

Women, Communities and Plantations in Ecuador

**Testimonials on a socially and environmentally
destructive forestry model**

Ivonne Ramos and Nathalia Bonilla - Acción Ecológica



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CONTENTS

Preface

Another look at the impacts of monoculture tree plantations

Introduction

Chapter 1. Pines in the Sierra

- Life before the pines
- Where and how many trees were planted
- The disappearance of water and its impact
- Fires
- Emigrations
- New “solutions”
- A bad business
- Bad business in numbers

Chapter 2. FSC-certified ENDESA-BOTROSA plantations

- The violent arrival of the company
- Destruction of native forest
- Changes in the ecosystem
- The destruction of water resources
- A harsh and dangerous environment
- Other impacts
- Certification without valid consultation
- Technical visit observations
- Summing up the falsehoods
- The mockery of certification

Chapter 3. Impacts of plantations on women

- Women on the plantations
- Women and water
- Women and food
- Women and health
- The forced confinement of women
- Emigration and its impact on women
- Two different worlds

Chapter 4. Conclusions

Preface

Another look at the impacts of monoculture tree plantations

Throughout the last 20 years, WRM has been documenting the impacts of monoculture tree plantations in countries around the world and supporting local struggles against them. Our support of these struggles has given us the opportunity to learn first hand about the impacts of plantations on local communities. As a result, “our” publications have always drawn significantly on the contributions of local populations affected by plantations.

The evidence is now overwhelming and the list of countries affected covers every continent on the planet. Nevertheless, monoculture tree plantations continue to spread, including those established for pulp and timber production as well as those used to produce palm oil. Despite all of the evidence to the contrary, these plantations continue to be promoted with a string of false claims: that “plantations are forests,” that “they protect forests,” that “they create jobs,” that they bring about “development for local communities.”

In the case of Ecuador, there are a number of particular factors that have led WRM to focus on this country more than on others:

- 1) There are plantations of the types of trees most commonly used for this purpose worldwide (eucalyptus, pine and oil palm) as well as monocultures of tropical species.
- 2) There are plantations established for the production of pulp, timber and palm oil (for food, cosmetics and fuel) as well as others meant to serve as so-called “carbon sinks”.
- 3) There are plantations with FSC certification.
- 4) The social and environmental impacts of all of these types of plantations have been experienced first hand by the communities affected and jointly documented by WRM and the local organization Acción Ecológica.
- 5) There is local opposition to monoculture plantations based on negative experiences with existing plantations.
- 6) The model of large-scale plantations has still not been completely consolidated.

These factors led us to undertake a process of in-depth research that resulted in the publication in May 2005 of *Carbon Sink Plantations in the Ecuadorian Andes: Impacts of the Dutch FACE-PROFAFOR monoculture tree plantations project on indigenous and peasant communities*.¹ One year later, a second and wider-reaching report was completed and published: *Monoculture Tree Plantations in Ecuador*.²

Nevertheless, these detailed accounts of the serious impacts experienced as a result of monoculture plantations seem to have had little effect on the Ecuadorian government: it recently approved a forestry plan which, if implemented, would result in the establishment of plantations covering vast areas of land. The explanation for this apparent blindness on the part of the government is twofold. On the one hand, there is

¹ Available at: <http://www.wrm.org.uy/countries/Ecuador/face.pdf>

² Available at: <http://www.wrm.org.uy/countries/Ecuador/book2.pdf>

the heavy political weight of the national forestry industry, controlled by powerful local economic groups. On the other hand, there are the equally powerful foreign economic interests keen to take advantage of the low costs of production in Ecuador to boost their profits.

This is why WRM has decided to continue its efforts to contribute even more documented information on the subject, while including a new facet that has not been addressed in the past: the gender-differentiated impacts of monoculture tree plantations.

For this purpose, two members of Acción Ecológica who work on the issue of plantations and forests (Ivonne Ramos and Nathalia Bonilla) organized a number of meetings and workshops with groups of women affected by different types of plantations in various regions of the country.

In the course of these meetings it became clear that the women found it difficult to distinguish between the impacts of the plantations on the community as a whole and the specific impacts that affect them as women. The problem is that women suffer *all* of the impacts, both those that affect men and those that only affect women.

The meetings and workshops were designed to be fully participatory, and the preset questions were meant to act as a spur to encourage the women to reflect on issues that they had perhaps not given a great deal of consideration, and express their thoughts in the way they felt most comfortable with.

During the research, a number of other experiences that had not yet been documented came to light. These included large plantations of tropical tree species (certified by the FSC), as well as the beginning of the harvesting process in the pine plantations established in the Andean highlands, and the impacts that have resulted.

The emergence of these previously undocumented experiences, combined with the fact that the meetings with women uncovered even more evidence of impacts on local communities than foreseen, led to the decision to organize this research study in four sections. The first two focus on plantations and their impacts on local communities in general, while the third presents the testimonials of the women interviewed regarding the gender-differentiated impacts of tree plantations. The fourth and final section summarizes the conclusions reached on the basis of the evidence gathered.

We hope that this research will serve a number of purposes:

- To encourage the women who took part in the meetings and workshops to play a more active role in the opposition to plantations.
- To encourage local, national and international women's organizations to become involved in the opposition to monoculture tree plantations in order to defend the rights of women who suffer their impacts.
- To strengthen the opposition to plantations through the inclusion of these new partners in the struggle.
- To provide national organizations that oppose plantations throughout the world with new documented evidence to back their efforts and expand their alliances.

Finally, WRM would like to express its gratitude to all of the peasant and indigenous women who shared their time, their insights, and their painful experiences with us. Without them, this publication would not have been possible. To all of them, we say: *Muchas gracias.*

Ricardo Carrere
International Coordinator
World Rainforest Movement

Introduction

Since the beginning of the 21st century, Ecuador has been subject to constant pressure, especially from the Inter-American Development Bank, to help meet the international demand for wood-based raw materials. This includes the demand for tropical timber, but also, and in particular, for plantations geared to the production of wood chips to be exported and subsequently used for pulp and paper production. This had led successive administrations in Ecuador to insistently promote the so-called National Forestation and Reforestation Plan.

This plan, strongly supported by the forestry industry, had never been put into practice, due to the active and ongoing opposition to these types of plantations on the part of social organizations. All of that changed, however, under the current administration of economist Rafael Correa. In February 2008, ignoring the voices of the peoples who live in the forests and on the highland plains of the Andes, who have consistently fought for their right to a decent livelihood and the conservation of their ecosystems, Correa approved Executive Decree 931, which paves the way for the implementation of the National Forestation and Reforestation Plan. This plan includes the establishment of 750,000 hectares of commercial monoculture tree plantations using exotic tree species, for which the government would provide tax incentives and financial resources.

This decree also condemns native forests that have already been partially deforested to replacement with monoculture plantations. It stipulates that plantations can be established in “secondary or severely disturbed forests, that is, state-owned, community-owned or privately owned lands that possess less than 30% of their original native primary forest cover per hectare as a result of human activities or natural phenomena.”

The decree further constitutes an incentive for the logging of primary forests, because after the logging has taken place, these forests can be classified as “severely disturbed” and thus eligible for rapid conversion to tree plantations.

At the same time, the decree transfers jurisdiction over forestry activities from the Ministry of the Environment to the Ministry of Agriculture, in order to facilitate forestry operations and spare the plantation sector from meeting environmental requirements.

On 20 March 2008 another executive decree was issued, establishing the creation of the Ecuadorian Forestry Promotion and Development Unit (PROFORESTAL), which will be responsible for the implementation of the Reforestation Plan.

