

EUCALYPTUS PLANTATIONS
AND PULP PRODUCTION

**PROMISES OF JOBS AND
DESTRUCTION OF WORK**
The case of Aracruz Celulose in Brazil

Alacir De’Nadai
Winfriidus Overbeek
Luiz Alberto Soares

Research Team: Alacir De'Nadai
Winfridus Overbeek
Luiz Alberto Soares
Translation: Jaime Chiarelli Junior (Ad Verbum, tradução & interpretação)
Cover design: Flavio Pazos

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International Secretariat
Maldonado 1858, Montevideo, Uruguay
Tel.: +598 2 413 2989, Fax: +598 2 418 0762
e-mail: wrm@wrm.org.uy
Internet: <http://www.wrm.org.uy>

European Office
1c Fosseyway Business Centre
Stratford Road
Moreton in Marsh GL56 9NQ
United Kingdom
Ph: +44 1608 652893, Fax: +44 1608 6512 878
e-mail: wrm@gn.apc.org

This publication is also available in Portuguese and Spanish

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Published in: May 2005

ISBN: 9974-7853-8-3

The elaboration of this publication contents was made possible with support from NOVIB (The Netherlands) and the Swedish Society for Nature Conservation (SSNC). The views expressed, the information and material presented, and the geographical and geopolitical designations used in this product, exclusively imply the opinion of the authors.

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Introduction

This paper presents and analyzes data about employment and work in eucalyptus plantations and cellulose production for export in the state of Espírito Santo, more specifically about the company Aracruz Celulose, leader of the sector in Brazil. Not intended to be an academic study, the paper is actually the report of a survey in which men and women workers from Aracruz Celulose and men and women inhabitants of the communities in the neighborhood of the company were preferentially interviewed, which also helped reveal the situation of these communities, whose traditional forms of work suffered alterations or were rendered impracticable on account of the deployment of large-scale eucalyptus monoculture in the state. The names of the interviewed workers, former workers and union members were omitted for reasons of security.

The current panorama makes this paper even more relevant if we take into account the high rate of unemployment in Brazil. In 2003, for example, over 1 million people were jobless in the country. In 2004 this rate attained around 11.5 % of the active population, according to data from the Brazilian Institute of Geography and Statistics (IBGE). Accordingly, just to prevent the rate of unemployment from increasing it would be necessary to create around 1.5 million annual jobs. Taking advantage of the seriousness of this situation, the eucalyptus/cellulose sector systematically uses the generation of jobs as a weapon to 'sell' its project to the local and regional communities, to the state and to public opinion. But in actual fact, the figures that the sector presents when performing its publicity are not even confirmed at its own sources.

According to researcher Francisco de Oliveira (IBASE, 2004), contemporary capitalism produces two opposite types of job. The first is the high performance job, well remunerated and with all labor rights guaranteed; these are jobs dedicated to scientific research and programs for technical progress. The second is the more trite type of job involving manual labor, which is poorly remunerated and generally outsourced, as a paradox of technical-scientific progress. The number of jobs in the other sectors – industry, where the working class is located, and services – has not increased for decades and job vacancies are progressively scarce. Hence the concentration of income and disparities between and among categories of workers with and without guaranteed rights increase proportionately. This situation can be perceived not only at Aracruz Celulose, but at all the companies from the sector.

Such an issue deserves an in-depth study, especially to put down the corporate speech that uses the generation of jobs to justify the expansion in the planting of trees in Brazil from the current 5 to 11 million hectares between 2003 and 2013, which means boosting the productive capacity of cellulose. Promises of jobs are repeated in other countries from the south such as Ecuador, Chile, South Africa and Indonesia, where large companies from the sector want to set up or expand to plant fast growing trees with the intention of producing cellulose for export. The large monopolies of eucalyptus plantations and cellulose plants in the state of Espírito Santo are destroying rural agriculture, substituting the production of foodstuff, preventing the performance of the agrarian reform and the restitution and demarcation of *Quilombola* (descendants of runaway slaves) and indigenous lands. We hope that the study will be useful to all those that face these problems.

Part I: Employment and Aracruz Celulose

1. Aracruz Celulose

1.1 Background and main aspects

Aracruz Celulose S.A. was founded in 1972, but it began operating in the state of Espírito Santo in 1967, under the name of Aracruz Florestal. In the 80's it expanded its eucalyptus plantations to the state of Bahia. Nowadays the company is also present in the states of Minas Gerais and Rio Grande do Sul. It has invested over US\$ 4 billion in Espírito Santo since it was founded. The company's main activities are the planting of eucalyptus trees and the production of bleached cellulose for export.

In 1997, Aracruz also begun to produce solid wooden products at a lumber mill set up in Posto da Mata, Bahia, through the company Aracruz Produtos de Madeira.

Aracruz Celulose's main shareholders are:

- Lorentzen Group (28%) – Norway;
- Safra Group (28%) – Brazil;
- Votorantim Group (28%) – Brazil
- BNDES – National Bank for Economic and Social Development (12.5%) – Brazil

Aracruz officially owns 375,000 hectares of land in Espírito Santo, in Bahia, in Minas Gerais and in Rio Grande do Sul, of which 247,000 hectares are used for planting eucalyptus. The company also maintains 'forestry advancement' contracts – the planting of eucalyptus on third party property – with 2,593 farmers, using this additional area of 58,000 hectares with plantations of the same species (Aracruz Celulose, 2003).

The company produces 2,4 million tons of bleached cellulose per annum, exporting 97% of its production, especially to Europe (38%) and North America (36%). Around 55% of the production is put aside for the manufacture of disposal paper, sanitary paper and tissue type paper (Aracruz Celulose, 2003).

The company's first plant (Plant A) was opened in 1978. The second (Plant B) started operating in 1991. The last plant (Plant C), in 2002, brought the production at the unit of Barra do Riacho, Espírito Santo, up to 2 million tons.

In the year 2003, Aracruz also acquired the company Riocell (from Klabin Group), in Rio Grande do Sul, whose cellulose plant produces 400,000 tons/annum. Moreover, in 2000, Aracruz acquired 50% of the shares of the company Veracel Celulose, in Bahia, which owns 73,000 hectares of eucalyptus plantations. In 2003, Aracruz decided, together with another shareholder, the Swedish-Finnish company Stora-Enso¹, to invest in the construction of a new

¹ Company that holds the other 50% of shares in Veracel Celulose.

cellulose plant in Eunápolis (Bahia) with a cellulose production capacity of 900,000 tons. The opening of the new plant is scheduled for this year (2005).

Outside Brazil, Aracruz maintains business relations with companies in Germany, Austria, Finland, Sweden and Norway. They are companies that supply equipment and maintenance for the planting of eucalyptus and the production of cellulose: *Andritz-Ahlstrom*, *Kvaerner*, *Partek*, *Metso*, *ABB*, *Siemens* and *Voith Paper*. In addition, the consulting firms *Jaakko Poyry* and *Indufor* from Finland are extremely important partners of Aracruz.

In Brazil, BNDES, a federal government bank, is the principal financier of the company Aracruz. Plant C banked on a loan from the bank in the amount of 1 billion reais (364 million dollars), and the construction of Veracel’s plant will be receiving a loan of 1.5 billion reais (546 million dollars) from this government bank. The latter is considered the highest loan granted to a private investment established in the government of Brazilian President Luiz Inácio ‘Lula’ da Silva. Aracruz also receives financial aid from European banks, especially from the European Investment Bank (EIB) and from the Nordic Investment Bank (NIB). In December 2004, the company signed a loan agreement with the International Finance Corporation (IFC) of the World Bank, in the amount of 50 million dollars.

Aracruz, which already has a share of 35% of the global market of bleached eucalyptus cellulose, intends to grow even more with the justification that there is a growing global demand for disposable paper products, including new promising markets such as China.

