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SWEDISH PULP IN BRAZIL: THE CASE OF VERACEL

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(with a Foreword by **Lennart Molin**)

FOREWORD

Many of the poorest countries of the world are heavily indebted to the rich countries. Since some years back, there has been a growing awareness that rich countries are also indebted to poor countries. For example, at the United Nations' conference in Durban, South Africa against racism in 2001 there were strong voices from the poor countries claiming compensation for the damages Northern countries caused them during colonial times.

Ecological debt was eventually identified to be as significant as financial debt. Especially in the global South, the concept of ecological debt has gained more and more attention and it is important that the peoples of the North also become aware of what it means. From the South to the North, it is being communicated that the global debt crises is not just financial, it is also ecological.

The Swedish word for "debt" (skuld) as in ecological debt can mean two things. Besides the meaning of the English word "debt" it also means "guilt". The combination of the two meanings might be typical of the melancholy that is sometimes said to be typical of the Nordic region. It is certainly a fact that debt always has a personal dimension affecting emotions and sometimes



even public sentiments. However, one must realize that debt is also relational, in the sense that it concerns connections between people individually as well as collectively. The one in debt is tied to the debtor, which can be more or less trying. The debtor is sometimes struck by bad conscience for being demanding and not generous.

The conclusion of this is that ecological debt has a moral dimension and an ethical discussion on this is much needed and necessary. Such a discussion must be very broad, with many participants. It cannot be limited only to scientists, politicians and different kinds of experts. For example, churches and different NGOs can offer moral and social perspectives as well as important insights to financial and ecological debt issues. They often monitor efforts to raise issues of justice.

This discussion especially needs to explore and highlight the relation between human rights and environmental issues. Too often, news of incidences and accidents that have caused pollution of environment comes as a surprise to the public. People are often not warned about risks, threats or dangers. Too often there is a tragic lack of a public debate before environmental damages occurs.

This case study on the Veracel pulp mill can help initiate discussions on the moral and social issues involved when a big company's investment and production affects the environment. According to the study, highly placed representatives of the companies involved in Veracel have made informal statements indicating that these companies have a hidden agenda and that they are aware of how their plans of expansion would effect people living in the surroundings of the plant and around plantations of eucalyptus trees that supply the plant with raw material. Who cares about the rights of poor peasants? It is a tragedy that their views and their conclusions on what will happen to their land so easily can be refuted and convicted with the help of loyal consultants and selected scientists suited for the purpose. Who would support and defend the peasants? That is a question addressed to all of us.

At the end of the case study SwedWatch points at a democratic problem "since the paper and pulp companies exercise large and informal political influence on regional, state and federal level". What can individual peasants and even popular groups and organizations do against counterparts with overwhelming resources?

One important element in democracy is an open public discourse. Can there



be a dialogue with the big companies, like Stora Enso and Aracruz? Are these companies and others like them interested in a discussion on moral issues in connection with what they do? Do they care about the relation between human rights and environmental issues?

At least, they need to be invited to respond to such questions. Their policies and their activities need to be highlighted and they have the right to answer both questions and accusations. They also need to be confronted with their accountability.

A minimum demand is for the companies to accept the debt (and guilt). The next step is for them to take responsibility and make the changes needed to stop pollution and the destruction of the environment. Finally, the most important step is to recognize the illegitimacy of financial debt and work for debt alleviation, first for the poorest countries.

This report is a challenging and controversial starter for such a discussion. Let us talk and by that recognize that ecological debt concerns us all.

EXECUTIVE SUMMARY

Of all the natural forest that is lost every year, 94 percent are located in the tropics. Fast-growing wood plantations and pulp production constitute a major threat to the remaining tropical rainforests and to the local populations who depend on these forests to secure their livelihood. The United Nations Food and Agriculture Organization (FAO) estimates that the global growth rate of tree plantations amounts to 45,000 km² per year. Asia and South America accounts for 89 percent of the total growth. Brazil has by far the most tree plantations in South America and the majority of the plantations are situated in the south eastern states.

On 28 September 2005, President Luiz Inácio Lula da Silva inaugurated Veracel's newly-constructed paper mill in the southern cone of the Brazilian state of Bahia. The pulp mill's annual production capacity is currently 900,000 metric tons of pulp. It is expected to produce the cheapest pulp in the world.

The Nordic Investment Bank (NIB), the European Investment Bank (EIB), and the Brazilian Social and National Development Bank (BNDES) have contributed US\$640 million of investments for the pulp mill. NIB contributed US\$70 million and EIB US\$80 million of this sum. The total cost of the



project is US\$1.25 billion, making it the biggest private investment in Brazil under the current administration.

Despite the political enthusiasm for the expansion of the pulp and paper industry in Brazil various movements and groups offer hard resistance against this expansion and environmental organizations from various states have formed a network, A Rede Alerta Contra O Deserte Verde (Alert Against the Green Desert Movement), in order to oppose the construction of pulp mills and the increase of eucalyptus plantations to supply the mills.

Veracel owns 700 km² of plantations. In addition, there are 230 km² of plantations, which are owned by peasants and farmers contracted by Veracel. A part owner of Veracel is Aracruz, the Brazilian-Norwegian paper and pulp company. Aracruz owns 2,100 km² and has additional agreements with peasants and farmers planting an area of 380 km². There is also another large paper and pulp company that is active in southern Bahia, Bahiasul, which owns 760 km² of plantations. Added together, this plantation area is almost the size of the Caribbean state of Trinidad and Tobago.

The large economic consultant institution, Instituto Fundação Calmon, has stated that the potential of growth of the eucalyptus plantations in the region amounts to 15,000 km². This would mean that, compared to their present size, the size of the plantations would increase several times. There have been some political attempts to legislate against the unrestricted expansion of the eucalyptus plantations. So far, however, the pulp and paper companies have succeeded in lobbying against such restrictions. When a court of the state of Espírito Santo, for example, banned further planting of eucalyptus intended for pulp production, Aracruz appealed to a federal court, which abolished the ban, arguing that it was unconstitutional.

The opposition against the industry states that the expansion of the pulp and paper corporations has to be limited since:

- The expansion of eucalyptus plantations forces local people- peasants, indigenous groups and Afro-Brazilian subsistence farmers- from their land.
- Pulp and paper corporations appropriate land that otherwise could have been used in the ongoing land reform.
- The plantations increase the price of land, thus making it harder for the state to buy land for land reform.
- The plantations have detrimental effects on agriculture in the vicinity





- and reduce water availability.
- The plantations obstruct the regeneration of the Atlantic rainforest and have negative consequences for the sensitive flora and fauna of the region.
- The paper and pulp industry generates few new jobs, despite the fact that huge state resources have been invested in this sector.
- The construction and operation of pulp mills have detrimental effects on the environment.
- The construction of the pulp mills attracts thousands of people to the region who do not have the right education to qualify for employment. The migrants tend to settle in the shantytowns of the region's towns and cities, thus increasing social problems.

Organized civil society's opposition to Veracel's paper mill is based on the assumption that the effluents will have great negative consequences both for the natural environment surrounding the mill and for the people who live in the vicinity, who risk losing their sources of subsistence.

The network of environmental and human rights organizations that organizes the resistance against the expansion of the pulp and paper industry in general and Veracel specifically asserts that the ecological conditions have changed since the last Environmental Impact Assessment (EIA) was made. Therefore, the network demanded that a new EIA ought to be carried out before Veracel started construction of a paper mill. Veracel, and the corporations which owns it, Stora Enso and Aracruz, rejected this demand, however. The network is also critical of the fact that the technique used in bleaching the pulp will not be TCF or totally chlorine free. Instead of the TCF-technique, the elemental chlorine free process, ECF, will be utilized.

The advocates of Veracel stress the employment opportunities created. This is, however, a contested claim. Most of the land where eucalyptus is grown was previously utilized for extensive cattle-raising. According to one of the most outspoken critics of the paper pulp companies, the priest José Koopmans, the eucalyptus plantations do not lead to any net gain in jobs when compared to cattle-raising and small-scale agriculture. Koopmans and organizations that represent farmers and landless peasants argue that plots where fruits of different kinds are cultivated lead to a significant increase in available jobs. They say federal and state investments should, therefore, be redirected from the pulp sector to small-scale agriculture.

Indeed, considering the large sums invested, few vacant jobs were created at





Bahia Sul's and Aracruz' plants. At the latest plant Aracruz built, 173 direct jobs were created. Taking into consideration the investments made, this shows that every vacant job costs US\$3.3 million. Veracel's plant will generate approximately 500 direct jobs.

Another major problem with Veracel concerns its partnership with joint-owner Aracruz Celulose, the world's leading producer of bleached eucalyptus pulp. The corporation, founded in 1968, has a long and conflict-ridden history. Local people and the network of environmental and human rights organizations fear that Veracel successively will adopt Aracruz' methods and its inadequate dialogue with nongovernmental organizations (NGOs) and unions.

The human rights organization FASE or Federation for Social and Educational Assistance argues that Aracruz has acquired land through false promises, threats and the destruction of sources of subsistence of the local people. FASE claims that there were about 40 indigenous villages in the area where Aracruz was active. After Aracruz had established all of its eucalyptus plantations in the area only three villages remained.