Despite the forestry industry’s impacts on the country, and the fact that it is largely responsible for Ecuador’s ranking as the country with the highest rate of deforestation in all of Latin America, it is this sector that will directly benefit from the decree and the so-called Reforestation Plan, since a handful of forestry companies and their subsidiaries hold monopoly control over the country’s wood resources, in terms of both tropical timber and tree plantations. The various holdings of the Peña Durini group, as will be seen below, include both ENDESA-BOTROSA and Aglomerados Cotopaxi, two wood manufacturing giants, along with large wood by-product export operations. Another major beneficiary is Expoforestal, which owns over 10,000 hectares of eucalyptus plantations in the province of Esmeraldas, created for the production of

wood chips that will be exported to Japan and converted to pulp for paper manufacturing through Mitsubishi Paper.

The implementation of this plan will lead to the impoverishment and displacement of the traditional inhabitants of the country's forests and highland plains, the concentration of land ownership and capital in the hands of powerful economic groups, and the satisfaction of global wood and paper demands. Are these the aspirations of a government that espouses "Socialism of the 21st Century"?

The following chapters provide detailed information on the social and environmental impacts that have already resulted from the kinds of plantations that the government is now promoting. A special chapter is devoted to the gender-specific impacts that affect women. We hope that this information, gathered from the populations affected by the plantations themselves, can help to persuade the government to change its course with regard to this issue.

Chapter 1. Pines in the Sierra

The large-scale introduction of pine and eucalyptus plantations in the Ecuadorian Sierra or Highlands region in the mid-20th century was primarily the result of a government policy, through which the plantations were established with free labour provided by secondary school students and army conscripts.

This gave rise to a certain amount of confusion, as is reflected in the following comment by a woman from a local community: “My village, Balcapilla, is between two rivers. When I was a little girl we all took part in the *minga*³ – men, women and children – and they told us that the trees [that they were planting] belonged to the soldiers.”

From the 1970s onwards, international cooperation agencies and financial institutions became sources of financing for the establishment of new pine and eucalyptus plantations in the Sierra region. Under the model used, the plantations were established by private land owners and local communities who went into debt to purchase seedlings and land, then provided their own labour free of charge and assumed all of the risks involved in the creation and maintenance of the plantations.

A resident of Simiátug recalled: “The planting of pines started in the 1980s and was strongly promoted by the Ministry of Agriculture. It started in Salinas, and then the FEPP (Fondo Ecuatoriano Populorum Progressio, a Catholic development NGO) also started promoting it in Simiátug”. Another local resident added that “in 1980 the FEPP people were the biggest supporters of plantations. They gave courses and workshops and said that the pine leaves could be used to feed sheep, goats and cows. They could also be used for firewood, and in addition we could sell the mushrooms that grew under the pines. A big business. And on top of that there was the wood you could sell when the trees had grown.”

The women from Bolívar told us that in 1980, technicians from various institutions came to tell them to plant pines on the highland plains surrounding their communities. “There were a number of assemblies where they told us that we were going to make more money with the pine trees.” The local residents were told that after 20 years they would be able to sell the trees for 20 dollars each. The plantations were promoted by the army and by institutions like the FEPP, which advised the communities about how and where to establish them.

Life before the pines

One of the people interviewed told us that “before we had everything: native forests for firewood, grass for the animals. Now we can’t grow grass and food like we used to. Within 50 metres of the pines nothing grows, the land doesn’t produce anything.” When asked about the reason for this particular distance, he explained that “it depends on the height of the pines,” which is related to “the length of the roots,” which consume the water and nutrients in the areas they reach. The unproductive land extends to an area of “more or less 40 metres from the trees 15 years after they’ve been planted. The land

³ Minga is a traditional communal work mechanism, through which all of the members of a community – men, women and children – gather together to devote a full day of labour, or more, to one specific shared task.

there is useless and it's also under the shadow of the pines," which further harms any crops planted by depriving them of sunlight.

The situation was summed up by another person who reported: "Before the land was more fertile, now it's dry and lifeless. The pines can be used for wood but we continue to lose our source of wealth, our crops. We've been hurt because we've lost that source of work. We're screwed. We have no way to survive."

Before the pine plantations, life was very different. "When I was little, we made a living by grazing animals and growing crops. But now all the native trees and medicinal plants have been lost. There are none left. There used to be little springs but everything is gone. Even in the big rivers the water level has dropped, and some of them have dried up."

Where and how many trees were planted

The plantations were primarily established on the highland plains around the communities. The local residents say that today "all of the plains are covered with pines." The figures they provided demonstrate that in many cases these are large plantations relative to both the total land area of the communities in question and on a regional scale. When all of these individual plantations are combined, they essentially amount to a large-scale monoculture plantation.

The community of Tingo, for instance, has a total of 600 hectares of land, of which 400 hectares are "nothing but pine trees." Cocha Colorada has a total of 400 hectares of land and 300 hectares of pines, Santo Domingo has 800 hectares of land and 500 of pines, Ayagua has 80 hectares of land and 20 of pines, and Papaloma has 400 hectares of land, of which a full 350 are covered with pine trees.

The disappearance of water and its impact

As stated earlier, the plantations were established on highland plains, and the local residents were told that the trees would help to conserve water:

"They didn't pay us anything to plant the trees because supposedly we were reforesting the land in order to have more water, for our own benefit. They told us that the sound made by the pine trees attracts water."

The local residents were even advised by the technicians responsible for promoting pine plantations about how to dry out the plains before planting the trees:

"In the wetland areas of the highland plains they taught us how to dig drainage holes or trenches that would dry out the land, and at the same time the pine trees arrived. We young people now realize that it was all done on purpose: they taught us to dry out our plains to plant pine trees there."

There are countless testimonials to the impacts of the plantations on water resources:

“Now that the pine trees have grown the community is feeling the effects, because the water available for consumption and irrigation has gradually diminished. The community has a reservoir, but it is shrinking.”

“The organizations that supported us came and told us to plant pine trees, and we planted them. The springs have disappeared and there is less water every year.”

In Guaranda, most of the water has dried up. Because only a few springs remain, the local communities must fight over the limited sources of water available. One local resident stated that “they planted the pine trees near the springs and dried them up.”

The direct connection between the establishment of pine plantations and the disappearance of the water is made evident when the pines are cut down. While the water does not return immediately, it does come back over time.

In Cocha Colorada, for example, the water reappeared after the pine trees had been harvested, but “the springs only started to flow again a year after the trees were cut down.”

The disappearance of water has been accompanied by the disappearance of the flora and fauna that depended on it. A woman in Simiátug commented: “We never imagined what was going to happen. It was only after two years that we realized that the animals and plants were disappearing, the springs were drying up, and all of the frogs in the area disappeared all at once. There used to be black frogs but they disappeared and never came back. We got scared and saw it as a warning.”

Local flora and fauna provided local communities with a wide range of resources (see Chapter 3 for more details) which disappeared after the pine plantations were established. “Under the pine trees there are no animals or plants, not even a single rabbit,” stressed one local resident, while another added that “on the pine plantations all of the native plants died off, and because nothing grows in there everything dried up and fires started breaking out.”

The shortage of water affects not only agricultural production and biodiversity, but also the daily lives of the people. What was once provided to them free of charge by nature must now be paid for.

They have had to go out in search of other springs. “They’re far away, we have to walk for an hour and a half or two hours to get to them. Pipes had to be installed. Now we have to pay taxes to the water agency. A drinking water commission was formed with the support of NGOs to bring in water, and there is an annual charge.”