1.2 Main criticism and resistance

The occupation of 375,000 hectares of land by Aracruz over more than 35 years, implied the expulsion of thousands of families from the countryside, including Tupinikim and Guarani Indians, *Quilombolas*, small owners, sharecroppers, land-invaders and rural workers.

In Espírito Santo alone, where the company owns 154,000 hectares of land, thousands of hectares of Atlantic Forest were destroyed and replaced by eucalyptus, according to testimonials from hundreds of Indians, *Quilombolas* and small farmers. There are also reports from journalists and researchers of the time, such as scientist Augusto Ruschi, who watched, in astonishment, the deployment of the so-called “green desert”. The deforestation and subsequent large-scale planting of eucalyptus forests, without any concern for the preservation of water resources, reduced the availability of water in streams and rivers due to the significant consumption of water on the part of these short-cycle crops. The quality of the surface water also deteriorated due to the systematic use of pesticides and as a result of erosion.

Over the last 35 years, communities have resisted and reacted to these kinds of violence practiced by the company. Nowadays, with the support of entities and social movements, these communities fight together in the *Rede Alerta contra o Deserto Verde*, (Alert Against the Green Desert Network), combating the exclusive agro-industrial model that Aracruz and other companies seek to impose on Brazilian territory. The Network organizes debates about the consequences of monocultures, creates spaces for education and the exchange of information, prepares informative materials and promotes campaigns and mobilizations. The main claims of these participating in the Network are:

- the performance of the agrarian reform and the restitution of land to indigenous communities, *Quilombolas* and communities of small farmers, instead of increasing the land in the hands of the corporate sector of eucalyptus plantations;
- incentive to the production of food in detriment of the production of eucalyptus, most of which is used for the production of disposable paper;
- recovery of the Atlantic Forest and of water resources against the promotion of a eucalyptus monoculture.

2. Marketing job promises

“Forestry activities offer job opportunities even in remote areas of the country.”

This is just one of the many advertising phrases that Aracruz Celulose divulges through texts and projects on the Internet, and that forms an integral part of a general message that companies from the sector want to “sell”: the planting of eucalyptus and the production of cellulose as generators of jobs, even in regions where there were no other opportunities.

In the anxiety to divulge positive messages, the information does not always correspond to reality or is manipulated to give an impression of reality. Let us take a look at the following phrase from Aracruz Celulose, in a project in English that circulated on the Internet in search of financing:

“On average, each hectare of eucalyptus plantation generates four directly related jobs, an indication of the economic and social importance of these plantations...”

This declaration means that, in the case of Aracruz, with 24,7000 hectares of eucalyptus, the company would be generating 988,000 directly related jobs on the eucalyptus plantations alone! But in actual fact, Aracruz directly generates only 2,031 jobs (BVQI, 2004).

Companies such as Aracruz Celulose, in addition to its own publicity, have many partners that contribute to transmit the idea of a generator of countless jobs and high income. As companies use greenwashing to create a green image, there is also jobwashing:

- (1) *publicity*

Aracruz always introduces itself in advertising campaigns with the objective of influencing public opinion, besides making specific communications to respond to the criticism that it receives. These campaigns are held through different media, such as billboards and posters located at points with a strong flow of people, on buses and at bus stops, especially in the region of Grande Vitória (ES), where the majority of the state population is concentrated. Furthermore, the company places ads in newspapers and on radio stations and television.

Aracruz’s most recent advertising campaign addressed the issue of employment, showing the population that the company “*is present in your daily activities*” through the countless indirect jobs generated by its presence in the State. But the campaign does not present specific data, such as the exact number of directly and indirectly related jobs that it generates, for example. It simply

aims to convince the population that it is somehow present in their daily lives, i.e., that it is responsible for jobs that are not directly related to its activities, and this “*you might not even notice*”, as the end of the disseminated message goes.

Even when Aracruz presents the numbers of direct jobs, these are never specific, as revealed by the response to an article from *Jornal do Brasil*, which criticized the company:

“Aracruz currently generates 4,800 direct jobs and around 50 thousand indirect jobs...”. (*response from Aracruz to the article published in JB on 4/14/2002: The environmental conflict of Aracruz*).

- (2) *the media*

*A Gazeta*² is the most important daily newspaper in the State of Espírito Santo. Aracruz finds its most loyal partner in the state press in this newspaper. *A Gazeta* only inform positive news about the company and always minimizes protests or criticism. This newspaper’s commitment with Aracruz is based on its conviction that large economic projects are essential for the development of the State. The company, in turn, constantly publishes through this newspaper a large quantity of ads, including special sections, a fact that probably influences the opinions of the newspaper. The result is a true manipulation of public opinion through all the media associated with the *Gazeta Network*, not only the newspaper, but also television and radio. All the attempts made to inform about the activities and actions of *Rede Alerta contra o Deserto Verde*, or the negative impacts caused by Aracruz Celulose, have failed.

We present below some excerpts transcribed from *A Gazeta* newspaper:

- “*The sector [of cellulose and paper in Espírito Santo!] generates 60 thousand direct and indirect jobs and is accountable for a financial volume of R\$ 2,5 billion [US\$ 0.9 billion] per annum*” (*A Gazeta*: 6/11/2002).
- “*Expectation with the release of eucalyptus planting: another 25 thousand jobs*” (headlines of *A Gazeta* newspaper on 6/11/2002).
- “*The civil construction works of the third plant were commenced in February 2001 and when the plant is operating it will generate 420 direct jobs and 2.4 thousand indirect jobs,...*”. (*A Gazeta* newspaper: 2/24/2002).
- “*the planting of over 174 thousand hectares of forests in the state, of which 70% contain eucalyptus and pine,(...), will permit the additional generation of US\$ 1 billion in income and around 50 thousand direct and indirect jobs for the economy of the state of Espírito Santo.*” (*A Gazeta* newspaper, December 1998).
- “*the planting of around 8 thousand hectares is anticipated, with the generation of over 300 jobs in the rural region.*” (*A Gazeta* newspaper, 1/15/2004).
- “*Hence Aracruz was responsible for the creation of the majority of its service providers, which currently amount to 152 companies, involving a total of 9*

² *A Gazeta* newspaper is part of Brazil’s main communication network, *Rede Globo*, in the hands of the Marinho family, and with newspapers and radio and television channels on a national level and in the states.

thousand jobs, which are both permanent (...) and temporary” (Caderno Especial; A Gazeta newspaper: 8/5/2003).

- (3) federal, state and municipal governments

The cellulose and paper export sector is of strategic importance to Brazil, since the country opted for the adoption of an economic policy that stimulates exports first and foremost. The Federal Government set the goal of expanding the area of tree plantations in Brazil by 40% until the year 2007. Hence it is not surprising that governments at all levels demonstrate great willingness in collaborating with the promotion of this sector. The former Minister of Labor and Employment, Jaques Wagner, said, during a visit to the company Veracel Celulose, in January 2004, that “*Veracel is just like Lula [President of Brazil!]*”, a statement that made the headlines of Veracel’s website. According to Wagner, “*here is the synthesis of what President Lula believes in.*”

Another example comes from a representative of the federal government bank BNDES:

“The department head of the industrial area of BNDES emphasizes that the project [of Veracel!] will generate two thousand direct jobs and eight thousand indirect jobs due to the multiplying effect of its activities. According to him, around 12 thousand jobs will be generated in the peak phase of the construction work.” (Gazeta Mercantil, 12/17/2003).

In the municipalities, the mayors are not lagging behind. We cite below the former mayor of Cachoeiro de Itapemirim, Theodorico Ferraço, during the opening of an office of Aracruz Celulose in his municipality, in southern Espírito Santo:

“This is a huge step for Aracruz to bring jobs and income into our region. The installation of the office of Aracruz’s Forestry Farmer program has the significance of a new Itapuã plant or of a Viação Itapemirim.”³ (Produtor Florestal, Year I no.4, July 2004, Aracruz Celulose).