In the beginning of October 2005, around 300 Tupinkim and Guarani Indians occupied the administrative center of Aracruz. The Indians demanded that the corporation return 1,100 hectares to them, which they claimed were part of their traditional territory. The Indians withdrew after authorities promised that a new demarcation of indigenous territory will be conducted.

The pulp mills have resulted in further deterioration in the living conditions of the local people. The large water consumption needed for the mills made Aracruz redirect the courses of rivers in the region, thus decreasing local people's access to potable water and fishing opportunities. The resistance against Aracruz has hardened substantially over the last years. There have been attempts to legislate against further expansion of the plantations and in 2002 the state parliament of Espírito Santo appointed a commission to investigate Aracruz' behavior. Currently, hundreds of labor lawsuits have been brought against Aracruz.

So far, however, Aracruz has succeeded in continuously expanding its activities. One reason for its success is the company's well-developed political network. Aracruz is among the companies in Brazil which makes the largest donations to politicians. Its donations and contacts have paid off. All three of Aracruz' plants have been inaugurated by presidents of Brazil and the country's highest political stratum have supported Aracruz.



I. INTRODUCTION

The objective of this report is to scrutinize the reasons for the severe criticism that Stora Enso's involvement in paper and pulp production has generated among certain sectors in Brazil. Local opposition to large-scale export-companies, however, often lack necessary resources and channels to make their grievances heard. The aim of SwedWatch is to study and monitor Swedish corporations, so that they comply with international conventions, national legislation and ethical guidelines. In this particular case, SwedWatch, with the support of the Swedish Society for Nature Conservation (SSNC), has studied a number of issues of conflict between the partly Swedish-owned paper and pulp corporation, Veracel, and its local adversaries.

The fast expansion of the paper and pulp industry

Brazil is, without comparison, the region of South America with most tree plantations and the highest production and export of pulp. Ever since a military dictatorship was established in Brazil in 1964, different regimes have supported plantations and large-scale forest enterprises as part of their general promotion of large-scale export companies. Successive forest policies have aimed at achieving pulp exportation, through generous fiscal subsidies, large loans and removal of judicial obstacles.

Eucalyptus is the main form of fast-growing wood in Brazil. The majority of plantations and pulp mills are concentrated in the neighboring states of Espírito Santo, Minas Gerais and Bahia. In the last decades, there has been a rapid expansion of plantations and pulp production. The Swedish-Finnish corporation Stora Enso is one of the major corporations involved in the paper and pulp sector in Brazil. Stora Enso, together with the Norwegian-Brazilian corporation Aracruz, owns Veracel, currently the fastest expanding paper and pulp corporation in Brazil.

Both the corporations' plantations and pulp mills have been accused of being associated with serious environmental and socioeconomic problems. The pulp and paper companies have nonetheless received enthusiastic political support from both local and national politicians and generous federal financial subsidies. The politicians have argued that the pulp companies will function as an economic motor in the region. So far, however, there is reason to believe that the companies have contributed to the reinforcement of investments in large unsustainable monocultures and neglected the needs of the local population. Furthermore, there have been negative consequences for the Atlantic rainforest.



These alleged negative consequences have caused increasing resistance, on both local and regional levels. A network of environmental organizations and human rights groups, A Rede Alerta Contra O Deserto Verde (Alert Against the Green Desert Movement), unites a wide array of NGOs and grassroots organizations that oppose the expansion of the pulp and paper industry.

Stora Enso's and Aracruz' purchase of Veracel

In 1997, Stora bought half the shares of the Brazilian pulp company Veracel. Two years later, Stora and the Finnish pulp corporation Enso fused into the company Stora Enso. In 2000, one of Brazil's most controversial companies, Aracruz, became the main shareholder of Veracel together with Stora Enso. Aracruz and Stora Enso forged an agreement stipulating that Veracel would deliver its eucalyptus to Aracruz until the construction of Veracel's own paper mill in 2005.

Veracel boasts a strong social and environmental profile. Yet the company has faced harsh resistance from various sources. The opposition, which consists of environmental organizations, has united in a network of local and regional organizations and claims that Veracel's reputation is based on inadequate knowledge of the real consequences of Veracel's activities. It is our hope that this report will contribute to illuminating these controversial issues.

The corporations involved

Stora Enso

Stora Enso today has around 45,000 employees spread over five continents and more than 40 countries¹. The Brazilian subsidiary was founded on April 1, 1998. Stora Enso is a market leader within the fields of fine paper, packing material and wood products (Stora Enso, 2003a). The company's total procurement of wood to own mills, joint ventures and subsidiaries is 44 million m³ yearly. Of this wood, 45 percent is covered by some kind of certification and 11 percent is certified by the Forest Stewardship Council (FSC) system (Stora Enso, 2004). Regarding certification in general, Stora Enso's standpoint reads as follows: "We support all forest certification systems which locally, nationally and internationally get the acceptance of key interest groups" (Stora Enso, 2003b).

Veracel

At present the ownership of Veracel Celulose S/A is equally divided between Aracruz Celulose S/A and Stora Enso. The main assets of the company





are 700 km² of eucalyptus plantations, the newly constructed paper mill, a maritime barge terminal and a state of the art nursery. The production capacity of the paper mill is currently 900,000 metric tons of pulp per year of which each owner company is entitled to 50 percent (Stora Enso, 2003d). The Chief Executive Officer of Stora Enso believes that it will be necessary to increase the production capacity in the near future through the construction of another production line of the mill (Reuters, 2005).

The construction cost of the mill amounted to US\$1.25 billion of which 45 percent consisted of own capital and the rest of loans from several development banks. Currently, the company employs approximately 2,000 people in the region (Veracel, 2003a).

Aracruz

Aracruz has plantations in northern Espírito Santo, the southern cone of Bahia and Rio Grande do Sul. The total area planted with eucalyptus amounts to 1,700 km². It runs three paper mills in Espírito Santo, with an annual capacity of 2.4 million metric tons of pulp, one paper mill in Rio Grande do Sul, with a production of 400,000 metric tons per year, and is co-owner of the future paper mill of Veracel² (Aracruz, 2003).





II. BACKGROUND

The disappearance of the Atlantic rainforest

The Dutch priest José Koopmans has lived in the southern cone of Bahia for several decades. He has been one of the leaders of the resistance against the pulp and paper industry of the region for many years. In a book he wrote, he rejected the arguments used by pulp and paper companies to defend their activities:

“I have personally witnessed the immense tragedy when all the forests of this area were devastated by personal greed and the authorities’ support of the ecological destruction. I arrived to this region in the end of 1960s. At that time, the cities and towns in the region all lay along the coast. Here, in the interior, there only existed small communities, surrounded by pristine rainforest. But after the military regime constructed the highway through the southern part of the state sawmills were put up all over the place. I was able to observe from day to day how the rainforest was logged. The regime approved of the entire destruction of the original forest.

“More than 30 years has passed since the violent onslaught on the Atlantic rainforest in the southern cone of Bahia began. We are travelling from the coast into the heartland where Veracel is located.

“The engine roars when the bus slowly creeps up along the steep and narrow roads. Green hills and fertile valleys stretch out before our eyes towards the horizon. Small herds of cows are grazing on the pastures. The landscape paints an idyllic picture, but less than 30 years ago all of these hills were covered by rainforest. When the rainforest had been logged the land was sold to large landowners, who nowadays use the area as pasture for their cattle. The fertile layer of soil which until recently was covered by the rainforest is now continuously being crushed under the hooves of the cattle and the erosion has caused great harm to the land”.

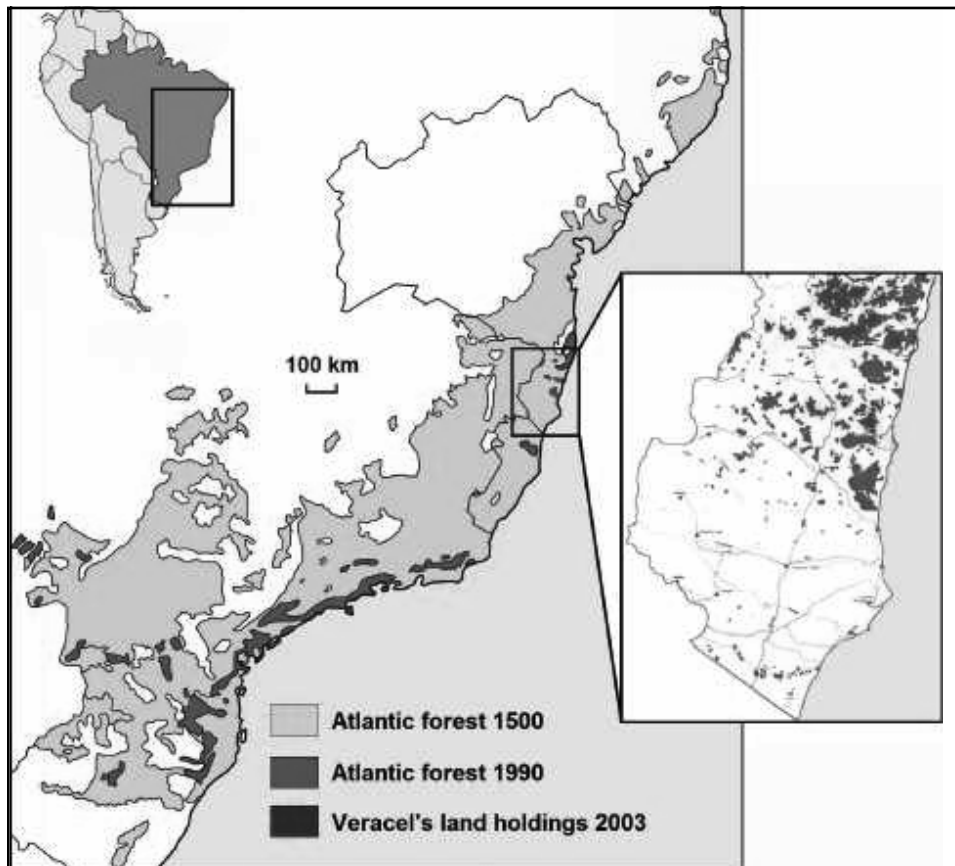
The destruction of the Atlantic rainforest that used to cover the southeast of Brazil is one of the main ecological disasters of the last century (Warren,



1995). Until a little more than 30 years ago, an overwhelming part of both the northern part of the state of Espírito Santo and the southern cone of the state of Bahia was covered with Atlantic rainforest³. Small groups of peasants lived interspersed in the area, earning their livelihood on subsistence agriculture.