A resident of Tungurahua reported: “The Chiquichua canal has a lot less water now, and that affects three communities that are in the lowlands. During the dry season there is no water and we can’t plant crops, and we have to pay for piped water.”

The people of Simiátug complained that now “there are fights over water. Before we were the owners. Now the water belongs to the state and the state has to allocate it. Before everyone had their own springs. Now they bring the water from far away. The state owns it now. Now there are fights because some get water allocated and some

don't. The indigenous people fight among each other and some communities divert the water with pipes.”

Fires

There have been major fires on many pine plantations in the Sierra region (in Salinas, Cutagua, Chuguinar and other communities), for which the causes have never been precisely determined. However, all plantations face the threat of fire due to a combination of several factors. First, there are the extremely dry conditions caused by the large amounts of water consumed by the pine trees. Second, there is the high combustibility of both the trees themselves and the dried leaves that pile up on the ground. Added to this is the fact that the plantations are located at high altitudes where there are strong winds. If a fire breaks out, the wind fans the flames and helps the fire to spread. Finally, the fact that many of these plantations are now viewed as a serious problem by local populations makes them a potential target for arson.

Nevertheless, according to one local resident, “the people have never set fires intentionally,” although the idea has been considered, due to the impacts of the plantations on nearby communities. In one case, some 15 to 20 hectares of plantations burned down in a fire started by a power line knocked over by the wind.

The most tragic case took place in Cocha, where a woman burned to death during a fire. She was alone when the fire broke out and attempted to put it out with branches. She did not succeed, and was soon engulfed by flames and killed.

Emigration

The most irrefutable proof of the fact that the pine plantations have not improved the local people's economic situation, but have actually made it worse, is provided by the high rates of emigration. These communities now live off of the money earned by people who leave to find work elsewhere. The majority of people live outside of the communities for at least part of the year, because it is impossible for them to earn enough at home to survive.

Many women reported that their husbands go away for periods of between one and two months, and work primarily in construction. All of the young people, of both sexes, leave the communities, which means that only old people and women with children are left behind. The main reason for migration is the shortage of land resulting from *minifundización* (the division of land into small plots), exacerbated by the occupation of large areas by pine plantations and their environmental and economic impacts.

Emigration brings about a great many cultural changes and this has resulted in problems formerly unheard of in the communities, such as theft and violence. Some members of the younger generations even become involved in criminal activity. When young people who have left the communities come back, their relatives say, “they look down on the food, on their fathers and mothers, and they even refuse to speak Kichwa.”

New “solutions”

Now that the plantations have turned out to be a disaster for the local communities, they

are being approached with new “solutions”, but at the same time, those who initially promoted the plantations continue to insist that they be maintained.

“There are new organizations coming around all the time. Sometimes they buy off the leaders, other times they take advantage of their naiveté. The latest project was chicken production, but they don’t provide us with markets to sell the chickens to. What they want is to sell us the vaccines and the feed, which is why they are trying to get us to stop raising guinea pigs and raise chickens instead.”

“After the pine plantations they came and tried to trick us into setting up greenhouses. They gave talks to motivate people, and handed out certificates saying that the people had learned how to manage greenhouses, but what they really wanted was to sell us chemical products. But we didn’t want the greenhouses, because we knew that the women in Cayambe were getting cancer.”

People in Simiátug report that “now the FEPP is coming around with integrated farm projects.” However, “you need water for farms, and the pine trees dried up the water in some communities, and in others, where they didn’t plant them, there is still water and they want them to share it.” The local residents also commented that “the FEPP is always here” and “the only thing the FEPP is interested in is money.”

The government forestry agency INEFAN says that in order to harvest and sell the pine trees, the communities have the obligation to replant pines. But the communities do not want to, because of the negative experiences they have had with these trees.

“Now the government is asking us what we want to plant, and we’ve told them we want to plant quishuar (*Buddleja incana*) and other native trees, because they fertilize the soil and provide much better firewood than pine trees.”

Despite this opposition, the promoters of pines continue to pressure the communities to keep planting them. One local resident noted that “when the community sold the trees they were ordered to plant more pines. They said no, that they would plant native trees instead.”

“The FEPP is still promoting pine plantations. They say we should continue planting pines on the crags, they say there’s no water there, there’s nothing on the empty slopes and on the lands where the pines have already been harvested. Now they’re starting to plant again, and a few people have planted pines. The FEPP says that when you cut down a tree you have to leave another in its place, and it’s promoting the planting of native trees along the streams and riverbanks. Other people in Simiátug refuse to plant more pines. They say that we have to get rid of those trees and never see them again.”

The problem facing those who want to get rid of the pines is that “you have to have authorization from the ministry to cut down the trees. People had started cutting them down but now they’ve stopped because they’re afraid.” In other words, the communities have even lost the right to make decisions to defend their own land from the impacts of the pine plantations. When the pine trees are still young, however, they uproot the ones that have been planted near sources of water.

A bad business

In addition to all of the impacts described above, it has turned out that the realities of the pine plantation business are a far cry from the promises made when it was being promoted. Back then, local communities were told that after 20 years they could sell each pine tree grown for 20 dollars. In Santo Domingo, pine trees are now being harvested and sold, and are fetching between two and five dollars each. Some have chosen to sell their pines as standing timber. In Tingo a deal was struck for 2,500 dollars for five hectares of pines. With an estimated total of 1,000 trees on the land, this results in earnings of a mere 2.5 dollars per tree.

As one local resident explained, the men and women of the community have begun to analyze this situation and are not very happy with the outcome, “because the money they are getting after 20 years doesn’t even compare with what we made when we raised cattle, sheep and llamas... for example, after only two years a bull is fully grown and can be sold for at least 120 to 150 dollars.”

Now the people are considering the time it takes the trees to grow to full size (15 to 20 years), the space they take up (around five square metres each) and the water they consume, and comparing this to much quicker productive activities like raising chickens or sheep, and they realize that they got involved in a very bad business indeed.

Bad business in numbers

The case of the pine plantation in the Casiche Chinipamba community in the province of Bolívar clearly illustrates what a bad business these plantations are.

In the parish of Ventimilla, located in Guaranda, one of the cantons into which the province of Bolívar is divided, there are lands registered as the property of the communities of Casaiche Chinipamba, San Antonio, Cacuango, Casaiche Arenal, Casaiche Rama Corral and Casaiche Era Pamba, all of which are organized under the community-based organization Intichuri Foundation. These communities are also members of the national indigenous organization CONAIE (Confederation of Indigenous Nationalities of Ecuador), the regional organization Ecuarunari and the provincial organization Fecabrunari.

The Casaiche Chinipamba community purchased and holds the property deed to 288 hectares of land turned over to it in 1978 by IERAC, the government agrarian reform agency.

In 1991, the Casaiche Chinipamba community, recognized as an “association of agricultural workers”, signed a “forestation contract” with the Forestry and National Resources Department of the Ministry of Agriculture. The contract authorized a private company, EMDEFOR (Empresa de Desarrollo Forestal) to plant pines on 50 hectares of the community’s land.

For its part, EMDEFOR had a contract with the Ministry of Agriculture to plant trees on 18,000 hectares of land, of which at least 75% were to be in the central highlands provinces of Bolívar, Chimborazo and Tungurahua. The contract further stipulated that these plantations were to be established on land under the ownership of indigenous

organizations, peasant organizations and small farmers. EMDEFOR promoted the plantations by claiming that the trees would “bring more water” and that the communities involved “would make a lot of money.” EMDEFOR’s commitment to the Ministry of Agriculture to guarantee the state’s investment in the 18,000 hectares of plantations in the central Sierra highlands was backed with mortgages on the lands owned by indigenous and peasant organizations and small landowners.