It is worth keeping in mind that Viação Itapemirim alone generates around 16000 direct jobs in the country, a figure that is much higher than the just over 2 000 attained by Aracruz.

- (4) members of parliament

The company Aracruz influences Brazilian members of parliament in all ways, firstly with appreciable contributions to the electoral campaigns of right-wing, central and left-wing candidates, which is a common practice in the country. Once the member-of-parliament has been elected, the financing company expects him to provide it with special treatment and to support its activities, even when these provoke serious environmental and social impacts. This was how the “*Bancada da Silvicultura*” (*Silviculture Parliamentary bloc*) appeared in the Parliament, a group of members-of-parliament that defends the expansion of tree plantations in Brazil. One of the members of this bloc said:

³ Itapuã is a national chain of stores that sell clothing, shoes and other products. Viação Itapemirim is one of the largest carriers in Brazil.

“There is no way we can ignore the importance of the Brazilian forestry sector in the economy (...) Two million direct jobs...” (A Gazeta newspaper: Reader’s column: Renato Casagrande, federal representative and forestry engineer: 08/07/2003).

- (5) *the silviculture representatives*

Silviculture in Brazil grew tremendously in the 60’s and 70’s, when companies from the sector obtained sufficient tax incentives to stimulate large plantations of eucalyptus and pine. Since then, forestry engineers and their associations, with rare exceptions, have perhaps become the main defenders of eucalyptus and cellulose companies. The Brazilian Silviculture Society (SBS) places news on its website, organizes seminars and orients members, about the benefits of tree plantations, including the generation of jobs. An example:

“With the public policies established in the 60’s and 70’s aiming to reduce the indiscriminate exploration of natural forest resources and to plant fast growing forests, the sector began to contribute with an important quota to the Brazilian economy through the generation of products for direct consumption or for export, generating taxes and jobs and working in the conservation and preservation of renewable natural resources.” (Rede SBS on 8/16/2004).

- (6) *the departments of agriculture, state companies of rural extension and inspection*

Government agencies, which work in agriculture, publicize eucalyptus, convincing farmers to adhere to the *Fomento Florestal (eucalyptus plantation outgrower scheme)*, program of companies. In Espírito Santo, Aracruz’s program convinces farmers to plant eucalyptus for cellulose production purposes. In its advertising work, government agencies also use the generation of jobs through the planting of eucalyptus as a form of convincing the public.

An example of this is the compact signed on June 7, 2004 by Aracruz, the Department of Agriculture of Espírito Santo (SEAG) and the Institute of Rural Research and Extension of Espírito Santo (INCAPER). The compact stipulates that the state agencies from Espírito Santo have as their goal the furtherance of the planting of eucalyptus on rural properties, and, according to the Secretary of State of Agriculture, Ricardo Ferraço, this is an *“extraordinary opportunity for agribusiness”*. Although the program is called *“Reforestation of rural properties”*, only 60 thousand seedlings of native trees will be made available to farmers in the state, a much lower number than the 1,3 million eucalyptus seedlings established in the program. When the compact was signed in the south of the state, Aracruz’s forestry manager Tadeu Mussi de Andrade, promised to generate around 500 directly related jobs and 2000 indirectly related jobs in a proposed eucalyptus plantation area of 5000 hectares in that region. (*Produtor Florestal*, Year I no.4, July 2004, Aracruz Celulose).

- (7) *schools*

Students and teachers of schools form a top-priority group that Aracruz seeks to influence. According to the Environmental Director of Aracruz Celulose, Carlos Alberto Roxo, *“The company’s social policy prioritizes the educational area, mainly”*. It is to this effect that it makes an effort to receive visits from schools at the plant, and subsequently to maintain the ties for the work of convincing the children to continue. At the main environmental fair of the state, known as *“Feira do Verde”* and held annually in Vitória, with over 70000 visitors, Aracruz always guarantees the best and largest spaces, right at the entrance to the site of the event. The audience mainly consists of school groups from all over the state.

3. The generation of jobs

3.1 Data from the plantation sector in Brazil

There are many figures available about the sector of plantations in Brazil and its capacity to generate jobs. The information is disseminated at the companies' websites, in speeches and in newspaper articles. It is worth adding that on these sites and in other advertising releases, the plantation sector is always called the "forestry sector". It is a good idea to explain that a monoculture of eucalyptus or pine trees has nothing in common with a real forest other than the presence of trees. The sector insists on the term 'forestry' because this is a positive term that influences public opinion much more than "plantation."

We present some data, obtained from newspapers and websites that are impressive in terms of quantity – millions of jobs! – but that at the same time attracts attention due to the still enormous differences and divergence among them. The sources do not furnish further details about the methodology employed to arrive at these figures, neither do they clarify the categories of jobs to which they refer to publish the figures. This gives rise to doubts about the credibility of this data and also about the real job generation capacity of eucalyptus plantations for various purposes in Brazil. We present some examples below:

- According to José Carlos Mendes, forestry manager of the company Klabin, in a speech held in Germany, in September 2004, having 5 million hectares of plantations, the "forestry" sector in Brazil generates 1.5 million direct jobs and 5.2 million indirect jobs.
- Federal Parliament member Renato Casagrande, in an article in *A Gazeta* newspaper dated 2003, said that the generation of jobs [of the "forestry sector"] comes to 2 million direct jobs.
- According to Antônio Claret, Chairman of the Silviculture Association of Minas Gerais, the "forestry" sector creates 2.5 million direct and indirect jobs, in conformity with an interview granted to *Jornal do Brasil* on October 7, 2004.
- Furthermore: *Estado de Minas* newspaper, in an editorial on December 18, predicts that "A sustained program of reforestation is capable of generating 2 million direct jobs [in Brazil]."

Some questions were sent by e-mail to the Brazilian Association of Cellulose Producers (BRACELPA) to clarify the issue of differences in the numbers of jobs presented and the categories of workers included. In its reply, BRACELPA does not answer the questions, but declares that "*it only keeps track of labor from the cellulose and paper sector*". The entity also informs that in Espírito Santo this sector generates 5,524 direct and indirect jobs. But at its site, Bracelpa declares that, including plantations and industry, the 'forestry' sector for cellulose generates 100,000 direct jobs in the country. (www.bracelpa.com.br). It is worth remembering that most of the wood produced on plantations is used for the production of cellulose. So where are the millions of workers?

The site of the Brazilian Silviculture Society (www.sbs.org.br), was consulted to see if it would present a more complete picture that would clarify the issue. But the main item of data found at this

site is the generation of 31,004 jobs in the “forestry activity” in the country. The source cited in this site is once again BRACELPA, which, as we already know, affirmed that it only has data from the paper and cellulose sector.

Hence it can be concluded that the disseminated data is not based on safe sources. When questioned, the sources of information, as was the case of BRACELPA, did not reply accurately. It appears that the main interest of the companies is indeed *jobwashing*.”

3.2 Aracruz Celulose

The table below presents data relating to direct and indirect jobs generated by Aracruz Celulose since 1989.