There has been a profound change of the landscape and of demographic factors in northern Espírito Santo and the southern cone of Bahia since the 1960s. In 1912, there existed more than 215,000 km² of Atlantic rainforest in Bahia. This corresponds to approximately half of the area of Sweden. In the 1960s, a majority of this Atlantic rainforest still existed. Three decades later only a little more than 7,000 km² of Atlantic rainforest remained. This means that more than 200,000 km² of the rainforest had been lost through logging⁴. That is an area five times the size of Denmark. When the rainforest had been logged in the southern cone of Bahia, the cleared areas were sold to large landowners, who use the majority of their land as pastures for cattle.

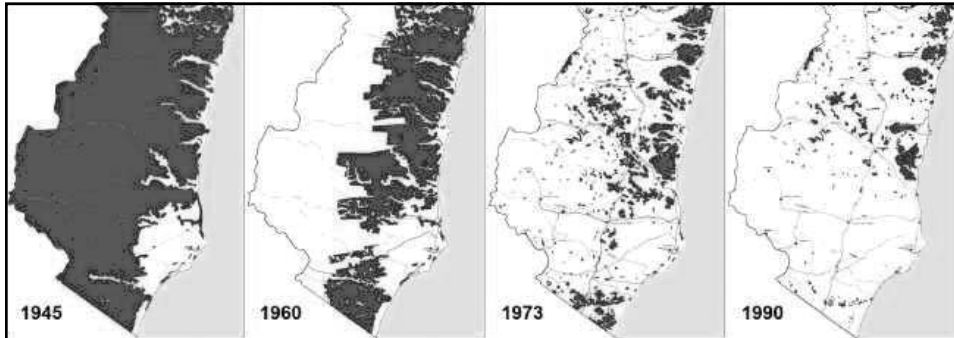
Map 1. The disappearing Atlantic rainforest in the Bahia region of Brazil and Veracel landholdings



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Figure 1. Rate of disappearance of the Atlantic rainforest in the Bahia region of Brazil, 1945-1990



In Espírito Santo, a mere eight percent of the Atlantic rainforest remain (Conservation International, 2003) and, according to the Environment Resources Centre (CRA) in Bahia, the area covered with Atlantic rainforest in Bahia has been reduced to three to four percent of its original extension.

The Atlantic rainforest is considered to be one of the most biodiverse forests in the world. Botanists have, for example, discovered 476 different species of trees in one single hectare, which is significantly higher than in the Amazon. This biodiversity is not limited to trees, the entire plurality of species of flora is extremely high and endangered (Mori et al., 1983; Mori, 1989). The total abundance of species is regarded as one of the highest and most diverse in the whole world (Thomas and Carvalho, 1998)⁵.

The current situation for the Atlantic forest in the state of Bahia is desperate. Not only is little of the forest left, the remaining rainforest is also highly fragmented, divided into small patches and corridors. Generally, according to the prevailing theories, the rates of extinction of species will increase more rapidly as the remaining area of a habitat decreases⁶. These theories are now beginning to be confirmed by scientific data. More than 95 percent of the forest in Bahia is gone. A quick increase in forest cover has to occur to save at least some species but, instead, there is a continuous decrease. This decrease has serious consequences. Projects such as clearing regenerating forest for eucalyptus or fruit plantations, hunting and other resource extraction from the forest would temporarily have to be almost totally terminated in order to halt the process of extinction, something that is impossible to achieve. But if socioeconomic activities could be limited to 90 percent of the land, allowing forest to regenerate on the remaining 10 percent this could lead to a dramatic increase in the probability of retaining some of the original biodiversity.





Currently, large resources are being invested in the conservation of the small areas of Atlantic rainforest that still remain. The G8 countries, consisting of the eight most powerful in the world, have, together with the World Bank, decided to invest US\$12 million in an attempt to preserve the Atlantic forest. However, very little of this money is invested in Bahia.

The heated land controversy

The clearing of the Atlantic rainforest and the opening up of the area also attracted an increasing number of squatters. The Catholic organization for land reform and land studies, Comissão Pastoral da Terra (CPT), states that landed properties that exceed 100 km² constitute one percent of the total number of properties in Brazil, yet they cover 45 percent of the entire area of arable land. At the same time CPT estimates that approximately 4.5 million families in Brazil lack land to cultivate. The federal institute of land reform, Incra, furthermore, estimates that 62.4 percent of the total agricultural area lies fallow (Pruth, 2003).

The distorted distribution of land has plagued Brazil in the last centuries. Its most costly consequence is the large numbers of peasants, whose landholdings are not large enough to survive on, forced to migrate to the large shantytowns of the cities in search of a job. In the last 25 years, 30 million rural workers have migrated from the countryside (ibid.).

The distorted distribution of land has been aggravated by the agricultural politics of the governments that have preceded the current administration. These governments have supported large landholdings with generous credits, while the resources directed at small-scale agriculture have been very limited, capriciously distributed and restricted by strict and hard conditions.

The land ownership in Bahia corresponds to the situation in Brazil at large. The prospect of arable land functions as a strong magnet for landless peasants and small-scale farmers.

Small-scale farmers who practice agriculture in small fields and patches interspersed in the rainforest often lack legal documentation of their land. Many have been expelled from their land. Large ranchers, who control vast land areas, have often forcibly taken control of the lands of small farmers. Violent conflicts have been common. The movement of landless peasants, Movimento dos Sem Terra (MST), is arguably the most dynamic and combative movement in Brazil, pressing hard for a thorough land distribution throughout





Brazil. The largest number of families involved in land occupations organized by MST in Brazil is found in the state of Bahia. As of this writing, the southern cone of Bahia has the most land occupations. The occupations demonstrate the gravity of the shortage of available arable land for small-scale farmers and strong foothold MST has gained in the region⁷.

In the beginning of April 2004, MST organized 2,000 landless families that occupied 25 hectares of Veracel's plantations. The leader of MST in Bahia, Valmir Assunção, argued that the plantations did not benefit the local population. The occupation was dissolved after a week of negotiation, in which the government supported Veracel's presence in the area⁸.

Bahia is one of the poorer states in Brazil and has one of the country's highest rates of illiteracy. This situation is especially serious in the southern cone of the state. The unemployment and underemployment in the capital of Salvador is approximately 26 percent, with comparative figures for the southern cone of Bahia. There is, in other words, no alternative labor market able to absorb peasants who do not have enough land to support themselves.

At the same moment as President Luiz Inácio Lula da Silva was inaugurating Veracel's new paper mill in the end of September 2005, 40 families of the indigenous people Pataxó occupied a parcel of land in the southern cone of Bahia⁹ which they claimed belonged to them traditionally. According to the Pataxós, their territory partly overlaps with both the National Park Monte Pascoal and with some of the private plantations of eucalyptus which sell its timber to Veracel. Five hectares of eucalyptus were promptly burned down by the Pataxós. This incident further demonstrated that both landless peasants and indigenous people are fiercely opposed to the expansion of the pulp and paper companies in the region.

The largest employment sector in the southern cone of Bahia is the tourist industry along the coast. The area is exploited beyond its current potential, however, and the economy has entered a deep slump. There is, in other words, a popular demand for land and employment opportunities in the southern cone. Development projects in this region will have to create abundant employment opportunities and/or make large areas of land available to landless peasants if they are to contribute to alleviating economic and social problems. NGOs argue that development projects that cannot fulfil at least one of these two premises will only aggravate the economic and social problems of the region.

The historic development in the northern part of the state Espírito Santo has



been similar to the one in the southern cone of Bahia. The Atlantic rainforest was logged and opened up commercially at an earlier stage. The land in the region, owned to a large extent by the state, was inhabited by indigenous peoples and Afro-Brazilian small-scale peasants. According to organizations that defend the rights of the Indians and the Afro-Brazilians, both these groups were driven from their territory through coercion and false promises (FASE, 2002).

The expansion of the paper and pulp industry

Aracruz Celulose was the first pulp and paper company to benefit from the region's advantages. The company wanted to find the most ideal conditions for the plantations of eucalyptus and the future construction of a paper mill. These conditions included abundant precipitation, large areas of available fertile land and water, tropical climate, closeness to the sea and a favorable political situation which would guarantee security and maximal profit. Northern Espírito Santo offered all these benefits. Settlers posed the only serious obstacle. According to the local population, the company used fronts to threaten or lure the settlers from their land (Batista Ferreira, 2002).