These mortgages were possible because the agreements were signed in the early 1990s, when the Ecuadorian constitution did not yet recognize collective land ownership rights, which grant indigenous lands and territories immunity from seizure. Today, however, mortgages like these cannot be executed because of conflicts with the current constitution and national legislation.

In August 2007, 16 years after the contract was signed, the regional office of the Ministry of the Environment in the city of Ambato auctioned off 35 hectares of the pine plantation in the Casaiche Chinipamba community to Aglomerados Cotopaxi, a wood processing company owned by the Peña Durini group. The total price paid was 40,800 U.S. dollars for approximately 28,000 trees, which works out to a mere 1.46 dollars per tree.

The Ministry of the Environment allocated 12,478 dollars to the community for the harvesting of the trees. This is 30% of the total sale price, and means that after spending 16 years cultivating the trees, the community earned 0.44 dollars per tree in the end.

Was this a good business or a bad business for the community? To answer this question, we will calculate the real cost of the establishment, maintenance and management of the plantation and compare this to the income actually received by the community.

For its work in establishing, maintaining and managing the plantation, the community was paid a total of 7,000 dollars by EMDEFOR (2,500,000 sucres for preparing the plantation area, 750,000 sucres for planting the trees, and 4,500,000 sucres for pruning, at an average exchange rate of 1,550 sucres to the dollar).

However, when the costs of all of the work involved are included, the total cost to the community for the establishment of the plantation was 23,989 dollars, as detailed in the following table.

Costs of the plantation including the community's labour					
Establishment and Planting	Price in US dollars				
Item	Unit cost	Units	Total cost	Notes	
<i>Purchase of tools</i>					
hoes	8	30	240		
picks	10	30	300		
planting bars	15	30	450		
machetes	6	10	60		
hammers	10	30	300		
<i>sub-total</i>			1350		
<i>Wages</i>					
labour costs for digging holes	6	1100	6600	1	1. Estimation based on 50 holes/person/day
labour costs for fencing	6	525	3150	2	2. 55,000 holes each 50 hectares
labour costs for planting	6	280	1680	3	3. 35 wages/day
<i>sub-total</i>			11430		
<i>Food</i>					
during digging holes	4,50	1099	4946		
during fencing	4,50	525	2363		
during planting	4,50	280	1260		
<i>sub-total</i>			8569		
Labour costs for transportation of seedlings	6,00	440	2640		
Total Establishment and Planting			23989		
Care and Maintenance					
Item	Unit cost	Units	Total cost	Notes	
<i>Plantation inspection and maintenance of fence wages</i>					
	6	144	864		
<i>Replanting of 30% of seedlings after 6 months (16,500 trees/100trees/day)</i>					
	6	166	996		
<i>Food during replanting</i>					
	4,5	166	747		
<i>Transportation for replanting</i>					
	6	83	498		
Management (pruning)					
<i>Labour costs for pruning (one time)</i>					
	6	700	4200		
<i>Tools - power saws</i>					
	5	17	85		
Total Care and Maintenance			7390		
Total costs of the plantation			31379		

These calculations lead to the clear conclusion that the plantation was a bad business for the community. When all of the costs are added up (including the costs of unpaid labour), the community invested a total of 31,379 dollars between the time the plantation was first established and the trees were harvested. In return for this investment, the community received two payments: 1) 7,000 dollars for the plantation

and 2) 12,478 for the harvested trees. In other words, the community LOST 11,901 dollars.

Moreover, while it is difficult to quantify in monetary terms, we should also take into account the cost to the community of not using the land occupied by the plantation: the so-called lost profits. This is very significant, given that the community devoted 50 hectares of land, of the 288 hectares that belong to it, to the pine plantation for a period of 16 years. This is a considerable portion of the land available for the livelihood needs of the community's members. During this rather long period of time, those 50 hectares could not be used to graze animals, which is the economic activity that the community would traditionally use this land for. This implies a decrease in the number of sheep raised, and thus in the amount of animals, meat and wool that could be sold or used by the community itself; a decrease in the number of pigs for sale or for their own consumption; a decrease in the number of cows for sale or for the production of milk for the community; and a decrease in the number of horses and donkeys for use as transportation or for sale. One can only imagine how high of a cost the community essentially paid for allowing those 50 hectares of land to be occupied by pine trees for 16 years, both in monetary terms and in terms of the loss of means of survival.

The members of the community assessed these lost profits at an assembly where they analyzed one by one the economic activities that could not be carried out on this land throughout 16 years, and they arrived at figures of hundreds of thousands of dollars. But regardless of the exact amount of the potential earnings lost, it can be concluded beyond a doubt that the community experienced an enormous loss as a result of the pine plantation on their land, in view of the money lost through the operation of the plantation (11,901 dollars) in addition to what they could have gained – in monetary profits and goods – by putting those 50 hectares to other uses.

The pine plantation was without a doubt an extraordinarily bad business for the community, even without calculating other losses such as the damage to the roads and the land caused as a result of the harvest and the loss of water resources. Added to this is the community's serious concern over the possible consequences of the mortgages with which their land is apparently burdened due to the agreements signed 16 years earlier between EMDEFOR and the Ministry of Agriculture.

Chapter 2. FSC-certified ENDESA-BOTROSA plantations

The Río Pizará Forest Management Unit, created by ENDESA-BOTROSA, a subsidiary of the Peña Durini Group, owns around 8,000 hectares of plantations in the provinces of Pichincha and Esmeraldas. These plantations were granted FSC certification by the German certification firm GFA Consulting Group in April 2006.

According to the Public Summary published by GFA (in English) at the time of FSC certification, the neighbouring community of Unidos Venceremos “indicates that no conflicts with the forest company are in course, neither in the past. Company people help local communities in road maintenance, and other local needs. One community member indicated his disagreement with the plantation’s presence because there are no fruits for local fauna. Illegal hunting was a discussion issue and need of coordinated company/community control. People recognize the company’s good neighbour policy and the company’s consultation to the community for carrying out forestry operations.”⁴

One might conclude from this that only one person is in disagreement with the plantations, and that the rest of the community is happy with the company’s performance. Nothing could be further from the truth, as is clearly reflected in the following statements gathered during interviews with the members of the Nuevo Ecuador (New Ecuador) Cooperative about the company’s activities.

The violent arrival of the company

The people interviewed reported that when the company arrived in the region, “there were a lot of people here, there were as many as 120 members, and everyone had a plot of land and fields. When the land was divided into lots as a population centre, each farmer had a plot of land, and we had a lot of possibilities for growth. We all worked together through the *minga* system. Every farmer had between 40 and 50 hectares, which added up to around 6,000 hectares altogether. That was the population here up until 1988, when people started leaving.” This process of depopulation was a direct result of the company’s arrival in the region.

All of the local residents concur that emigration from the area resulted from the company’s express policy to gain access to the land that was in the hands of peasant farmers. They reported that “the company started harassing people. Some men came and robbed and threatened us, and people started leaving little by little.” A local resident told us that “all kinds of people came, rapists, killers, and we had to sell the land. No one from outside wanted to come here to buy land and people inside wanted to get out as fast as they could, so they sold their land for anything they could get.”