Table 1: Direct and indirect workers at Aracruz Celulose

Year	Direct workers	Indirect workers	Total
1989	6,058 (1)	N/A	6,058
1991	7,095	N/A	7,095
1992	6,677	N/A	6,677
1993	5,125	N/A	5,125
1994	3,275	N/A	3,275
1995	2,907	N/A	2,907
1996	2,652	N/A	2,652
1997	2,393	3,706	7,099
2001	1,794 (2)	3,037	4,831
2003	2,281	7,546	9,827
2004	2,031	6,776	8,807 (3)

(Sources: Corporate information, Aracruz Celulose: 1989-2003; RIMA, 1989; BVQI, 2004)

(1) 4,729 direct workers in the forestry area with the anticipated creation of another 2201 jobs (expansion project); 1329 direct jobs in the industrial area with the anticipated creation of another 341 jobs (expansion project) (RIMA, 1989);

(2) 106 direct workers at Portocel (cellulose export port); 146 direct workers at Aracruz Produtos de Madeira and 1,542 direct workers at Aracruz Celulose and international subsidiaries;

(3) Pursuant to data from BVQI, Aracruz has 6,056 employees (645 of its own, and 5,411 outsourced) in the area of the plantations, and 1,751 employees in the industrial area.

Some aspects attract attention when we observe the table:

- since 1991, the number of direct workers has decreased non-stop; the growth recorded between 2001 and 2003 is due to Aracruz’s acquisition of the company Riocell;
- no information was found in the data for 1989 to 1996 about the number of indirect workers.

Apparently because the company did not bother to include these workers in its reports, or perhaps the company really had no idea of the quantity of outsourced workers rendering services to Aracruz. Anyhow, this fact merits a more in-depth investigation;

- as of 1997, the company starts to present the numbers of indirect workers, probably due to the large outsourcing process deployed in the country in the 90's, which significantly reduced direct workstations;

- there was a significant increase in the number of indirect workers between 2001 and 2003, which cannot be explained only by the acquisition of the company Riocell. Aracruz Celulose received e-mails asking for information about the reason for this increase, but no reply was obtained;

- it is always important to associate the number of workers with other parameters, to obtain a better evaluation of the creation of jobs in this sector.

3.3 Generation of jobs vs. other parameters

Investment

A characteristic of the sector that plants eucalyptus for production of cellulose is the need for heavy investments. This is due to the technological complexity that requires large-scale automation and the use of machinery and technology imported from Europe. Accordingly, it is worth comparing the generated jobs with the invested amounts (table 2). We kept track of these three examples:

1. José Koopmans, a human rights activist, in a study about the impacts of the monoculture in the extreme south of Bahia, indicates that the cost of the construction of the plant of Bahia-Sul Celulose, opened in 1992, was 970 million dollars, with the anticipated generation of 1,565 jobs. Hence the cost of each generated job attained 619,808 dollars.

2. Plant C of Aracruz Celulose, opened in 2002, cost 575 million dollars, and was supposed to generate 173 direct and outsourced jobs at the industrial plant. This calculation leads to a cost of 3,323,699 dollars per generated job.

3. Veracel's new plant, scheduled to open in the year 2005, banks on an investment of 1.5 billion dollars and promises to create around 400 jobs, which means a cost of 3,750,000 dollars per generated job.

The three examples demonstrate that employment at a cellulose plant is extremely expensive and that the cost of this employment has also increased in recent years. To obtain a better idea of these figures, we resort to other examples (Table 2).

According to Sérgio Leite (IBASE, 2004), a professor of Development, Agriculture and Society at Universidade Rural do Rio de Janeiro, the settlement of one million families in the countryside could create 3 million jobs with a cost of around 8,000 reais (2,900 dollars) per created job. The costs of creating a job in the industry, in the sector of services and in trade, through the Pro-Work program of the Federal Government, are respectively 23,000 reais (8,400 dollars), 35,000 reais (12,700 dollars) and 88,300 reais (32,100 dollars).

Table 2: Investment by job created in the production of cellulose, compared with other sectors

Sector	Cost per generated job (in US\$)
Rural settlements	2,900
Industry (Pro-Work program)	8,400
Services (Pro-Work program)	12,700
Trade (Pro-Work program)	32,100
Pulp industry (Bahia Sul – 1992)	619,808
Pulp industry (Aracruz – 2002)	3,323,699
Pulp industry (Veracel – 2005)	3,750,000

(Sources: Cepedes, 1992; Cepemar, 1999; Veracel Celulose, 2003; IBASE, 2004)

Territorial coverage

Aracruz Celulose, the owner of a total 375,000 hectares of land in Brazil, is the company that occupies the largest quantity of land in Espírito Santo, with 154,500 hectares. Considering that the planting of eucalyptus and the production of cellulose are interconnected activities, the intention is to evaluate the number of jobs that Aracruz generates in the industry and in the rural area, comparing it with the quantity of land that it concentrates (Table 3).

With 375,000 hectares of land and 2031 direct workers, Aracruz generates one direct job for every 185 hectares of land. Even if we were to consider only the areas planted with eucalyptus – 247000 hectares – the generation of jobs does not exceed one direct job for every 122 hectares of eucalyptus.

However, if we consider the most favorable calculation for Aracruz, which also includes the official number of 6,776 outsourced workers, part of which works in the area of plantations, we arrive at a number of one direct and indirect job for every 28 hectares of eucalyptus.

In the case of Veracel, according to a document from the company, dated December 16, 2003, it has 73,000 hectares and 400 direct workers, which generates one direct job for every 183 hectares. With the plant in operation, around 2000 direct and indirect employees will be working in the fields and at the plant. In this case, we estimate one direct and indirect job for every 37 hectares of eucalyptus.

Observing the case of the most significant agricultural monoculture in Espírito Santo, that of coffee, it is easy to conclude how the planting of eucalyptus generates few jobs. According to data from the Movement of Small Farmers (MPA), one hectare of well cultivated coffee is capable of creating one direct job. During harvest time, between the months of April and July, each hectare guarantees work for another one or two people. In other words, this type of agriculture can create one direct job for each hectare of coffee.

Table 3: # Hectares necessary to generate one direct job in eucalyptus and coffee monocultures

Monoculture	# plots of land to generate 1 direct job (ha)	# plots of land to generate 1 direct and indirect job (ha)
Eucalyptus (Aracruz Celulose)	122	28
Eucalyptus (Veracel Celulose)	183	37
Coffee	1	<1

(Sources: Aracruz Celulose, 2004; Veracruz Celulose, 2003; MPA, 2004)

4. Mechanization

4.1 Plantations

In the 70's, almost all the work that involved the production of seedlings, planting, hoeing and cutting of eucalyptus, was performed manually. At that time, eucalyptus plantations generated many more jobs, especially for people from the local communities. A process of mechanization in the rural area started in the 80's, firstly in the area of eucalyptus cutting, with cutting machines. In 1984, 30% of the harvest was performed mechanically, and from then on, this figure has constantly increased. Nowadays, practically no cutting is done by chainsaw on the plantations of Aracruz any more. The work of chainsaw operators only continues in the areas of "fomento florestal".

The discharge of chainsaw operators caused an increasing of unemployment, a fact that continues in the memory of inhabitants of cities such as São Mateus, Conceição da Barra and Aracruz, where many of these workers still live, the vast majority still unemployed. Data contained in a folder published by the company reveals that the group of workers involved in harvesting has dropped from 1100 to 350, in other words, 750 workers lost their jobs due to mechanization. The same publication shows that each machine for harvesting cuts 140 trees per hour, while a worker manages to cut 'only' ten trees per hour.

Opposing this data from Aracruz, former chainsaw operators speak about '*thousands of chainsaw operators*' laid off. A simple calculation, using the figures divulged by the company where one harvesting machine manages to substitute fourteen workers, and another furnished by a cutting machine operator, where the company has around seventy machines, confirm the statements indicating mass downsizing. If we also consider the practice of three daily shifts, we can conclude that Aracruz fired 2,940 workers. This figure is closer to the estimates of former workers and coincides with the statement made by an ex-officer of Sintral, the union that represents chainsaw operators: "*...I recall that at one time they joint a strike at Aracruz Florestal and there were around 3,000 employees...*".