Other pulp and paper companies soon followed. The corporation Suzano had started to plant eucalyptus in Bahia, and the state owned company Companhia Vale do Rio Doce had established plantations of eucalyptus, aimed at providing charcoal for the steel industry. Bahia Sul Celulose was established in 1984, with the state as its biggest shareholder.



Four-year old eucalyptus tree

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Seven years later, the Brazilian construction and petrochemical company Odebrecht founded a subsidiary which was named Veracruz Florestal. Odebrecht planned to plant huge areas with eucalyptus and to construct a large pulp factory. In 1997, Stora bought 45 percent of the stock of Veracruz and the name of the company was changed to Veracel.

Aracruz faced a hardening resistance towards expansion in Espírito Santo and available land was becoming increasingly scarce. Aracruz responded to these obstacles by entering Bahia and purchasing more than 1,000 km² of land (Carrere and Lohmann, 1996).

In less than two decades eucalyptus became a dominant crop in southern Bahia.

The expansion of the companies was met by protests and resistance from the start. The reasons for this resistance is briefly outlined below and elaborated in much more detail further on in this report.

Veracel's and Aracruz' partnership and joint responsibility

The pulp and paper company Aracruz became joint owner, with Stora Enso, of Veracel in 2000. The fears A Rede Alerta, the network of environmental organizations, already had concerning the Veracel project increased after the joint ownership was declared. Several local organizations and NGOs SwedWatch talked to expressed concern that Aracruz' joint ownership of Veracel will make Veracel adapt the methods Aracruz used in Espírito Santo. Some of these critics argued that such a development is already taking place and that the company's own history demonstrates that Veracel can act as aggressively as Aracruz is accused of doing¹⁰.

Aracruz is the most controversial of all pulp and paper corporations in Brazil. Veracel is also criticized by environmental and social activists, but not yet to the same extent. This is partly due to the fact that the structural conditions, such as land ownership and distribution, in southern Bahia, where Veracel is active, differ from the state of northern Espírito Santo, which has constituted Aracruz' core area. Veracel, on the other hand, has also been more anxious to avoid conflicts with the local population. Its history of operation is also shorter than that of Aracruz.

From Veracel's point of view, the formal cooperation between the two



companies has several advantages. Aracruz possesses both technical know-how and a substantial political capital in Brazil, two assets which are very valuable to Veracel.

It is even hard to distinguish the politics of the companies. They cooperate intimately both formally and informally and their expansion of plantations and production of pulp is coordinated. Both companies are also in a process of expansion. The ongoing construction of Veracel's paper mill demonstrates this.

Stora Enso, Aracruz and Veracel have all signed the United Nations' ethic guidelines for corporations, Global Compact. These guidelines make the companies responsible for both contractors' and each other's activities. This means, for example, that Stora Enso is obliged to use its influence in order to make Aracruz respect international and national legislation and conventions of environment and economic, social and cultural rights of the local population.

This report intends to discuss the issues outlined above and the responsibilities of Stora Enso and of its partner Aracruz. Some of these problems are of a general nature which concerns all pulp and paper companies. Others are specific problems related to Veracel and Aracruz respectively.



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III. THE VERACEL CASE

Inadequate legislative implementation

Veracel emphasizes that the corporation will follow “environmental, health and safety legislation”. Unfortunately, it is hard to conclude if the company adheres to this proclamation. There is a striking consensus among NGOs, researchers and officials that the institutions designated to overlook that rules and laws are followed often lack resources and/or suffer from corruption.

According to a senior officer at the Environmental Resources Centre of Bahia State (CRA) to SwedWatch, Brazil has one of the best laws in the world but the worst implementation.

While researching this report SwedWatch met numerous people who opposed Veracel’s expansion and felt intimidated by both the corporation and the official bodies. It is hard for SwedWatch to conclude if their allegations are correct or not.

The resistance

Veracel has faced resistance since its founding. Due to accusations of illegal logging in 1992-1993 and the debate regarding the Environmental Impact Assessment (EIA) and the license of operation, the most intensive period of criticism against the company perhaps occurred in the period 1993 to 1996. A new wave of criticism is currently directed at the company because of its decision to construct a paper mill and refusal to submit itself to a new EIA.

Even though Veracel and its shareowner Aracruz have succeeded in expanding their plantations and production of pulp, they are facing increasing resistance. Currently, Aracruz is facing various labor lawsuits. In 2002, a deputy of the state congress of Espírito Santo, Nasser Youssef, introduced a bill in congress proposing that new eucalyptus plantations intended for pulp production should be prohibited until a mapping and division of the land into zones of different usage has been conducted. The new law was rejected by the federal Supreme Court the year after (FASE, 2002).

The same year the state parliament of Espírito Santo appointed a state commission of inquiry, CPI, in order to investigate irregularities in the licensing procedure of Aracruz’ third pulp mill. The commission also inquired





if and to what extent Aracruz respected prevailing legislation, human rights and environmental conventions. All groups that had been affected by Aracruz' activities bore witness to Aracruz' violations of economic, social and cultural rights and of environmental conventions and legislation¹¹.

Veracel, backed-up by influential state politicians and court verdicts, has hitherto not faced such organized resistance. Veracel has also not been in conflict with the local population in the same way as Aracruz. Veracel's landholdings have to a large degree been purchased from large landowners. Thus, land conflicts have not been as dramatic as in the case of Aracruz.

Critics, such as the non-governmental organization CEPEDDES, and the priest José Koopmans, however, argue that the pulp and paper companies which established themselves in the southern cone of Bahia used the same ruthless methods as the ranchers. According to Koopmans, the corporation Flonibra, for example, used fronts to acquire land using promises, threats and force. All the land that Flonibra has acquired belongs to the pulp and paper company Bahiasul.

Koopmans asserts:

“Bahia Sul is not an exception. I even got to know a person in 1995 who was used as a front by Veracruz¹², in order to buy land for the company that subsequently was transferred to the corporation”.

Veracel faces potential conflicts of land with indigenous groups, but these are of smaller scale. The movement of landless peasants, MST, is critical of the expansion of Veracel, and has even organized, as mentioned above, an occupation of a plantation in 2004. The government of Luiz Inácio Lula da Silva walks a tightrope between the attempts to lure foreign investments to the impoverished Northeastern part of Brazil and the need to meet the demands of the landless, environmental organizations and indigenous people.

Yet, the resistance against Veracel seems to be growing. In 2003, a conference about the problems with the industry was held where most of the critics of the pulp and paper industry of Brazil gathered. In the joint statement of the conference, the present state of the eucalyptus plantations and the pulp production was explicitly condemned. Resistance has been increasing continuously since then.





The Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA) and the National Institute of Colonization and Agrarian Reform, INCRA, now appear to be more negative towards the expansion of the pulp industry than previously. This partly seems to be due to changing governmental policies that have been introduced since President Lula da Silva was installed in 2002.

The government, on the other hand, has wholeheartedly, supported the pulp and paper industry and President Lula emphasized this support when he inaugurated Veracel's pulp mill in September 2005.

How the resistance against the pulp industry is going to be organized and if it will be able to change state and federal support for the pulp and paper sector is still an open question. The critique that the network of environmental organizations directs at the pulp and paper corporations take its base in local conditions, while the advocates of the plantations seem to focus on the economic benefits on a state and national level.

Veracel's pulp mill

Since the founding of Veracel there have been plans to build a pulp mill. However, the realization of the project was repeatedly delayed. The construction of the pulp mill was finally started on 22 May 2003 and completed in September 2005. The construction costs amounted to US\$1.25 billion making it the biggest private investment of the current Brazilian administration so far. The plant





is located 49 km from the coast and 5 km south of the Jequitinhonha River. Veracel estimates that the pulp mill, when it reaches its maximal output, will increase the number of people employed by the company by 400.

The mill is the largest single-line bleached eucalyptus pulp mill in the world (Veracel, 2003b) with a capacity of 900,000 metric tons per year. It is expected to produce the cheapest pulp in the world¹³ (Palmeus, 2003). The mill is also supposed to be able to expand its annual production to one million metric tons, after being tuned up. The owner companies, Stora Enso and Aracruz, will each be entitled to half of the mill's output. Stora Enso will use its pulp to produce fine paper, while Aracruz will sell its share on the market¹⁴.

Environmental problems associated with the pulp mill

The Jequitinhonha river ecosystem has kept some of its biodiversity, including the legally protected mangrove forests in the lower parts. Raquel Moura, one of several researchers of the Institute for Socio-Environmental Studies of Southern Bahia (IESB), who has been working in the area, stated:

“We have to accept some environmental effects, but the current location of the pulp mill is very worrying. The area is one of the few remaining areas with high biodiversity in the region. In order to not create environmental problems the production system has to be extremely closed, any leakage might cause irreparable damage”.

The EIA for the plantations and the pulp mill, conducted by the consultancy Jaakko Pöyry Consulting, was accepted by the authorities in 1996. According to the EIA, the production should use a technique that is totally chlorine free (TCF). Since then, however, Veracel has changed its mind and decided to use the ECF-technique¹⁵. ECF stands for elemental chlorine free process, and involves no elemental chlorine but produces small amounts of dioxin.