As a result, “the company got what it wanted: the people were terrified, and poverty-stricken, and so they went to the company to sell their land to it. And the company said, ‘If people come and beg me to buy their land, what choice do I have but to buy it?’ Since 1978, the company has wanted the land to plant wood species that aren’t from around here. In the end, after being boxed in and pressured, I had to sell my 40 hectares

⁴ The GFA Public Summary is available at: http://www.gfa-group.de/beitragdownloads/12662/PS_gesamt_FM_RPFMU_06.pdf

of land. They paid me 700,000 sucres for all of it, and to make matters worse, they paid me in three instalments, so I was never able to buy land again.”

Others had similar stories to tell: “I’ve lived here for 30 years. We had a farm where we raised cattle. The land is good and you can grow anything. When ENDESA came we ended up alone and boxed in, because everyone else sold their land and left. Some of the people who sold their land are in Santo Domingo, working as bricklayers, others are in Bolívar... the people were left without land. We had a number of animals stolen from us. We had to get out and sell everything, the cattle and everything else, to the company itself, because nobody else wanted to make an offer. We had bananas, cassava, everything, but the plantations came and got rid of it all, they didn’t leave anything.”

“My sister and I lived together, and everyone else was pressured into leaving. I was the last to leave. I sold my 15-hectare farm. One day 20 workers arrived at the lot next to my farm and they pulled up all of my crops and left all the gates open so the animals could escape.”

Destruction of native forests

One of the main reasons behind the idea of the certification of forests and the creation of the FSC was the need to ensure the conservation of forests through responsible management. Yet this company which was granted FSC certification has done the exact opposite. “When BOTROSA came they knocked down everything and left it to rot.” In other words, the company destroyed the native forests and replaced them with plantations of fast-growing species like terminalia (*Terminalia ivorensis*), pachaco (*Schizolobium parahyba*), eucalyptus, teak, guayacan (*Tabebuia chrysantha*) and jacaranda. According to the local residents, teak trees are cut down after 25 years and jacaranda trees after 10. “Now they are harvesting laurel, pachaco and jacaranda trees to use as timber for construction.”

The land now occupied by ENDESA-BOTROSA’s plantations used to be covered with a huge diversity of tree species. One local resident quickly named off a whole 27 different types of trees that used to grow wild in this area.

Changes in the ecosystem

The replacement of heterogeneous native forests with homogenous plantations has brought about a great many changes in local ecosystems. As one local resident explained, “the fast-growing species don’t provide the ecosystem with stability. The only things that live there are amphibians, and that’s why snakes are a big danger for the workers. No mammals live on the plantations. They pass through, but they don’t live and breed there.”

As in the case of native flora, before the arrival of the company there was a hugely diverse range of fauna in the area. “Before you could hunt around here, and there were other animals in the forests, but now there’s nothing.” The local residents mentioned over 30 types of birds and animals that once lived in the area but have now mostly disappeared, including pacas, peccaries, agoutis, armadillos, squirrels, deer, monkeys, sloths, wild boars, ocelots, pumas, coatis, monkeys, doves, partridges, budgies, parrots, parakeets, caciques, woodpeckers, eagles, bananaquits and hummingbirds.

“There are no more parrots, only the ones that eat corn, because they have nothing to eat anymore. Now the only animals on the plantations are peccaries, although they go out to look for food on the farms [and therefore damage the crops of local farmers]. There used to be boars that ate seeds but they’re all gone now. In the places where there is still some native forest left on farms, there are a few animals, like agoutis for example.”

These testimonials do not simply describe the loss of biodiversity in the region. This is an issue that is directly related to the satisfaction of the local population’s needs in terms of food. As a local woman explained, “Before we didn’t need money so much. If we didn’t have work, our husbands could always go out hunting at night and bring back meat, and that was food for the family. Now when you have no money you have to search for some way to feed your family, because without forests or trees there are no animals. On the farms there are still a few of those trees left, but on the plantations there’s nothing.”

The destruction of water resources

There was once an abundance of water resources in the area, including the Mojarrero, Pizará and Frío Rivers and a number of smaller streams, but the company’s operations have had a critical impact on the water supply.

“There is no water left in the streams and rivers” due to the fact that the company “doesn’t leave a single native tree standing, and the water dries up. Now we are the ones who are suffering because the plantations are up there and we have no water anymore. Around here we reforest, we protect the springs, we plant guadua bamboo, but up there everything is dry.”

“BOTROSA knocks down everything, even the trees along the banks of rivers. Now that we went in we saw that there was no protection for the streams, there is no guadua bamboo to protect the streams.” “The plantations are located on the main streams that feed the big rivers.” “The plantations are right on the water sources.”

The impact has been felt directly by local residents. “For the last two years almost everything has dried up. Now there is only water in the streams that are outside the ENDESA-BOTROSA plantations. Before the rivers were full of water and there were different kinds of fish to catch. They say that the Mojarrero River got its name because it was full of fish called mojarra, but that’s over now. Every summer you would see dead fish because the plantations dried up the rivers.” “In the summer the rivers practically dry up, they look like streams. They’ve dried up because of the plantations. We protect the water, and where we raise cattle and cacao, we leave the native trees standing.”

The people living in the area are not informed about what is happening and have no way to find out because “we are not allowed to enter their plantations, so we don’t know what they are doing, or what chemicals they are using. It was only recently when the journalists came that we saw the disaster, the mountain stripped bare. We believe they are poisoning the river, because of all the dead fish we find.”

A harsh and dangerous environment

One man told us: “I worked for the company as a contractor for 12 years, but they always paid me less, they always found a way rip us off and pay less, as a way of pressuring me into quitting. I always worked with people I knew and the company didn’t like that, they prefer to bring in people from outside. I got paid between 16 and 17 dollars a hectare for maintenance, for weeding, but we did the work among several people and after two or three days there would only be enough for food. In the end I managed to pay them \$200 a month, but they really had to work hard for it.”

“The technician admitted that he doesn’t go onto the plantations to investigate because they chased a friend of his to kill him and he doesn’t want the same thing to happen to him. There was also a teacher that they almost killed because the people in the community didn’t want to sell their land. She got saved by the priest who was a friend of the Durini family and defended her. Lino Veloz works for ENDESA-BOTROSO. He goes into the communities to buy land, to harass the people, he’s Durini’s right hand man. The three who come around here are Durini, Montenegro and Veloz.”

Other impacts

“They destroy the road with their lorries and then we have to repair it for them. We’ve asked them to repair it but they refuse. We signed an agreement with the municipal government and the company to make repairs with the community. But in the end all the material went to the company and we didn’t get anything. When the road is damaged the local bus won’t come here and we’re left stranded. The trucks leave the plantations and take everything to the plant in Simón Bolívar. That highway belongs to them and they keep it in good shape.”

The local residents report that with regard to the road called Unidos Venceremos, Rio Pitzara and San José, “ENDESA-BOTROSA doesn’t let us use the road, there is always a chain across it and they ask to see identification. Now people have to make a long detour and go all the way around to get from one community to another.”

Certification without valid consultation

When asked about the certification process, the local respondents told us, “Yes, we met with the certifiers, and they asked us questions, but only a few of us told the truth.” “When the certifiers came they gathered us all for a meeting, and the people from the company were there. So the certifiers asked, ‘Have they provided support for the school?’, and we said yes, because they actually did give us a few planks of wood and some zinc sheets, but they never asked us how much we really received from the company. Besides that we were afraid to tell the truth, because the company employees were there, the ones who are always around here, the ones who come at night and fire shots into the air. They’re a big wood company and all that they’ve given us are a few crumbs, but every time they give us something they put it on the radio, they make it look like they help us a lot. But compared to what they’ve done to us and what we have to put up with, it’s very little. They take big pictures, of the chicken projects that maybe just two families are involved in, but the rest of us get nothing. The certifiers never talked with us alone, they never came without the company employees, they never asked us if we were happy, they never heard what we had to say.”