The job of chainsaw operator has been substituted by that of machine operator. This appears to be a good job. The worker sits on comfortable seats and in cabs with air conditioning. However, this group of workers faced and still faces problems, in accordance with the report of an interviewed operator, who has worked at the company since 1992: "*at a certain time, there was a machine that*

demanded the total and continuous control by the worker, causing a great deal of stress among operators”, and “some people have difficulty coping with the ‘isolation’ of the work, spending 8 hours per day alone in a cab.”

4.2 Industry

In Aracruz’s cellulose industry, the productive process has been largely mechanized since the opening of the first plant in 1978. And the demand for productivity by direct worker has increased constantly with the process of modernization and outsourcing, which intensified as of the 90’s. In 1989, 1,329 workers from the industry produced 502,000 tons of cellulose, i.e., each worker produced 378 tons of cellulose. Twelve years later, 1,543 workers (the vast majority active in the industry) produced 1,240,000 tons of cellulose, which means to say that each worker produced 804 tons of cellulose in 2001. The opening of the new plant C, in 2002, boosted the productivity: each worker started to produce 1,052 tons of cellulose in 2003.

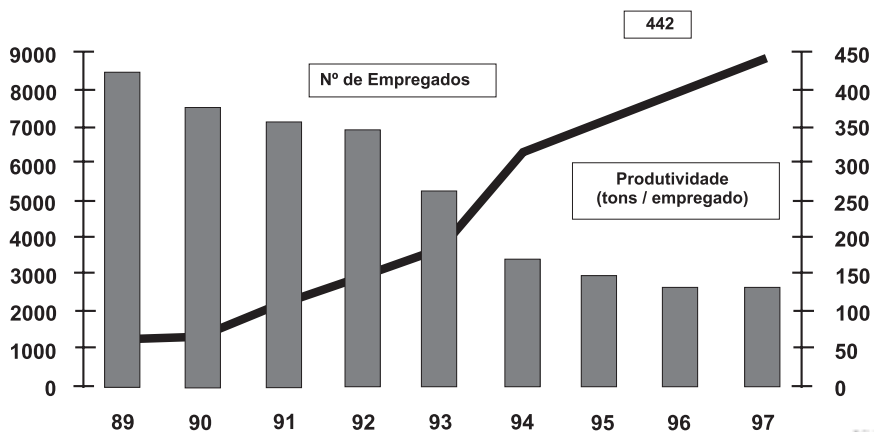
A graph dating 1998 from Aracruz itself demonstrates the increase in productivity and the reduction of employees over the years:

Data da Última Atualização: 16/03/98

Referência do Quadro: 

5 - INDUSTRIAL

5.6) Produtividade x Número de Empregados



Obs.: Não inclui “Terceirizados”



The third plant (C) generated only 173 direct and indirect jobs. But not even this prevented another mass downsizing process in December 2002, after the Collective Agreement, signed by the company and Sinticel, the union of cellulose industry workers. In a press release published in *A Gazeta* newspaper of December 2002, Sinticel declares that “it is repudiated the downsizing

process that Aracruz Celulose unleashed after having signed the Collective Agreement, in the beginning of December. A number of workers were discharged in the areas of Drying, Digester and Boiler.”

Sinticel shows that the company henceforth produced more with fewer workers:

“In spite of the increase in production and exports and the guarantee of profits with the rise in the dollar, the company’s policy has been to reduce workstations. Sectors such as Maintenance, Cleaning, Surveillance, Transportation and some administrative areas are the target of a violent outsourcing process, without the guaranteed absorption of labor discharged by the plant. Those that obtain work at the contractors are subject to terrible work conditions and a salary cut.” (A Gazeta, 2002).

Workers that ‘survive’ this modernization process enter a state of ‘panic’, also fearing the loss of their jobs, as declared by a worker who since 1980 has been working in the industrial area of Aracruz. According to him, the phrase *“if you are not satisfied, there are plenty of people after your job”* was in constant use by supervisors and coordinators of the areas. The reduction of workstations is justified by the following statement: *“he alone managed to do the job”*. It is also worth emphasizing that, in the last twelve years, workers have not obtained a significant salary increase resulting from the increase in productivity.

Furthermore, the interviewees reveal that internal control has been intensified in order to make workers to dedicate themselves as much as possible to their specific task in the production process. Nowadays, access by a worker from one department of the industrial area to another, for example, which was formerly permitted, only happens with prior authorization, and is noted down on his or her ‘identity badge’. This electronic control system allows the company full surveillance of each worker and his and her movements in the industrial area. This also means that it is more difficult for workers to socialize the problems faced.

The cellulose plant construction process: the Veracel case

A cellulose plant profoundly alters the micro region where it is set up. In spite of the generation of the so-said “thousands” of jobs, the construction process produces a series of problems that mainly affect traditional populations. The plants of Aracruz Celulose built on land of the Indian village of Macacos, attracted a large quantity of workers from other regions and states. This entailed a great deal of trouble for the neighboring district called Barra do Riacho, which was basically a district of fishermen, and that is located at a distance of one kilometer from the plant. This district went from 900 to 10,000 inhabitants. The village still suffers the consequences: high rates of unemployment, child prostitution and drug traffic.

The construction of the new plant of Veracel Celulose in Eunápolis, Bahia, started in 2003. In 2004, CUT (Confederation of Workers’ Unions) from the Extreme South of Bahia presented the company with a list of claims from the construction site workers. The list contained twelve demands, including a salary readjustment of 20%, the end

of temporary hiring activities that releases the companies from labor obligations, and high quality food for free. Even with the appeal from CUT, the workers went on strike and after several days, surrounded by and under the surveillance of hundreds of police officers called in by Veracel, entered an agreement with the companies involved in the construction.

The Center of Research and Studies for the Development of the Extreme South of Bahia (Cepedes), a NGO, is conducting a study about the impacts of the construction of the plant on neighboring communities. The survey is analyzing issues such as the situation of those unable to find a job, prostitution and the general situation of workers. Even without research, on a rapid visit to these communities, it is possible to observe the high rates of poverty, unemployment, illiteracy and other problems.

5. Outsourcing and degradation of work conditions

5.1 *The outsourcing process*

Outsourcing is the mechanism whereby a company transfers to another the activities considered not essential for its corporate goals. It means that the company cannot transfer activities that are part of its company charter, i.e., it can only outsource ‘middle-activities’ and not the ‘end-activities’ (MPT-Minas Gerais, 2002).

The main reason for outsourcing is to allow the company to specialize in the performance of its own activity. Outsourcing is performed when the contract is executed by two companies, in which one will render a service (of middle-activity) to the other. This contract can never serve as a mechanism to reduce salaries and/or rights of workers. If this occurs,

“...it is a case of fraudulent outsourcing, in which the negotiation standards seeks to substitute, by masking the form, the labor content of the relationship existing between employer and employee, with the third party actually rendering the service as a screen for illegality.” (MPT-Minas Gerais, 2002).

Nevertheless, many people believe that outsourcing is a typically economic phenomenon, from which the Labor Courts should keep their distance. According to the Federal Public Labor Prosecution Service in Minas Gerais, *“...the Judiciary itself understands otherwise, which can be observed in the various decisions proffered in specific situations of illegal outsourcing.”*

In Minas Gerais, over forty companies that plant eucalyptus are being sued since 2002 by the Federal Public Labor Prosecution Service for the practice of illegal outsourcing, since the planting of eucalyptus, outsourced by these companies, is clearly an ‘end activity’ and not a ‘middle activity’. The fact that there is no similar performance in Espírito Santo, shows just how controversial this issue really is in the legal sphere.

5.2 Outsourcing at Aracruz Celulose

According to the testimonial from a worker at Aracruz, who since 1980 has been working in Mechanical Maintenance, at that time the company had around 9000 direct workers on the plantations and at the plant. He declares that until the beginning of the 90's, it was a time of professional growth and economic gains for workers. According to him, workers were proud to "wear the colors" of Aracruz.