Local NGOs are critical to the decision to change from TCF to ECF production. José Augusto Tosato, former coordinator at CEPEDES states:

“The EIA clearly states that TCF technique ought to be used, but Veracel has changed its mind and decided to only use ECF. This is totally unacceptable”.

In 2002, the construction of a hydroelectric plant was initiated at Rio Jequitinhonha. This is also the river from where Veracel's paper mill obtains





the water used in the production process. Tosato is also very concerned about the state of the river Rio Jequitinhonha. Tosato concludes:

“During the EIA the authorities had not taken into consideration that the hydroelectric plant may have changed the flow of water of the river drastically and hence also the dilution of effluents into the river. It is therefore necessary to demand that a new EIA-study is made”.

Veracel, however, has decided to ignore the demand of A Rede Alerta, the network of environmental organizations, and not conduct a new EIA.



Ecological Debt: The Peoples of the South are the Creditors

Socioeconomic problems associated with the pulp mill

As noted above Bahia is one of the poorest states in Brazil. The unemployment and underemployment in the capital of Salvador is approximately 26 percent¹⁶. José Augusto Tosato, former coordinator at CEPEDDES, is worried about the people who have migrated to the area to find work in the construction of the paper mill. Experiences from the construction of other paper mills in the area





demonstrate that the number of migrant workers employed at the construction sites have been much less than the number of those turned down. The people who have not been able to secure employment at the mills have had no choice but to move to the shantytowns of the cities in search of jobs. Around Aracruz mills in Espírito Santo, for example, prostitution flourished and most of the migrants were forced to move to the large shantytowns of cities like Porto Seguro and Vitória¹⁷.

Nils Grafström, Veracel's Board Chairman, argues that this migration is not the responsibility of the company, but that of Brazilian authorities. During the mill's construction period, the regional newspaper A Tarde reported that hundreds of people, many of them unemployed, had traveled to the area in order to apply for jobs at the plant (Belém, 2003).

Additional issues of conflict

The fast expansion of eucalyptus plantations

“We stand on the top of a high hill in the middle of Veracel's territory. Before us mile upon mile of eucalyptus trees stand in strict rows, like an enormous army, made up solely by trees, waiting motionless for the battle to start. The only thing that is possible to observe in a distance is how the crowns of the trees tremble as if an enormous animal is trying to push itself between the trunks. When we get closer we see how the logging machine lowers its head and bites off the trunk at the base of the tree. In less than a minute it has logged the tree and cleaned the trunk of all branches, figs and leaves. Log after log lies on the ground as if they are preys, clobbered by a gigantic predator. It is hard to understand that only a little more than a decade ago all the rainforest in the area was logged manually, by persons equipped with chain saws”.

The 1996 permit for Veracel allowed the company to operate in a 20,000 km² area to buy land and establish plantations¹⁸. The establishment of the plantations was subjected to several national regulations. The one that is most straightforward is the total ban on logging of the Atlantic forest. There is also a demand of a minimum 20 percent natural forest coverage on land holdings originally forested¹⁹.

Secondary forest and degraded forest is organized in several categories of which none is allowed for plantation use. In order to be able to determine that these rules are followed, a photographic map of the area was produced in 1995²⁰. One copy of this map was deposited at the Environmental Resources Centre of Bahia State (CRA). Only land that was “degraded” at





the time of the production of the map can be used for plantations²¹. All these regulations are also valid for the areas where the eucalyptus is owned by private proprietors. Veracel labels this private mode of ownership and production forestry partnership program or fomento florestal. Altogether the companies landholdings exceed 1,400 km². In 2001, the company claimed they would use 770 km² for plantation purposes (Veracel, 2001). At present, the area destined for eucalyptus plantations covers approximately 700 km² and has contracts with landowners designating another 230 km² for the forestry partnership program.

As previously stated environmental organizations, such as CEPEDDES, GAMBA²², the movement of landless peasants, MST, and the state branch of the National Institute of Colonization and Agrarian Reform (INCRA) declare that the vast plantations of eucalyptus in the southern cone of Bahia that continue to expand, contribute to further obstruct the realization of a land reform. Arable land that theoretically could be distributed among the landless is instead converted into eucalyptus plantations. When SwedWatch visited Veracel, the heads of production, environment and information guaranteed that only land that was inadequate for agriculture was used for plantations. This claim was refuted, however, by all the local organizations. The head of INCRA, Marcelino Galo, also declared that arable land was used.

When MST occupied one of Veracel's plantations in April 2004 they immediately chopped down the trees and started to plant crops and fruits. The landless peasants argued that the land was perfectly suited for agriculture.

In a telephone interview with SwedWatch, Nils Grafström, head of Stora Enso's Latin American division, also acknowledged that arable land is used for plantations:

“Veracel's denial must be based on a misunderstanding. Some of the land we use for plantations could definitely be used for other purposes, but I can't see that there is antagonism between our eucalyptus plantations and agricultural production. There is simply enough land available for both purposes. If more land is needed for agricultural land the authorities can start by expropriating land that is not used”.

The organizations that oppose Veracel's plantations, on the other hand, claim that the vast land areas controlled by the pulp companies is a continuation of the support to large landowners at the expense of peasants with small





landholdings. They further argue that Veracel's purchase of land leads to increasing prices. Such an effect is visible in Espírito Santo where Aracruz is active. João Fernando Borges, corporate planning manager of Veracel, does not believe that such a rise has occurred in the municipalities where Veracel operates, though²³:

“When we purchased half of the shares of Veracel in 1997, we believed that this would lead to a massive increase of the land price. This process never occurred, though, the main reason is probably that the land supply has been great and that the land owners have come to us on their own free will”.

There is every reason to believe that the alliance between Veracel and Aracruz will result in a substantial increase of the eucalyptus plantations. The main reason for this expansion is the enhanced production capacity of Veracel's new paper mill. Nils Grafström states that Veracel will not have to expand its plantations to meet the demand of timber after the new paper mill has been constructed. Aracruz, on the other hand, which has supplied its latest pulp mill with timber from Veracel, will have to increase its production of timber to be able to use its own new built plant's capacity. FASE and CEPEDDES, non-governmental organizations that are monitoring the activities of Aracruz and Veracel, fear that the company will have to increase the area of its plantations drastically to achieve this end. Stora Enso's plan to add another production line to the new paper mill will most definitely demand larger quantities of eucalyptus timber (e.g. Affärsvärlden, 2005).

Approximately 20 km outside Eunápolis there is a small squatter settlement of peasants, Projeto Maravilha, that received titles to their land after 13 years of constant struggle against the state owned company Vale do Rio Doce, which previously owned large areas of land in the region. The farmers claim that the number of farmer families has been greatly reduced because Veracel has clandestinely bought their land. One of the farmers stated that he was offered 30,000 reais (at the time US\$10,000) for the 15 hectares of land that he owns. According to the land reform legislation, peasants who have received land through the reform are not allowed to sell it. Joelson Ferreira de Oliveira, a regional leader of MST, asserts:

“MST strongly condemns this practice of buying distributed land²⁴. It shows that Veracel acts as a common large farm owner”.





Marcelino Galo, the head of the Bahia section of INCRA, voices the same opinion:

“The pulp and paper companies are no better than other forms of large-scale monoculture which always has constituted a problem in the history of Brazil. The corporations appropriate land that otherwise could have been bought by the government and used for the land reform”.

Veracel denies that the company has ever bought land owned by squatter settlements for plantations purposes²⁵. Words stand against word, as is often the case concerning Veracel. Koopmans (1999), however, states that he has interviewed a person who used to function as a front for Veracel, buying land and then selling it to Veracel. Representatives of an influential organization of small-scale ecological agriculture, Terra Viva, also assert that Veracel has used fronts to buy land from peasants. The lands were subsequently transferred from the front to Veracel.

It has not been possible for SwedWatch to verify this information. During the state parliamentary inquiry against Aracruz, several local farmers told the commission that the company had used fronts to appropriate their land (Fase 2002). Koopmans (1999) reported that Bahia Sul also has been using fronts to acquire land. These incidents demonstrate that clandestine appropriation of land has, at least, been used as a strategy by the other two major pulp and paper companies in the region and Veracel has been accused of using the same methods.

Pesticide use

Veracel uses on average of one kilo of the insecticide Mirex-S/hectare a year and one kilo of Roundup/hectare a year²⁶. When Veracel's entire plantations of 700 km² is planted with eucalyptus this will imply a total consumption of 70 metric tons of each substance a year. Roundup normally contains around 40-68 percent of the active component glyphosate. It means that a total of 39 to 47 metric tons of glyphosate is used every year. Veracel's use of glyphosate is thus three to five times higher than the entire amount of pesticides used by the Swedish forestry business (Kemikalieinspektionen, 2004).

When it comes to herbicides Veracel uses five to eight times as much as the Brazilian average for tree plantations²⁷. The high level of herbicide usage results in a striking lack of animal life and understory vegetation in Veracel's



plantations and the ground in the young plantations appears to be completely sterile. Due to the lack of data the long term environmental effects and the health effects on company staff, local farmers and fishermen remain to be discovered.