“The company gets health care missions to come in every now and then, but we have to pay for everything ourselves, they don’t give us medicines or anything, we have to buy everything.” “BOTROSA says they pay the teacher, but we have to pay him ourselves. They’ve paid the teacher 60 dollars for three years, we put in the rest.”

“Now we are organizing ourselves with a community development and security association. We want to deal with these problems; we don’t want to leave this land because it is good productive land. We have been educated. We want land for our children; most of the people here are older. We have always taken care of our springs, but now we want to recover the land that has been stripped bare. There are two foundations that are supporting us, one with guadua bamboo and the other with planting native forests, analogue forests. They give us the plants and workshops to help us protect the environment.”

Technical visit observations

In response to a complaint filed with the Ministry of the Environment and the environmental NGO Acción Ecológica by the community of Nuevo Ecuador, with regard to the pressures being exerted on the community by ENDESA-BOTROSA, a technical visit was made to the company’s property on 27 November 2007. The team conducting the visit included members of the Ministry of the Environment Technical Office based in San Miguel de los Bancos, a reporter from the TV programme La Televisión, technical experts from Acción Ecológica and members of the Nuevo Ecuador peasant association.

During the visit, a series of violations of FSC principles and criteria were verified:

- ENDESA-BOTROSA has established plantations on areas converted from natural forests since November 1994, and the company has been directly responsible for this conversion. ENDESA-BOTROSA organizes and finances groups of settlers and their associations and cooperatives to gain access to land. With the support of the company, settlers invade and set up residence in natural forest areas, where they clear part of the forest and raise crops and livestock for several years. The settlers then sell their farms to ENDESA-BOTROSA, allowing the company to gain ownership of the land.
- The members of the Nuevo Ecuador peasant association who participated in the visit said this was the first time they had ever entered the ENDESA-BOTROSA plantations, because the company’s armed guards normally keep them out. It was confirmed that entry to the plantations is in fact restricted to certain individuals, and that there are armed security guards both at the entrance and inside the plantation.
- According to Ecuadorian law, special permits are needed for the possession and use of firearms, yet during the visit, when the ENDESA-BOTROSA employees were asked to show their firearms permits, they were unable to do so. The

company's representatives went so far as to state that their employees do not carry firearms, a claim that is clearly contradicted by the photographs taken.⁵

- During the visit, road construction work was observed in which at least two sections of road had gradients between approximately 18% and 20%. This is a violation of the Standards for Sustainable Forest Management for Logging, of which Article 13 stipulates that the maximum allowable gradient for a main access road is 14%.
- It was also observed that the natural course of a stream had been changed and obstructed, and on its former site a makeshift camp with plastic tents had been set up to serve as housing for an undetermined number of workers. The dammed water from the stream was stagnant and putrid, thus representing a health hazard to the workers.
- With regard to the living conditions of the workers, three "living quarters" were encountered during the visit. These were large tents made from green plastic and wood, set up at the side of the road and next to a ditch filled with stagnant water. There were no signs of any sort of latrine or building for use by the workers. The report states that this is an area where malaria and other tropical diseases are endemic, and therefore the stagnant water poses a clear danger to the health of the workers.
- It was not possible to evaluate the company's logging practices because the security staff prevented the visiting team from conducting technical observations.

Summing up the falsehoods

In the Public Summary quoted at the beginning of this section, the certifier stated that:

- "[N]o conflicts with the forest company are in course, neither in the past." FALSE
- "Company people help local communities in road maintenance, and other local needs." FALSE
- "One community member indicated his disagreement with the plantation's presence because there are no fruits for local fauna." TRUE
- "Illegal hunting was a discussion issue and need of coordinated company/community control." FALSE. THERE IS NOTHING LEFT TO HUNT.

⁵ This is a clear violation of FSC Principle #1: Compliance with laws and FSC Principles, which states: "Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria."

- “People recognize the company’s good neighbour policy and the company’s consultation to the community for carrying out forestry operations.” FALSE

The mockery of certification

The people who live in Río Pizará say that before the company came, life was quiet and peaceful. People worked through the *minga* system to help each other and improve the area. Many people wanted to move to Río Pizará: the land was good, you could grow anything, there were lots of families and children, the school was full, and because the population was relatively large, there was regular transportation service to and from the area.

When the plantation came, however, people started to sell their land and move away, and Río Pizará is slowly disappearing. There are only 10 families remaining now. The school has barely 30 students, and the Ministry of Education wants to close it down, because it costs too much to run for so few people. There is almost no transportation, and the highway has been destroyed by the passage of heavy trucks loaded with logs.

The future of the Nuevo Ecuador community is difficult to imagine, and the realities of the present are not very encouraging: emigration, women left on their own, water shortages, diseases, violence. At this point in time, the ten families who are still there are engaged in a day to day struggle against a powerful invader that has robbed them of almost everything, except their courage.

In the face of these facts, the FSC certification of this plantation makes a mockery of the local residents, the consumers of certified wood, and the FSC itself.

Chapter 3. Impacts of plantations on women

The cases addressed in the previous chapters describe the general impacts of large-scale monoculture tree plantations on the communities affected as a whole. However, in terms of both the environmental and social impacts of plantations, many of the effects experienced are gender-differentiated: women suffer the same problems as men, but also face additional hardships.

Women on the plantations

In the Sierra region, the plantations were established with *minga* labour, in other words, through the traditional mechanism of social interaction in which all members of the community – men, women and children – join together and devote a day of labour, or more, exclusively to one task. By definition, *minga* labour is unpaid labour.

However, while all of the members of the community participated in the *minga* work on the plantation, the women of the community were obliged to work much harder. First, because the area where the plantation was established was a considerable distance away, the women were forced to get up at two or three in the morning to prepare the food that would be taken to the work site and eaten during the day by everyone participating in the *minga*. Not only did they have to get up before the men, but they also had to carry the food and their children on their backs during the long walk to the plantation site. Once there, both men and women dug holes and planted seedlings, but many women were obliged to carry out this heavy labour with children strapped to their backs. Clearly, the work was much more exhausting for these women.

In the case of the Río Pizará plantation, where all of the work is done by hired labour, almost all of the jobs are done by men, and women are only hired on very rare occasions. One local resident reported that “there were two women working there, clearing the land with machetes, but it was really hard work.” In cases like these, the plantations do not offer any opportunities for women to work and earn a monetary income.

Women and water

The disappearance of sources of water in the areas occupied by monoculture tree plantations has also had clearly gender-differentiated impacts, and once again it is the women who suffer most. A woman from the Sierra summed up the situation as follows:

“We are the ones responsible for preparing food and bathing the children. The problem is when you have to walk for two or three hours carrying jugs of water on your back, and this is what we sometimes have to do. We women are the ones who have to give water to the animals at noon and in the evening. We have to search for water to take to the cows because the spring has dried up, and sometimes the river is 40 or 50 minutes away. When we prepare food we have to fetch water and we have to take the kids with us, to get water from the streams, or else we have to dig deep down with a hoe where there have been no pines.” This last comment was clarified by another woman, who explained that on a site where there used to be a spring but it has dried up, if you dig deep you can sometimes hit water. But in the summer “you have to go to the river to fetch water,” which means walking a much longer distance.

“We used the water from the springs to drink and to cook. You could drink the water straight from the spring. You could use it to wash clothes and bathe the kids. You could give it to the animals to drink and use it to water the crops. We used to dig channels to irrigate the crops.”

“Before we could use this water for washing, but now we can’t and we have to use drinking water.”

