many people by demonstrating successful reforestation on his own land. Young Ocote trees can be seen in the foreground. The bigger trees were planted by Fidel in the early 80's.

there are many other complications.

"Many problems lie within the communities themselves," said Anacleto. "Authorities in the communities cling to old rules and laws that are so severe they make no sense in today's world." He was talking about el tequio, a system of rule that was put in place by the Dominican Friars when they arrived in the Mixteca Alta over four centuries ago. El tequio changed the traditional guetza and trueque practices of many native communities. La guetza and el trueque were systems of barter, equal exchange in which people in the community traded and offered their skills and services free of charge knowing that at a later date, the favor would be returned in some other form. The Dominican Friars manipulated this system to benefit the "maximum authority," which was the church, and called it el tequio. In contrast to la guetza and el trueque, el tequio benefited only one side, the "maxi-

⁹ Ocote is a local species of pine, and it is the predominant species being used for reforestation. There are many other species of trees that are also being used, such as ash, alder, white oak, yellow oak, acacia, cherry oak, *cucharal*, juniper, madrona, *ramon*, *zomaque* and *jarilla*.

mum authority," and exchange and barter were replaced by obligatory labor.

El tequio stuck, and has been carried through to the present day as "tradition." Mixtecan communities elect their own leadership from within, and that leadership is now the "maximum authority." The maximum authority subjugates their own fellow *Mixtecos*, obliging them to serve the community. Services are free and there is no pay or compensation for labor. Every year, authorities from each community select a committee from the local population to serve time in free labor for "the good of the community." Oftentimes duties are so severe that people would rather leave their homes than serve on the committee. To refuse service, however, can mean losing your house, land, rights, or all of the above. In Anacleto's opinion, el tequio is a modern-day form of slavery, But I have spoken with people of other native communities, who think it is effective, a quick and efficient way to get work done. Either way, many are bound to it, because it is "tradition."

"The government applauds this form of rule," said Anacleto. "Look at this *pueblo*, these people, how hard they work, how committed they are to their community," he said mockingly. "The government uses *el tequio* to their advantage, to keep people from getting anywhere. If a person is selected to serve on the committee, they must forego their personal responsibilities. Imagine not being able to tend your fields for a whole year. It is a lot of pressure; a great burden on the people."

Over the years, the government's paternalistic attitude toward the people has caused a lot of damage. "Among the people there is an expectation that the government will always provide a free handout, no matter whether the handout is beneficial or not," said Anacleto. "It is as if their ability to become creative thinkers, problem solvers has been shut down, closed off. Government programs are not implemented to help the people. They are carried out to create dependency and conformity, to maintain the current power structure. I wish the government would just leave the people alone. They would work harder to improve their own situation if government projects never arrived."

As an example, Anacleto told me about PROCAMPO. PROCAMPO is a government program that pays campesinos 400 pesos¹⁰ for each hectare (2.2 acres) of cultivated land. Allegedly, the government stated that with the implementation of PROCAMPO, Mexico, within 15 years, would be able to increase production of grains to a level that would allow them to compete with grains currently being marketed through NAFTA by the U.S. and Canada.

"The biggest lie I ever heard," said Anacleto, "was when the government came out with the statement that with PROCAMPO, the State of Oaxaca alone could increase production of corn to 16 *toneladas* (tons) on every hectare of land. *Campesinos* in this region are lucky if they produce 16 *toneladas* of corn on every 10 hectares of land. The government thinks only of themselves and their abilities, not the *campesinos* and their reality."

PROCAMPO hands out checks and the people buy seeds and chemical fertilizers. There is no timeline for payment or delivery of seeds. No attention is paid to the fact that seeds have to be planted at certain times of the year, and that beyond those times there will be no *milpa*. Furthermore, no technical assistance is provided to help farmers find sustainable solutions to current land and agricultural production problems. As a result, people continue to apply more and more pesticides, further degrading the land, a solution to nothing.

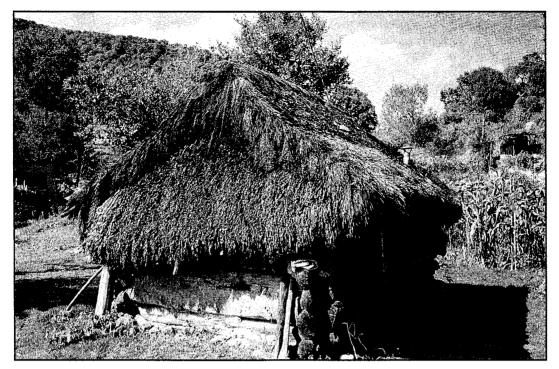
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Throughout my visit, I could not pinpoint exactly what it was about the Mixteca Alta that touched my soul, despite the region's numerous and complex problems. In



Anacleto and Mario at one area that was reforested in the late 80's

¹⁰ The rate of exchange of the peso to the dollar when I was there was P\$9.3 to U.S.\$1



Old, traditional style Mixteca home that can still be seen in some areas. This one was in San Miguel Huautla

retrospect, I can say that it was hope. The seeds are "taking root and going toward the sky," as Mario said. Standing in a young forest, seeing the rich new soil, the vibrant green color of the trees and the new life that they represent filled me with sadness and happiness in the same moment. It represented hope in the midst of too many desolate hills. At a time when technology and the lust for power are taking so many of us farther and farther out of balance with the earth, I admired these people for working so closely and patiently with the land. I admired the earth even more. I have heard people express the sentiment that this earth does not need human beings, that it will go on with or without us. If we choose to see it as a mirror for our actions, however, it can teach us to find balance within ourselves.

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