Effects on the Atlantic rainforest

Veracel's tree plantations are situated on flat ground. Natural forest has been left in gullies, on slopes and in some smaller flat areas. This is a general practice in order to reduce the risk of infections spreading between stands, but it is also regulated by law to protect water catchment areas. Furthermore, Veracel depends on machines for the management and harvesting which makes the company prefer flat ground²⁸.

Veracel also states that one of the reasons to keep these forest remnants is to protect and regenerate the Atlantic forest. According to the environmental regulations, however, Veracel is obliged to maintain 20 percent of native forest. The corporation has chosen to "maintain" almost 50 percent, which is located almost exclusively on slopes and in narrow river basins. These are areas where it would be impossible, or very difficult, to harvest the eucalyptus trees, since



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the logging is mechanized.

Furthermore, the quality of the preserved land can be questioned. Dr. Pedro Rocha is one of the few scientists conducting research on the relation between eucalyptus plantations and natural forest and the only one working in this region. He is critical of the current state of the “protected” forest areas within Veracel’s plantations and claims that only very small fragments of high-quality rainforest are maintained. According to Rocha:

“Of the 700 km² Veracel has set aside for forest conservation and regeneration 153.5 km² is natural forest in different states of forestation, ranging from highly degraded forests over forest in different stages of recovery to areas with primary forest. Veracel claims that 30 percent of this is primary forest and 16 percent is in a very late stage of succession²⁹. However, although classified as being in a late stage of succession these forest fragments have been subjected to logging. It is impossible, though, to say if the logging is recent or not. The forest fragments are in any case in a bad state. Within Veracel’s area it is very hard to find pieces of good forest, but it is those good parts that Veracel show on their homepage and in their publications”.

Rochas’ claim that most of the rainforest on Veracel’s property is fragmented and in bad condition is shared by many other environmentalists. José Augusto Tosato, former coordinator at CEPEDDES, argues:

“It is true that they [Veracel] have constructed a national park, Estação Veracruz. That is, however, the only major part of Atlantic rainforest on their property. The rest of the rainforest is dispersed into narrow corridors and small patches”.

Loss of biodiversity associated with clear cutting of the Atlantic forest

Veracel has not been caught cutting down Atlantic rainforest since 1993. It has also made a demonstration to prove that it has changed its environmental policy, turning an adjacent area of 60 km² into a rainforest reservation, which was baptized Estação Veracruz.

The illegal logging occurred when the construction and petrochemical corporation Odebrecht was the sole owner of Veracel (at the time called





Veracruz Florestal Ltda.). Due to this, the further expansion of the company was temporarily stopped by the Brazilian authorities in 1993.

Even if Veracel does not log rainforest, its purchase of land and eucalyptus timber risks being an incentive to private landowners to cut down rainforest to clear land to plant eucalyptus. In December 2003, for example, a controller group of the federal environmental bureau IBAMA denounced that a large area of Atlantic rainforest on a ranch had been logged. The area was being planted with eucalyptus for Veracel, in accordance with the corporation's Fomento Florestal program. The planting had already been approved by the municipal environmental department. The incident raises questions concerning the efficiency and honesty of municipal control and of Veracel's control and responsibility for the private plantations of eucalyptus that the corporation sponsors (A Tarde, 2003).

Veracel's forest recovery program

Veracel has initiated a forest recovery program. According to this program, the Atlantic forest is divided in three categories: the initial state, with trees lower than five meters, the intermediate state and the advanced state.

According to José Augusto Tosato, the former coordinator of CEPEDDES:

“All stakeholders in the region, small-scale peasants, farmers and Veracel, continuously cut down the first stage, which is not protected by law if the landowner already has 20 percent of the property covered with forest. It is also common, however, that all these stakeholders cut down trees of the second stage. This is not permitted but the Brazilian Institute for the Environment and Renewable Natural Resources, IBAMA, does not have enough resources to control and prosecute such transgressions. When it comes to Veracel it is also extremely hard to control if and where they cut down secondary and tertiary rainforest, since the only one who has maps which can be used as a control is Veracel”.

Raquel Moura, researcher at the Institute for Socio-Environmental Studies of Southern Bahia (IESB), points out that some of the lands that Veracel buys is covered by bush-land and low forest, so-called capoeira, and that there ought to be some control of what happens to this type of vegetation. This is of importance since these capoeira can be secondary forest developed after the





creation of the maps in 1995. The capoeira represents the first step towards the desperately needed regeneration of forest areas. However, currently there are very limited possibilities for authorities to control violations of logging regulations. Veracel claims that the locations of capoeira and Atlantic forest remnants within Veracel's land holdings are known by CRA. Officials at CRA have told SwedWatch that they lack this information but that they hope to receive updated maps over the area soon. Furthermore, CRA in Bahia is completely undermanned, with a handful of people covering an area larger than France³⁰.

Isolation of native forest remnants

Critics assert that the remnants of Atlantic forest within the plantations are too small and isolated to support sustainable populations of many plants and animals. Dr. Pedro Rocha, at the biology department at the Federal University of Bahia in Salvador performs research in Veracel's Atlantic forest fragments. He says:

“Preliminary data demonstrates that some animal species with low dispersal capacity use some areas of old eucalyptus near the Veracruz Reserve, Estação Veracruz. Eucalyptus areas far from the reserve, though, seem to be less suited to maintain many of these animals. Furthermore, one has to remember that we are performing our studies in “old” eucalyptus forest with more understory vegetation. The situation in the eucalyptus that is one to five years old is probably worse”.

In this context it also has to be underlined that every seventh year, after harvesting, the understory vegetation is completely removed, first mechanically, then chemically, creating areas inhospitable for all animals and plants.

Within Veracel's landholdings the forest is fragmented indeed. There are 113 “forest” fragments with areas ranging from 0.50 to 37 km², with the majority of the areas between 1 and 2.5 km²³¹.

Deborah Faria, assistant professor of zoology at the Santa Cruz State University (UESC), is not satisfied with the prospects of the forest fragments:

“There has to be more source areas connected to the forest fragments³². Furthermore, some research has to be done about how these narrow corridors of forest work. We do not know





how fauna and flora are affected by the clear cutting of the eucalyptus every seventh year. There are forms of land use, such as the agricultural technique where agricultural plantations are interspersed in the native rainforest, that are far superior³³.

Veracel's forest regeneration program has received much criticism and according to FASE the company has, through political pressure, managed to get rid of significant forest recuperation requirements originally demanded by CRA³⁴. In this context, it is also important to remember that strips of "natural" moist forest between the plantation blocks is an excellent and cheap way to keep pests and fires from spreading in the plantations. These strips thus have additional positive outcomes for the plantation companies, but the companies do not need vast coherent areas of rainforest, areas which would greatly increase the biodiversity.

The loss of a diverse, sustainable agriculture

Farm workers associations and environmental organizations criticize Veracel for transforming diverse agricultural land (see above) into monocultures, inhospitable for both people and the local fauna and flora. In addition, the company's acquisition of large land areas has raised land prices and reduced the economical possibility to establish a more diverse form of agriculture.

From 1950 to 1985, the area that was used for agriculture in the southern cone of Bahia expanded from 670 km² to 2,590 km². After the mid 80s, however, the agricultural area started shrinking and in 1993 the area had been reduced by almost 60 percent (Koopmans, 1999). The number of farms has decreased between 1960 and 1990, while the number of landholders with large landed properties has greatly increased. The largest of these landed properties belongs to the three main pulp and paper companies: Bahia Sul, Aracruz and Veracel. There is, in other words, two divergent developments, where agriculture literary is losing ground, while the paper and pulp companies are continuously expanding.

SwedWatch interviewed peasants whose small plots of lands lie adjacent to Veracel's plantations. They argue that there is no difference in fertility between the lands they cultivate and the one used by Veracel and believe that Veracel lands also ought to be used for farming. The peasants' point of view was confirmed when landless peasants occupied a Veracel plantation, cut down the eucalyptus trees and planted beans and other crops. The peasants reaped 100 sacks of beans³⁵ at harvest time.





Veracel responds to this criticism by claiming that the forms of land use totally dominating the area prior to their arrival was cattle farming on pastures, covered with exotic grass species.

Koopmans (1999) argues, however, that at least one-eighth of the land was previously used for diversified small-scale agriculture. He also states that the use of different fronts may disguise that land that is sold as pasture may well have been used for agriculture shortly before.

Representatives of Veracel alleged that the applied alternative agricultural practices, such as pastures and papaya plantations, are not more diverse or sustainable than eucalyptus plantations. This point of view is hard to understand, however. There are several different forms of agriculture³⁶, but the one the Rede Alerta promotes is the one where the cultivation is interspersed in the Atlantic rainforest, the system labeled terra cabrocada. This view was supported by all biologists and agronomists interviewed for this study.

Decreased access to water

Rainfall in the region is evenly distributed over the year with an average of around 1,200 mm/year and for commercial and technical reasons Veracel claims that the corporation does not plant eucalyptus in areas with an annual rainfall below 1,000 mm/year³⁷.

All small-scale farmers who lived adjacent to Veracel's plantations interviewed for this study who stated that the precipitation and the water level of creeks, ponds and lakes had decreased substantially in the last decade³⁸. This was one of their greatest grievances and they all attributed this change to the eucalyptus plantations. They even argued that sometimes watercourses have disappeared totally, thus affecting the people's livelihoods since irrigation and fishing become so much harder. The peasants who live close by the plantations of Aracruz in the state of Espírito Santo makes the same complaints regarding the decrease of access to water as the peasants SwedWatch met in Bahia (e.g. Batista Ferreira, 2002).