They have had to go out in search of other springs. “They’re far away, we have to walk for an hour and a half or two hours to get to them. Pipes had to be installed. Now we have to pay taxes to the water agency. A drinking water commission was formed with the support of NGOs to bring in water, and there is an annual charge.”

These comments show that the shortage of water affects not only agricultural production, but also the daily lives of the people (and particularly women), and what was once provided to them free of charge by nature must now be paid for.

The same problems are faced in Pitzar, where women are the most affected, because they no longer have water easily available for cooking or cleaning their houses. They are forced to walk considerable distances to fetch clean water. They take their children with them and “everybody helps, but they come back tired, overheated from being in the sun for so long, and they don’t feel like doing anything.”

The water supply has also been polluted, and “now the children get sick from the water. I always take my children to the river to bathe, and we went to the Mojarrero River and my son broke out in a rash and lost all his hair and didn’t get better. The doctor told me it was because of the water. I’ve gotten sick from the water too. When I wash clothes in the river I get a rash. This all started two years ago, and in the summer it’s worse. The children always get rashes.”

“The water that is stagnant and doesn’t flow anymore also makes my daughter sick, she breaks out in a rash. I’ve spent over \$300 because of all the times I’ve had to take her to the doctor. I don’t bathe the baby in the river but he gets a rash from the clothes I wash in the river. Sometimes all of the children get sick with the same thing at the same time. The ones who get sick the most are the women and children, because we spend more time in the river, and the company throws poisonous chemicals into the river.”

Women and food

The shortage of water affects both crops and livestock. A woman from Simitug told us:

“Now we don’t have water and the rivers have dried up. We don’t have gardens anymore, we can’t grow onions or anything at all. The summer is really hard, the plants and animals die, the freshwater springs have all dried up. The land isn’t fertile anymore, it doesn’t produce anything.”

Before the arrival of the pine plantations, the situation was very different. “We lived off of growing crops like beans, mashua (a root vegetable), barley, wheat, corn, lentils,

peas, onions and garlic. We also raised animals like sheep, cows, pigs, guinea pigs and rabbits.” A woman interviewed in Balcapilla added that “there used to be sheep and the women used their wool to make clothes, but now we buy everything. The wheat and corn crops produce less than they used to.”

A woman from Tungurahua explained: “This mainly affects us economically. We can no longer produce anything, and so now we have to buy everything. Our people have had to go out to work in the cities, as domestic workers, as seamstresses. In the old days our grandmothers stayed home and the children were taken care of by the older people.”

“We used to grow food and medicinal plants in the little gardens that we used for cooking for our families. Now women can only depend a little bit on farming and raising animals and we have to go out and work. That is why our daughters go to work in the big cities as domestic workers and send money to their folks.”

The link between all of this and the plantations is very clear, as pointed out by a woman from Azuay: “We used to be able to grow really nice gardens, all of the crops came out really good. But now the forests have been destroyed and the land is drying up. The people let themselves get talked into the plantations. They told us that these wood trees were good, that they would help us, but after the plantations the land’s capacity for production dried up, the trees suck up all of the nutrients, even the crops planted far away don’t produce anymore. So we have had to start depending on chemicals and fertilizers, since the land won’t produce anything without them now. So we are raising our children around these chemicals, and they get sick more often. But the medicinal plants don’t grow well with these chemicals.”

In the past, people had almost no need for money, because “we could barter guinea pigs for sheep or for potatoes, corn, peas, squash, or for clothing, for fabric. We made sheep’s wool. When the pine trees came we lost all of that. They take up a lot of space. We used very little money, and there was always enough for food, clothes and school.”

In Pitzara a woman told us that “the dogs used to bring us the wild meat that we ate.” These dogs were trained to hunt, and women were responsible for gathering the animals that they caught. These included monkeys, capas, agoutis and armadillos. “But there are no little animals now. Now the people from the company hunt to sell the animals, but we hunted to eat. Now there is nothing to hunt. Not even hunting dogs.”

In the case of Pitzara, the local residents were settlers who had moved into a forest area, and they cleared only small sections of forest, “just a little to plant rice, coffee, corn.” They only began to sell the trees they cut down after the road was built.

In the past, women also fished, and they say that fish were abundant. They would take their youngest children along with them and fish with small nets or hooks with worms. But today, following the arrival of ENDESA-BOTROSA, “you can hardly catch any fish, because there’s no water and it’s polluted.” The company’s workers initially lived off of hunting and fishing and used poison to fish, which killed off a large part of the fish stocks.

The availability of food from all these sources meant that there was almost no need for money in times past, the women say. “In the forest it’s easy to eat because you can find everything.” The soil is good and “everything grows.” Neighbours also traded basic commodities among themselves. Today, however, women have to buy food and other necessities, which means selling coffee, chickens, pigs, etc. It is the men who sell these products and receive the money, and so women are now more dependent on their husbands, some of whom “spend all the money they get.”

Women and health

The women of the Sierra have considerable knowledge of the wide variety of medicinal plants that grow on the highland plains. They recited a long list of plants and the specific uses for them:

“Valerian, *arquitectos*, *chuquiragua*, *alverjilla de agua*, *sumfillo*, *matico*, *hierba buena*, *barba blanca* (for drinking after childbirth), *muelancillo*, *culaj* (for fevers), *piquichiza* (for childbirth), *agualongo* (for the hair), *ñachigsiza*, *escorzonera* (colds), *yana sacha* (childbirth), *atag* (after childbirth), *rita murrel*, *ashpa corral* (depression).”

It is interesting to note that many of these plants were used by women to meet their own health needs. Pine plantations have led to the disappearance of this valuable resource.

The situation is summed up well by the following testimony from one of the women interviewed:

“We had all of these plants in the plains, in the fields, around the springs and streams, where the forests used to be. We learned how to use these plants from our grandmothers, who used them to cure us when we were sick. We learned which plants to give to the children when they were sick. Our mothers would send us out to pick plants. They didn’t send us to buy medicine, they sent us to the fields. For example, *arquitecto* was used a lot for weakness, and for the kidneys; *caballo chupa* was good for back pain. When somebody broke a bone they would send us out to the plains to pick *pag yuyo*, and they would heat it and put it over the fracture, so the cold couldn’t get in. Now women can’t go out and pick medicine, and we have to go to the drugstore to buy pills.”

Because food production has declined dramatically, there has been an increase in malnutrition and in illness as well. More children are admitted to hospitals and health care centres, and women are forced to leave the rest of their families home alone when they have to go away to take care of children who are hospitalized.

The women say that in the past, people were healthier. “Now children get sick more and women have to take care of them. Before they could make them better with our medicine, but not so much anymore. Sick children are a lot of work for women. A lot of the plants are gone now and that’s why our medicine doesn’t work. The *sapoyuyo* has disappeared because it grows around springs. You used to be able to pick it anywhere where you walked, but you can’t find it anymore. It’s very good for stomach aches. My mother-in-law taught me about these things.”

With regard to women's health, one woman interviewed reported: "There is a lot of cancer now. The doctor says, we have to take out your uterus. I'm afraid to go to the doctor. Those diseases didn't exist before. Now a lot of indigenous people believe in doctors and they don't go to the stream to look for medicine (like nettle) anymore." The problem, she added, is that "the medicines don't have the same strength as before because they are in the middle of the pines and near the pine trees there are no plants. Arquitecto, valerian... they're all gone now."