As of 1991, when the second plant (B) started operating, radical changes began with the purpose of adapting the company to the new production models. The results were mass downsizing and outsourcing, besides the merger between Aracruz Celulose and Aracruz Florestal. Around 6000 jobs were eliminated in a few years, which caused a serious social impact that is still being felt by many ex-workers and their families, which still live in the region.

The outsourced areas were those of Civil Maintenance (bricklayers, carpenters, painters, fitters, jet operators and their helpers), Administration, Property Surveillance, Electrical and Instrumental Maintenance, and Piling. The plantations were also outsourced (planting brigades, chemical hoeing, fire and helpers, nursery workers).

The workers that managed to be re-hired lost their health care plans, transport conditions worsened and the work day became longer. After a few years, the salary was on average only a third of that which they initially received. Some contractors used as a reference the salary floor of workers from Mechanical Maintenance, which were outsourced right from the beginning.

An ex-officer from Sintral affirms:

"I clearly recollect the outsourcing of Aracruz Florestal; at the time many workers were thrown out into the street because at the time there were no machines for cutting euclyptus, everything was done by chainsaw operators and with this outsourcing the company commissioned contractors and purchased cutting machines, and the outsourced companies did not pay a decent salary."

Some of the employees discharged with health problems resorted to the union for intervention with the company. According to the statements of an ex-union member, in most of the cases the company was not sympathetic to the cause of these former workers and merely offered medical care for a short period of time, which varied from two to four months.

6. Unions: organization and dismantling

There are many unions representing the various categories of employees that work at Aracruz Celulose or at its contractors. We interviewed some ex-officers from two of the main unions: Sinticel and Sintral.

6.1 Sinticel

The main union, which has always worked in the cellulose industry of Aracruz, is Sinticel. The idea of the Association that henceforth represented workers in the industry was launched in 1978.

The company's Industrial Director at the time, stimulated the organization of workers, as he considered this important, besides being part of the culture of his country of origin, Great Britain, where there were well-structured unions. At this time, various managers from specific areas supported workers, while others, including Carlos Augusto de Aguiar, the company's current Director, did not.

Sinticel was created in 1979 as the *Union of Workers in the Paper, Cellulose, Wood Paste for Paper, Cardboard and Cork Industries of Aracruz*. But the Ministry of Labor only signed the union letter in 1983. At that time, workers trusted in the union, and issues related to unhealthiness, hazards and working hours were always on the day's agenda. Some accomplishments from the first period of the Union's fight were (i) transportation for workers coming from Greater Vitória; (ii) the reduction of the workday to forty hours; (iii) the expansion of medical and dental care; (iv) the payment of overtime above what the law determined.

The first frustrated attempt of a strike occurred in 1985, and at the same time the company started to coordinate activities against the union, according to the testimonial of a former union member. In the same year, the first health and hazard lawsuits were filed in the courts. The company refused to discuss the issue as it understood that the work did not offer risks to the health of workers. One of the first proceedings was only concluded in January 2001, when 656 workers were benefited. The first strike arose in 1986, and at the same time, workers were involved in the most significant demonstration to date, camping for nine days in front of the plant.

The workers' main achievements were obtained until the beginning of the 90's. From then on, it has only been possible to replace salary losses and to guarantee any salary premiums. After 1994, by operation of law, the company began to negotiate profit sharing and gain sharing. But various historical achievements of the working class were taken away in 1998, affecting all categories of workers. These losses include the reduction from 50% to 20% of extra remuneration for the first two hours given in addition to the work day, and restrictions in medical and dental care.

The union demobilization work coincides with the mass downsizing that occurred in the 90's. During this period, the brutal outsourcing process weakened the foundations of the union. In some cases of workers with extremely serious health problems, the union, through lawsuits, managed to reintegrate discharged workers at the company with all their rights reestablished. But there were few cases if compared with the total quantity of discharged workers. Some strikes occurred at the gates to the company during this period. In spite of the demobilization, the union managed to expand its base to other similar categories. From this point on it was called *Union of Workers from the Pulp, Wood Paste for Paper, Cardboard, Cork, Chemical, Electrochemical, and Pharmaceutical Industries and Alike in the State of Espírito Santo*.

The tremendous change happened in 2003, when a new senior management took over the union, after an electoral process that is still being contested in the courts. The new senior management, according to statements from a former union member, is characterized by the partnership with the company. He states that the union no longer adopts the strategy of filing lawsuits against the company, and that Aracruz has already managed to avoid one of collective lawsuits for unhealthy work that had been going on for many years. Instead of justice, it now seeks negotiation channels, a more fragile form of guaranteeing the rights of workers. While in the past,

some union directors were even subject to criminal suits, nowadays this relationship has changed completely.

It is also worth remembering the recent dismissal of five ex-directors of Sinticel: Jorge de Oliveira, Manoel Carlos Gomes, Orlando Monteiro, Silvério Scarpatti and Luiz Alberto Soares Loureiro. The persecution of union directors has always been a practice of Aracruz. But while in the past the union itself sought to guarantee the reintegration of its (former) officers, today it no longer offers support to its members.

6.2 Sintral

The union for active workers in the area of plantations in Northern Espírito Santo is known as Sintral, which was founded in 1988 with the support of various entities, especially of FASE-ES and of the Pastoral Commission of the Land (CPT), besides the Catholic Church. From this point on “...successive strikes occurred, in 1991 at Florestas Rio Doce, at Aracruz in 92...”, as declared by a former director of the union. The main claim was related to salaries, and workers were the ones to decide whether to go on strike or not. The directors of the union did not have much experience, but they were “...perfectly willing to fight, it went very well”. In Sintral’s first years, there was a strong relationship between worker and union. A former director from Sintral declares that “Trust was built on a daily basis.”

The situation changed completely with the outsourcing that weakened the union and the workers. When they managed to obtain any benefit with a strike, “the company reacted by concealing the incident, removing the benefit through outsourcing”. At the same time, the company began to propose partnerships, “...and some directors started to find this interesting...”, says a former director.

The result of this process was the significant reduction in the number of union members. But at the same time, they created the ‘administrative fee’ in which the employee already enters an outsourced company as a union member, and a percentage of his or her salary is deducted. An outsourced worker from Plantar declares that in the two years of his contract “I never saw a director from Sintral”, in spite of the monthly deduction of the ‘administrative fee’. He also declares that he does not even know “where the head office of the union is located; there is a doctor for the workers, but I do not know whether this doctor was contracted by the union or by the company.”

There is a huge gap between Sintral and the workers that are members of the union. A worker from Plantar says: “we contribute, but I do not know the union, and they couldn’t care less about our situation”. A former director of the union denounces that “...today it is Aracruz that gives the orders and supports the union financially, and the category is abandoned...”. In fact he hints about a collective process in which the union deducted 10% from the amount that each worker was supposed to receive, and when the workers challenged the deduction, the senior management of the union alleged that this was a decision of the Labor Courts and that it could not do anything about the situation. According to an ex-director, there are no more new collective lawsuits, only individual ones, because in these cases the union is obliged to act. A former director sums up the matter by saying that “the union no longer goes out to plantations to speak about anything, it has finished”. And therefore the relationship of trust that formerly existed between workers and union officers has also come to an end.

7. Former workers: occupational accidents and illnesses on plantations

7.1 *Dismissed mutilated workers*

In the 80’s, Aracruz Celulose still maintained around 9,000 employees, as clarified by an interviewed former union member. Most of these employees worked on the plantations and the majority was dismissed by the outsourcing and modernization processes. The group of dismissed workers that were not hired by the contractors included workers that had suffered work accidents and/or contracted occupational diseases. In fact, the dismissal process was the opportunity for Aracruz to get rid of those workers that were no longer managing to attain a productivity desired by the company.