Veracel argues that the observations made by the small-scale farmers are incorrect. Veracel's environmental officer, Danilo Sette, states that the corporation has taken measures to guarantee that the eucalyptus will not harm the local populations. Such measures include a ban on planting eucalyptus near water sources or streams.





If eucalyptus plantations are replacing pastures with little or no forest cover, as is mostly the case in southern Bahia, the reduction in available water can be expected to be high³⁹. It is lamentable that no long-term adequate and independent research concerning this urgent issue has been conducted in the area. The complaints made by the small-scale farmers who live in the proximity of the plantations ought to be reason enough for the corporations to encourage such studies.

Daví Sarney is a 56-year-old farmer who lives in a settlement outside Eunápolis that is situated at the border of one of Veracel's plantations. He says that the eucalyptus has affected the rainfall in the area:

“The last ten years, since the eucalyptus was planted, it rains much less than before”.

Sarney's words were repeated by almost all of the small-scale farmers who live close to Veracel's plantations.

Furthermore, clear-cutting large areas all at once is likely to cause local fluctuations in smaller rivers. The biological effect of these fluctuations on adjacent Atlantic forest remnants and streams are not currently known. One of the forest machine operators working for Veracel declared that they cut entire areas around rivers and creeks⁴⁰. This is also the prevailing technique, as SwedWatch observed and confirmed through Veracel's management maps. Fluctuation in water absorption and run-off is not actively limited by the simple means of mixing smaller plantation blocks of different age. In addition, there are no buffer zones between the clear cuttings and the thin strips of natural forest, recovering forest and grassland in the valleys interspersing the plantation blocks. Hereby, harvesting of the eucalyptus can have dramatic effects on the animals living in the adjacent forest fragments. A local farmer expressed his concern for the decrease in animals when the eucalyptus was cut down:

“We used to hunt in the forest, but when the eucalyptus was cut down all the animals disappeared”.

The loss or the minimal gain in employment opportunities

One of the main benefits of the establishment of the pulp and paper companies, according to Stora Enso and Veracel, is the creation of a large number of





employment opportunities. This benefit is emphasized by all advocates of the pulp and paper corporations: company representatives, politicians on all levels, journalists and, not least, many of the local population. José Koopmans has, however, criticized this belief severely and presented elaborate calculations in order to support his statements:

“The corporations have accused its critics of being against the development of the region. Yet they have never succeeded in answering my questions concerning the net benefits of employment during the public hearings that were held concerning the construction of the paper mills”.

In order to compare employment opportunities between the pulp and paper corporations and small-scale agriculture, Koopmans uses calculations made by the farmer organization Terra Viva and the Union of the Rural Workers. According to their figures, based on research in the municipality Itamaraju, agriculture creates 10 employment opportunities in every 50 hectares while cattle breeding yield only one.

SwedWatch has used Koopmans' (1999: 117-122) method to investigate how large actually is Veracel's employment contribution. Veracel owns a total of 1,400 km². Half of this area is not used for plantations, but, according to Veracel's statements, put aside to be a haven for Atlantic rainforest. Koopmans makes the assumption that 73 percent of Veracel's lands were previously used as pasture, 13.5 percent as small-scale agriculture and 13.5 percent were made up of shrubbery or first stage rainforest. As noted above, cattle breeding yield one employment opportunity per 50 hectares and agriculture one per five hectares. Shrubby does not yield any employment. If one takes Veracel's entire land area into account 5,684 persons would previously have earned their livelihood there. If one generously takes away all the area that supposedly is set aside for preservation of native forest, the land would have employed 2,842 people.

Veracel has declared that the paper mill and the plantations will generate 2,000 direct employment opportunities (Veracel, 2004). This heavily subsidized industry would, in other words, lead to a net loss of employment opportunities.

Koopmans does not, however, discuss the creation of indirect employment opportunities in the commercial and service sectors. More indirect jobs would be created if the net income of the workers of the corporation were to be





substantially higher than in the agricultural sector. Plantations workers tend to be more dependent on their income than peasants, who can, at least partly, rely on their own production. Veracel calculates that every direct job at the company creates four indirect ones. Thus, Veracel would generate 10,000 jobs altogether. If we calculated that people employed in the agriculture and at the ranches generate two indirect jobs for every direct one, Veracel would still create a net loss of employment opportunities if one includes all their land. Were half of the land area exempt, however, Veracel would create a surplus of jobs, albeit a small one.

The investments of the Brazilian Social and National Development Bank or BNDES in the construction of Veracel's paper mill amount to US\$495 million. This means that every direct job at the plant has cost the Brazilian state almost one million dollars. This is a large difference compared to the sums that are invested in small-scale agriculture in the region.

IV. CONCLUSION

As we have noted, there are several problems related to the current situation of the pulp and paper industry in general, and to Veracel and Aracruz operations specifically. There are several reasons to question



the long-term sustainability of pulp and paper production. The critics of pulp and paper corporations regard the plantations of eucalyptus as yet another monoculture which contribute to aggravating Brazil's social and economic problems. Since Veracel and Aracruz are two of the main pulp and paper companies, they are targets of this critique.

The critics argue that the expansion of eucalyptus plantations contributes to driving small-scale peasants off their land. Veracel has mainly purchased its land from large ranches, but these ranches may have appropriated land from peasants in various ways. Veracel's answer to this criticism is that the company's activities generate thousands of new employment opportunities.

Calculations made by José Koopmans, however, demonstrate that it is possible to question if there is any net gain of employment opportunities at all. The corporations do not account for calculations of how many employment opportunities are lost when ranches and agricultural plots are turned into eucalyptus plantations. The critics further argue that enormous sums of federal resources are invested in every employment opportunity at the plantations and the plants, while state credits to small-scale agriculture is severely neglected. There is also a serious scarcity of available arable land for landless and small-scale peasants in Brazil and 4.5 million families in the countryside do not own any land. This lack of land has contributed to making the movement of landless peasants, MST, into Brazil's largest and most dynamic social movement. The expansion of eucalyptus plantations contributes to aggravate the distorted ownership of land in Brazil. MST has occupied land that belongs to Veracel, arguing that the plantations ought to be distributed among landless peasants.

The pulp and paper corporations' demand for land may raise prices of land substantially, thus making the ongoing land reform more costly since large landowners are compensated at market prices when their land is expropriated for land reform distribution.

These are the additional critical issues:

- Despite the fact that Veracel claims to have a program of preservation of Atlantic rainforest, its plantations of eucalyptus cover vast areas which otherwise could have regenerated into native forest. Veracel also cuts down first stage rainforest, thus limiting the recovery of the rainforest. There have been incidents in which private landowners who plant eucalyptus, which subsequently is sold to Veracel, have cut down rainforest in order to plant eucalyptus.
- Informal statements made by high-level representatives of Veracel,

Stora Enso and Aracruz seem to indicate that the corporations have a hidden agenda, where the plans of expansion of their plantations are much more extensive than their official declarations imply. Veracel is continuously expanding its plantations and Stora Enso and Aracruz apparently have plans to greatly expand the production capacity of the newly-constructed paper mill.

- Peasants whose land plots are adjacent to Veracel's plantations claim that the availability to water has diminished since the eucalyptus plantations were established. Veracel argues that these grievances are false. This claim, however, corresponds to the assertions made by peasants who live close to the properties of Aracruz and Bahia Sul.
- There also exists a democratic problem since the pulp and paper companies exercise large formal and informal political influence on regional, state and federal levels. The opposition to the pulp and paper corporations, which consists of a wide array of popular groups and organizations, has much weaker political representation and much less access to media.

ABBREVIATIONS



BNDES	Banco Nacional de Desenvolvimento Economico e Social (Brazilian Social and National Development Bank, formerly BNDE)
BRACELPA	Associação Brasileira de Celulose e Papel (Brazilian Association for Pulp and Paper Sector)
CEPEDES	Centro de Pesquisa P/Desenvolvimento do Extr. Sul da Bahia (Research and Development Centre of the Extreme South of Bahia)
CI	Conservation International
CIMI Equipe ES	Conselho Indigenista Missionário Espírito Santo/ Brazil (Indigenist Missionary Council of Espírito Santo)
CPT	Comissão Pastoral da Terra (Catholic Organization for Land Reform and Studies)
CRA	Centro de Recursos Ambientais (Environment Resources Centre)
ECF	Elemental Chlorine-Free
EIA	Environmental Impact Analysis
EIB	European Investment Bank



FASE	Faculdade de Educação da Serra (Federation for Social and Educational Assistance)
FSC	Forest Stewardship Council
GAMBÁ	Grupo Ambientalista da Bahia (Environmental Group of Bahia)
GPS	Global Positioning System
IBAMA	Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis. (Brazilian Institute for the Environment and Renewable Natural Resources)
IESB	Instituto de Estudos Socioambientais do Sul da Bahia (Institute for Socio-Environmental Studies of Southern Bahia)
INCRA	Instituto Nacional de Colonização e Reforma Agrária (National Institute of Colonization and Agrarian Reform)
MST	Movimento dos Trabalhadores Rurais Sem Terra (Movement of Landless Workers)
NIB	Nordic Investment Bank
SINTICEL	Sindicato das Indústrias de Papel, Celulose e Químicos (Union of Pulp and Chemical Industries Workers)
SETRAS	Secretaria do Trabalho, Assistência Social e Esporte (State Agency of Labor and Social Action)
SSNC	Swedish Society for Nature Conservation
TCF	Totally Chlorine Free
UESC	Universidades Estaduais da Bahia (State University of Bahia Santa Cruz)
UFBA	Universidade Federal da Bahia (Federal University of Bahia)
WRM	World Rainforest Movement

NOTES • • • • • • • • • •

- 1 The corporation currently has a production capacity of around 15 million metric tons of paper and board annually.
- 2 Aracruz' current composition of shareholders are: the Lorentzen Group, 28 %; Safra Bank, 28%; Votorantim, 28%; BNDES, 12.5%, and others, 3.5%.