In Pitzar the situation is different, because the people who live here now are settlers who came from different ecosystems and are not familiar with the medicinal plants of the area's forests. Nevertheless, the changes brought about by the plantations have had an impact on people's health here as well. The local residents say that "when children get sick now it means more expenses because you have to spend money on medicine. But there is nowhere to get more money from, and women have to really stretch the money they have available. They have to choose: you can either buy medicine or you can buy food. Then they are the ones who have to stay up all night, taking care of the children, bringing down their fever, and the next day, even with sick children, they have to continue working."

The forced confinement of women

In Pitzar the women told us stories of rape and sexual harassment of women and girls. They do not dare to go out alone like they used to. Once again, although the community as a whole has suffered the impacts of the company's violent arrival in the region, women have faced additional impacts.

As one community member told us: "The women felt threatened. They didn't want to go to the fields to tend their crops alone, and they had to keep their daughters shut away, locked up. They couldn't go out anywhere. We worried about them constantly, we didn't get a moment's peace, and it was even worse for them, shrivelling up like little plants that don't get any sun."

The local residents reported a number of specific cases. "Ten years ago a neighbour's daughter was raped. They broke into her house, and we found out the next day. We went to get the police. They arrested the guys and put them in jail, but they were released a year later. After they got out, they came back here and were really aggressive, and they threatened us."

"In 1983 Mr. Albaracn's wife was murdered. They had money in the house because they had just sold a cow. The company workers who lived here found out, and when they went to rob them they killed the woman. Those workers robbed the neighbours but we couldn't say anything. After the woman was killed the police didn't come and nothing happened. We couldn't say anything, we were afraid and they threatened us."

A local woman told us: "The contractor brings people in from outside for certain jobs. The people stay in the contractor's house or in the abandoned houses, and they cause problems, they're not trustworthy. They use our playing fields and our space, the kids can't play sports. I prefer to stay locked up in my house."

A man added: “They take over our space. We are afraid that they will take our things or attack and rape the women. You can’t even feel safe in your own home. They walk through our property without asking for permission or anything; armed men walk through our land, and say they are going hunting.”

Of the people who sold their land and moved away, some now live in Santo Domingo and others in Bolívar. While the men have had to become bricklayers, “the women have gone from being the heads of their households to maids in other people’s houses.”

Emigration and its impact on women

The socioeconomic changes resulting from the arrival of the plantations, combined with the environmental impacts, have led to a process of large-scale emigration from the area. In all of the cases studied in the Sierra region, the general pattern is for the men to leave to work in the cities while the women stay behind with the children. Thus, in addition to their usual household tasks, women are now responsible for all of the farm work that used to be done by their husbands – the only exceptions are during the planting and harvesting seasons, when the men come back to handle these jobs.

One of the women interviewed summed up the situation by saying that “we women are the ones most affected, because we’re the ones who stay behind and have to figure out how to solve all the problems.”

The rate of emigration has further increased and today “there are women leaving as well as men. The men are leaving (both married and single) and the single women are leaving too. The little kids stay behind with their mothers. The children are affected because they grow up without fathers, and without affection, and that is why there is so much violence.”

Two different worlds

The testimonials gathered during the workshops held in both the Sierra highlands and in Pizará illustrate the existence of two parallel and irreconcilable worlds: one based on social and environmental respect, and the other on the destruction of natural resources and the social fabric.

The traditional indigenous and peasant knowledge systems, which have taught women and men alike how to produce food, cure certain diseases and live in harmony with their natural surroundings, form part of a culture forged through thousands of years of social interactions, in which woman play a key role in the transmission of this knowledge. The large-scale monoculture tree plantations in Ecuador, like in many other countries of the world, are threatening and destroying the local culture, and worst of all, this damage could very well be irreversible.

Chapter 4. Conclusions

As has been demonstrated throughout this report, the social and environmental impacts of monoculture tree plantations have seriously affected local communities where they have been established. Chapters 1 and 2 clearly illustrate that the promises of employment, prosperity and development have vanished along with the water, flora and fauna, leaving the people in much worse circumstances than before. While all of the members of these communities – men, women and children – have suffered and continue to suffer the consequences, we want to highlight something that is usually overlooked: the gender-differentiated impacts of monoculture tree plantations on women.

Before the arrival of the plantations, Nuevo Ecuador was a growing and developing community, with social ties being forged through the sharing of common experiences among people coming to the area from different parts of the country. Nuevo Ecuador is largely made up of settlers who came to Pedro Vicente Maldonado for different reasons, and chose to make it their new home because of its rich biodiversity, abundant sources of clean water, and highly fertile soil for farming. They learned to live in harmony with the forests, until the arrival of ENDESA-BOTROSA and its plantations, which abruptly transformed their daily lives and led to a radical decline in the community's size.

Natural resources became increasingly scarce, as the wild animals and fish began to disappear along with clean water for farming and consumption. This created more work for women, who were obliged to make ever greater efforts to meet their families' needs.

At the same time, the threats and intimidation practiced by the company's employees targeted women's vulnerability, and sexual violence became a weapon used directly against them but aimed at the weakening of the community as whole, as a means of driving the local residents off of their land through fear. The impact suffered by women was twofold: on the one hand, they were the direct victims of these practices, while on the other, they were forced to confine themselves to their homes to protect their safety, which resulted in all of the psychological impacts associated with forced confinement as well as the weakening of family ties. This in turn led to the erosion of the social fabric and relationships based on mutual solidarity. The community of Nuevo Ecuador rapidly disintegrated, with the majority of its population forced to emigrate elsewhere. Today there are only a handful of families still living there, and the women remain locked up in their homes.

In the case of the indigenous women of the Andean highland plains, the tree plantations have had a serious impact on their food sovereignty. In the past, these women carried out small-scale subsistence farming, with which they were not only able to meet their own families' food needs, but could also sell or barter their surplus crops. This provided them with a certain amount of resources that gave them a degree of independence and greater opportunities to ensure the wellbeing and proper nutrition of their families.

The plantations destroyed these local economic systems, which were based largely on bartering and subsistence activities and were intrinsically more cooperative and solidarity-based. The communities have been forced to adopt a new economic system in

which money plays a key role, and which leaves little room for women in a world dominated by men.

With the disappearance of the highland plains ecosystem, women lost the space where they put their traditional knowledge to use and access to the medicinal plants used to treat illnesses particular to high altitudes and to attend to the general health care needs of their families.

The arrival of the pine trees dried up the area's water sources, which means that women and children, who are responsible for livestock grazing, must now walk for long distances in search of water for their animals. At the same time, women's household and farming tasks are much more difficult and time-consuming due to the short supply of water.

In addition, the planting, maintenance and harvesting work entailed by plantations has made women's lives more difficult. Aside from actively participating in these tasks alongside the men as part of the minga communal labour system, they are obliged to get up earlier than their male counterparts in order to prepare the food that will be eaten during the work day. They are also responsible for looking after the children (who accompany the adults in their work in the plantations), as well as for the general organization of the invisible ties that make the minga work.

When the water and vegetation of the highland plains vanished, they took with them the spirits who inhabited the forests and springs, the myths, legends and rituals that gave life meaning and purpose. The plantations marked the end of peace, water and fertile land, and replaced them with violence, destruction and erosion.

Documenting and raising awareness of these experiences is crucial to halt the advance of this "forestry" model and allow local communities – particularly those who suffer the impacts of plantations most directly – to begin making decisions about their own futures.

Women can play a key role in this process. Not only are they the ones who can most clearly see everything they have lost since the arrival of the plantations; they are also the ones with the greatest desire and need to seek alternatives. Not to return to the past, but rather to build a future that ensures the conservation of resources and improves the quality of life of everyone – women and men alike.