Based on the analysis of the cases of 33 former workers, whose histories were recorded in a dossier prepared by the *Movement of Mutilated Workers of Aracruz Celulose*⁴, we can have an idea of the types of occupational accidents and illnesses that were common at the time among workers:

- accidents/illnesses caused by transportation: transportation in the 80’s was performed by trucks, which had wooden boards as seats; the roads were full of holes and the constant jolts produced spinal problems in workers.

- occupational accidents due to the planting of eucalyptus and hoeing: the planting, fertilizing and hoeing work was manual, and people had to carry boxes with seedlings and chemicals, weighing over 40 kilos, which caused problems in the cervical section of the spine.

- accidents/illnesses due to the application of pesticides: the eucalyptus monoculture demands the frequent application of pesticides, especially herbicides and ant poison. The pump used for the application of these products weighs 20 kilos on average, and is carried by workers on their backs, also causing spinal problems. Furthermore, prolonged exposure to pesticides causes headaches, vomiting, pain in the mouth and stomach, spongy nails, risk of blindness and other disorders. It is worth emphasizing that in those years the risk was even greater, because only a mask was used to protect the worker. The Individual Protection Equipment (EPI) that is currently mandatory did not yet exist. Moreover, workers did not receive any type of training to deal with the poison.

- accidents with the cutting of eucalyptus: workers used to be crushed by falling trees and accidents occurred due to the handling of chainsaws, such as loss of toes, feet, and cuts on the body and face.

⁴ This Movement appeared in 2004 when dozens of former workers from Aracruz Celulose in São Mateus, with serious health problems, mobilized to support a colleague who was being sued by Aracruz. He had called the company a “murderer” during the Open Trial in the Commission for Human Rights of the Federal Parliament, in Brasília, in the month of May 2003, after he saw several colleagues die as a result of health problems contracted when they worked at Aracruz Celulose. To date, the vast majority of these former workers have not received any type of indemnity. The Movement also includes the widows of former workers from Aracruz. All these people in search of their rights, violated by Aracruz Celulose, also complain about the inaction of the State.

- illnesses due to the maintenance of equipment and machines: the maintenance and fueling of chainsaws, performed by each chainsaw operator without any protection, caused irritation in the eyes and even blindness, and also a disease called leucopenia – the reduction of the amount of white cells in the blood. This disease also occurs in people that apply pesticides without protection or that handle lubricants in the maintenance of forestry machinery.

- accidents/illnesses caused by cleaning the land: the removal of eucalyptus trunks could cause both accidents and disorders of the spine.

In analyzing the 33 cases, what stands out is that:

- the recording of occupational accidents was not a common practice;
- the reports from specialist physicians proving the existence of occupational illnesses were not accepted by the medical service of Aracruz Celulose;
- workers mutilated by occupational accidents were all dismissed, and nowadays, most of them continue unemployed, without a pension, and surviving with the aid of relatives and neighbors.

These workers face many difficulties in seeking their rights through the courts. Firstly, the union of the category, Sintral, did not provide them with support or guidance when they began to claim their rights in the mid-90's. Secondly, based on an analysis of the civil and labor lawsuits against Aracruz Celulose in the courts of the municipalities of Conceição da Barra and São Mateus, it can be concluded that:

“Aracruz Celulose (...) makes use of all the legal remedies available to postpone lawsuits filed against it, which demonstrates its total lack of commitment with the rights (social and civil) of its employees.” (Report about civil and labor lawsuits against the Aracruz Celulose group in the state of Espírito Santo, FASE: 2003).

As stated by a former union member, *“Aracruz has never been interested in its former workers”*. But in these cases it would be a case, above all, of a *duty or obligation* of a company the size of Aracruz Celulose to indemnify all those that were mutilated while working hard in favor of the deployment and expansion of the company, and that are now living in a situation of abject poverty and abandonment.

7.2 The current situation of workers at outsourced companies

Occupational illnesses and accidents currently occur with less intensity, since various manual activities, especially the work of chainsaw operators, are becoming progressively rare. The main health problem faced by rural workers continues to be the application of pesticides, in spite of the declarations from outsourced companies stating that there are no risks to the health of workers if they are using individual protection equipment.

In practice, the problems continue, as alerted by a worker from Plantar who, though sick, continues rendering services to Bahia-Sul Cellulose:

“They provided cloth overalls, rubber gloves, ankle boots and a mask, but nobody could stand using the mask since with the heat workers felt suffocated and were then instructed to hang the masks around their necks and to put them the minute

an inspector arrived [from Bahia-Sul] even if they removed the mask afterwards in the eucalyptus plantation.”

What is astonishing is the fact that supervisors did not demand the constant use of the equipment: *“They only complained when workers were not carrying the mask around their necks, so that they could quickly put them on when the bosses arrived”*. Another problem that this worker mentions is that the pumps with pesticides used to leak down their backs. But the supervisor said that workers had to use them, even if they offered no protection. The worker also complained that the leather boots, which were common until recently, and the rubber gloves did not provide sufficient protection.

A 59-year old former employee worked at the outsourced company Plantar for fourteen months between 2000 and 2001, applying pesticides. Although he used individual protection equipment with a mask, clothing, gloves and boots, he fainted on the plantation for the first time after four months. *“..Then my friend pulled me into the shade, grabbed a hat, and fanned me for about ten minutes until I recovered again. Then I worked all afternoon long. Another two or three months went by and I fainted again...”*. (Interview on 10-27-2002, Conceição da Barra). From this point on, he became ill, and when he complained to the supervisor, was fired: *“...Because I myself complained to a person who supervised the plantation, that I was sick, I complained to him today, the other day the notice arrived and it is over. Only I did not sign it. Only Jânio signed it. He stamped it and signed it himself...”*. This worker was fired even against his wishes. He is still fighting for his rights in the courts.

This ex-worker also speaks about the case of a colleague who died on a plantation:

“Junio worked in the same sector as I did and complained to his friends that he was feeling sick. At lunchtime he did not want to eat, and didn't. Then it was time to start working. They started working and went to work. Then they put the name of the person on the allotted row. At 4:40, when the shift ends on the plantations, they stopped, and put away the pumps. When they were out on the road, the friend traveling with him noticed that Junio was not there and said: where's Junio? Junio isn't here. It was almost 5 p.m. When they got back, they entered the row, got there and he was lying down, with the pump on his back.”

Apparently, some workers are more resistant to the application of pesticides than others. The former-worker states that: *“...Because some resist the poison but not everyone.”* And at the same time, he warns:

“...Now, nobody knows later, right, not everyone can stand it. Because there are people there who fainted twice on the first day of work. I mean that if they fainted twice on their first day of work they can forget it, it's no good insisting, right?...”

The occurrence of deaths of workers from *Plantar* on the plantations of Aracruz Celulose led the Federal Public Labor Prosecution Service (MPT) in Espírito Santo to start a secret inquiry in 2002, which also included the testimonial of the aforementioned ex-worker from Plantar. The Investigation led to a Behavior Adjustment Term, signed by MPT and by Plantar, forcing the company to follow a series of procedures to guarantee the health and safety of workers.

A worker from Plantar, who currently works at the company and apparently suffers no health problems, declares that: *“...I prefer to work with a hoe than applying pesticide...”*. He says that

work with pesticides in the so-called 'grotas' (land of steep slopes) is more dangerous. He would also like to have another job, but at the same time is scared of losing his current job, because he knows just how difficult it is to find employment. He works in a shift with forty workers, but twelve did not manage to cope with the work. Some handed in their notice and others were fired by Plantar.