- 3 The southern cone of Bahia is labeled O Extremo Sul da Bahia in Brazil, and it encompasses the region between the river Jequintinhonha and the border to the state of Espírito Santo.
- 4 New York Botanical Garden (2004) from www.nybg.org/bsci/res7bahia/Defor.html.
- 5 An overwhelming number of the species of the area are endemic and exist nowhere else. More than 50 percent of the tree species (Mori et al, 1981) and 92% of the amphibians (Lynch, 1979) are endemic (Thomas and Carvalho, 1998). Of the 849 bird species of the Atlantic forest 188 exist only there and new species are constantly being discovered. Of the 197 reptile species 60 are endemic. For many groups of organisms southern Bahia and northern Espírito Santo are distinct areas of endemism. Of the remaining forest, a large proportion is fragmented and isolated preventing many species from having a chance of survival. In 1990, only 16 percent of the Atlantic forest remained and only 2.6% could be classified as non-fragmented. In Bahia the situation is even worse with less than 3.5% forest remaining and only 0.4% non-fragmented.
- 6 For example, if the predicted extinction rate is 10 percent when 50% of the forest is lost, the extinction rate could increase to 50% if 90% of the forest is cleared.
- 7 According to the regional newspaper A Tarde MST has organized 23,000 land occupants in the southern cone of Bahia, distributed amongst 112 camps (A Tarde, 2003).
- 8 See A Tarde (2004), Fonseca (2004), and Kjörling (2004).
- 9 Source: PED RMS – SEI/SETRAS/UFBA/DIEESE/SEADE 2003.
- 10 Marcelo Calazans and Winfried Overbeek, Fase; José Augusto Tosato, CEPEDES, verbal communication om 2003; Koopmans (1999).
- 11 Unfortunately, the commission was possibly used as a tool by unscrupulous local politicians to extort money from Aracruz. The crux would have been that the politicians promised to dissolve the commission if Aracruz paid the extortion money. A couple of years earlier Xerox terminated all its activities in Espírito Santo and withdrew from the state after politicians had extorted money from the company (A Tarde, 2003). Currently, there are a number of judicial proceedings against several local politicians who are suspected of belonging to a criminal syndicate, which covers several states. The commission that investigated Aracruz was dissolved because of a procedural mistake that Aracruz could use to its advantage. As a consequence of the dissolution of the commission, no final report was presented by the commission.
- 12 Veracruz was the name of Veracel before Stora Enso became co-owner of the company.
- 13 The calculated market value of the pulp produced by the plant is expected to be US\$500 /ton, while manufacturing costs are estimated to be US\$150 /ton. Source: João Fernando Borges, corporate planning manager, Veracel, personal communication, April 2003
- 14 Mail answer from Nils Grafström , head of Stora Enso's Latin American Section, 2004-05-06.
- 15 Through the system of “self evaluation for environmental permit” (ALA), CRA gave an “industrial modification permit” for this in January 2003 (bill 2559 by CRA, March 15, 2003).
- 16 Source: PED RMS – SEI/SETRAS/UFBA/DIEESE/SEADE 2003.
- 17 José Koopmans and Winfried Overbeek (FASE), personal communication, April 2003.
- 18 João Fernando Borges, corporate planning manager, Veracel, e-mail communication, August 2003.
- 19 In addition, open water areas such as rivers and creeks have, if originally aligned with forest, to have natural forest buffer zones ranging in width from 30 to several hundred

- meters. Forest plantations are totally prohibited in a 10 km wide strip along the coast. The company is also allowed to cover at most 20% of each inland municipality and 15% of coastal municipalities with plantations. In 2001, Veracel's forest plantation coverage in the municipalities varied from 0.2% to 13.6% with an average of 5.8 percent (Veracel 2001), other tree plantations within these municipalities are not included in these figures. As of July 2003, Veracel had bought 407 landholdings with a mean area of 3.6 km² (361 hectares).
- 20 Moacyr Fantini Junior, technical manager, Veracel, personal communication, March 2003.
 - 21 João Fernando Borges, corporate planning manager, Veracel, personal communication, March 2003.
 - 22 Grupo Ambientalista da Bahia.
 - 23 Veracel's own data, from 1989 to 1998, show that land prices in general and their own purchasing prices appear to have increased by around 50 percent during their time of activity in the region. However, no correction for general price increase could be done, no statistical analysis could be performed and SwedWatch has no data regarding the last five years during which Veracel has acquired less land.
 - 24 Land distributed by the land reform is bought with tax money.
 - 25 João Fernando Borges, corporate planning manager, Veracel, e-mail communication, August 2003.
 - 26 To facilitate comparisons with other data, spraying areas are given in hectares (ha), one hectare equals 0.01 km². If nothing else is stated all pesticide volumes in the text refer to total volumes, active plus inactive components.
 - 27 João Fernando Borges, corporate planning manager, Veracel, e-mail communication, August and September 2003). According to Sindag the average tree plantation in Brazil use 0.085 kg/ha/year (active component). Source: Sindag (National Syndicate of Agricultural Protection Products Industry). João Fernando Borges, corporate planning manager, Veracel, e-mail communication, August 2003.
 - 28 In 2001, the Finnish machine producer Partek signed a five year service and maintenance contract with Veracel and Aracruz covering 39 forwarders and 42 harvester heads (Partek, 2001). Altogether Veracel has purchased 16 harvesters, at a cost of US\$ 210,000 each, and 9 forwarders, at a cost of US\$ 236,000 each. The harvester basic machines are produced by Swedish Volvo and the harvester heads and forwarders by Finnish Partek.
 - 29 According to Veracel, the vegetation on the legal reserve and preservation areas is distributed as follows (in hectares): Total, 71,221; Atlantic rainforest remnants, and, 37,156 which is divided in to the following categories: primary forest, 5,038; advanced stage of regeneration, 3,622; intermediate stage of regeneration, 2,1341; initial stage of regeneration, 5,334; cabruca (native forest mixed with cocoa cultivation), 445; mussununga (low forest on sandier soils), 1,089; planted by Veracel (native species), 287; grassland 34,065. Areas to be recovered/managed by Veracel Atlantic Forest Program covers, 28,237 and the permanent preservation areas cover 5,828. The Classification is in accordance with the definitions of CONAMA—the National Agency of Environment as follows: Primary forest=conserved forest; advanced stage of regeneration=mean height >12 m, mean diameter >18 cm; intermediate stage of regeneration=height 5 m to 12 m, mean diameter 8 m to 18 m and Initial stage of regeneration= height < 5 m, diameter < 8m. João Fernando Borges, corporate planning manager, Veracel, e-mail communication, August 2003.
 - 30 Bahia covers 567,300 km² of which Veracel controls 0.16%.

- 31 Dr. Pedro Rocha, researcher at the University of Salvador, personal communication, March 2003.
- 32 Many animal and plant species have their populations divided into “source areas” with high probability of species survival, and “sink areas” with lower probability. In case of local extinction in a “sink area” organisms re-establish there by spreading or migration from the “source area”. Hereby, a bigger population can be upheld.
- 33 This type of plantations is called cabruca plantations. They consist of crops, generally cocoa, grown in the shade of forest trees. It has been demonstrated that these plantations currently are vital for the survival of many forest species. Due to falling world market prices and the fungal infection “witches broom” the cocoa plantations have at a fast pace been transformed into pastures, forest plantations, etc. The latest reports, however, demonstrate that the fungal infection has decreased rapidly and that certain trees are immune against the disease. There is widespread hope among the remaining cocoa plantation owners that the crop will be commercially competitive again.
- 34 Winfried Overbeek, FASE, e-mail communication, August 2003.
- 35 This was reported by the filmmaker and freelance writer Lennart Kjörling, who filmed the occupations of Veracel’s plantation by landless peasants.
- 36 One of the traditional forms of agriculture has been small patches, beside the rivers, which have been cleared. The peasants have cultivated cacao, interspersed with mandioca, bananas, corn and beans.
- 37 Moacyr Fantini Junior, chief engineer, Veracel, personal communication, March 2003.
- 38 Veracel argues that this is incorrect and show data from the city of Eunápolis, in the centre of the company’s land holdings, suggesting that precipitation has not decreased (João Fernando Borges, e-mail communication August 2003).
- 39 Dr. L.A. (Sampurno) Bruijnzeel, Department of Hydrology and Geo-Environmental Sciences, Faculty of Earth and Life Sciences, Vrije Universiteit, Amsterdam, e-mail communication August 2003.
- 40 Anonymous machine operator, Personal communication, April 2003.

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