Another two workers were less lucky and were intoxicated in 2003, in São Gabriel da Palha, working for an outsourced company called *Emflora*. The two worked for ten days without boots, overalls or special clothing, and were only provided with gloves – which had holes in them –, mixing three pesticides at a new eucalyptus plantation belonging to Aracruz Celulose, on a 78-hectare farm. Each worker was supposed to earn around 280 Reais for the job. After a few days they started to feel headaches, dizziness, shivering fits and stomach ache. When they denounced the case to the press, the company immediately legalized the labor situation, signing the work papers of these workers. They were taken to see the company's doctor, who asked them to immediately get back to work, affirming that they were fine and would get used to the work with pesticides. In actual fact, the two were suffering from leucopenia, which was evidenced by exams carried out in the capital city of the state, Vitória.

Today, one year after the incident, these workers continue to have headaches. One of them is suing *Emflora* for bodily injury. The case once again shows how, in practice, outsourcing can make work conditions precarious. Aracruz Celulose manages to find a way around proceedings and liability, and while the workers continue to risk their health and very lives without having their rights guaranteed, the eucalyptus plantations are growing.

Chainsaw operators continue in "Fomento Florestal"

Throughout the State of Espírito Santo, Aracruz Celulose stimulates "*fomento florestal*", this is the planting of eucalyptus on third part properties, generally farmers. Based on a contract with the company, they reserve part or all of their property, for planting eucalyptus. This resource permits the enhancement of the production of raw material without the company having to acquire more land. Besides releasing Aracruz from sustaining the labor obligations, this outsourcing guarantees the expansion of the eucalyptus monoculture in areas where the company would never attempt to go due to the conditions and/or declivity of the ground.

This practice applies particularly to the mountainous region of the state, where farmers plant eucalyptus in areas of accentuated declivity and difficult access, in which the use of alternative agricultural resources is very complicated. The cutting of eucalyptus and the arduous task of removing the trees are performed by chainsaw operators hired by the farmers.

In the year 2003, CPT (Pastoral Commission of the Land) of the State of Minas Gerais revealed that workers, deceived by false promises, were being recruited in the State for areas of "*Fomento Florestal*" in Marechal Floriano, a mountainous municipality of Espírito Santo. An inspection by the Regional Labor Office (DRT) of Espírito Santo, which also occurred in the year 2003, evidenced the degrading eucalyptus cutting work conditions in the areas of "*fomento florestal*" of Aracruz Celulose.

Part II: Employment and work in the neighboring communities of Aracruz: destruction of work and search for alternatives

1. The situation of employment and work in neighboring communities

In the 70's, the demographic expansion was greater in the municipality of Aracruz than in other regions of the state, with a rate of 36.3%. Many people were attracted by Aracruz Celulose's promise to generate many jobs. According to the Environmental Impact Report (RIMA), produced in 1989 for the expansion project of Aracruz Celulose, this expansion came about because "*the reforestation process made possible to settle local workers in the region, besides attracting workers from others, in search of the great quantity of permanent jobs made available by silviculture.*"

However, the report does not go into details about this "great quantity". Moreover, what RIMA and other official documents omit is that, upon the arrival of Aracruz Celulose in northern Espírito Santo, the company invaded land of two traditional populations: the Tupinikim and Guaraní Indians and the *Quilombola* communities. Most of the families from these populations were cast out, as were small farmers, which were literally driven away or lost their sustenance, which was the case in the community of Vila do Riacho, in Aracruz.

The older inhabitants of these communities talk about the conditions of work and employment before the arrival of Aracruz Celulose, and what changed after the planting of eucalyptus.

Indigenous communities

When Aracruz Celulose arrived in the municipality of Aracruz, Mr. Antônio dos Santos, age 65, a Tupinikim Indian and former chief of the Pau-Brasil settlement, lived in the settlement of Cantagalo, one of the more than thirty Indian settlements that were wiped out with the arrival of the company. At the time, his community had around twenty families. Antônio says that all the men and women in Cantagalo worked, even though nobody had a formal job. The main forms of work in the community were work on the land (planting, clearing land and harvesting coffee, maize, bananas etc.); domestic work (cleaning houses, preparation of food, care with the clothing, health and education of children); the teamwork among the families for the harvest and construction of houses; hunting and fishing and the manufacture of handicrafts such as bowls, oars and sieves.

After the arrival of Aracruz, Antônio worked for the company for nine years planting eucalyptus, but left, according to him "*because I wanted to*". He went to live in the settlement of Pau Brasil and joined other Tupinikim Indians for the fight for the recovery of their land, invaded by Aracruz. Later on, many Indians were laid off in the mechanization and outsourcing process.

Several traditional work activities were rendered impracticable with the arrival of Aracruz, which directly and indirectly destroyed the natural resources on which these activities depended,

such as the Atlantic forest, rivers and streams. Nowadays, only the cleared land and eucalyptus plantations, 'inherited' from Aracruz in the last battle over the land, in 1998, are the main sources of employment in the indigenous areas. But these jobs are insufficient for the quantity of Indians. And for this reason the lack of jobs is indicated as being one of the main problems of indigenous communities.

In search of alternatives, 84 of the approximately 400 Indian families in the municipality of Aracruz live off the manufacture and sale of charcoal produced by gathering eucalyptus residue (trunks and branches), left over from the cutting of logs. Although it signed an agreement with the indigenous communities in the year 2002, where it promised to guarantee the 'employability' of Indians, in October 2004, Aracruz Celulose prohibited the gathering of these residues, the main source of survival of those families. They protested by cutting eucalyptus trees. The allegation for not assigning residue any more was that this practice could bring it problems related to labor issues. However, it is known that the company already has a machine that mills the trunks and branches of timber, to cut costs in the fertilization of plantations. It appears as if Aracruz does not consider the fact that this prohibition means hunger for many families to be important.

The issue of charcoal

The manufacture of charcoal in the state of Espírito Santo is mainly intended to supply the iron metallurgy plants that exist in the State with this source of energy. Even before the arrival of eucalyptus, this was already a current practice, and the native forest was used as a raw material. With the large-scale deployment of the eucalyptus monoculture in Espírito Santo, a new and abundant source of raw material appears, since the native forest is becoming progressively less dense.

The families that work in the manufacture of eucalyptus charcoal have always been explored by the so-called "*gatos*" which are small companies that enter into agreements with eucalyptus companies, such as Aracruz, to outsource the cleaning of plantations after cutting. The work conditions of charcoal manufacturers are precarious, and the exploitation of child labor is very common in this area. All this results in the growing degradation of work relations and conditions, which has been happening for years in areas where companies from the sector operate.

The only survival alternative for landless families camped besides the eucalyptus plantations is often the gathering of residue and the production of charcoal. Like Indians and other communities, these families have sought to organize, to avoid depending on "*gatos*" any longer.

Quilombola Communities

Before the arrival of Aracruz Celulose in São Mateus and Conceição da Barra, there were around 10,000 families from remaining *quilombo* communities living in the rural areas of these

municipalities. They lived in a style similar to that of the Tupinikim and Guarani Indians. According to Mr. Cloves dos Santos, age 65, an inhabitant born in Córrego do Santana, "...we lived off the land; flour, banana, everything grew...". And adds "we never went hungry, if we felt hungry we 'run' into the woods and everyone had food, we fished, bartered goods". At the time money was scarce, but the bartering of products was constant. According to Cloves: "Yes, we bartered, one person helped another to work..."

The most traditional, and staple product, was cassava flour, used to prepare the traditional "biju", a food made from flour and coconut. Humberto, another inhabitant who has lived in the region for a long time, remarks that "I had a flour buyer who used to arrive, I sell flour in bulk. When the truck arrived it used to be 1,000, 3,000 bags of flour. Now everything comes in packets. In the old days it would leave here to Vitória [capital city of Espírito Santo], now it comes from there to here."

According to Cloves, Aracruz employed many people when it arrived, "but after the eucalyptus were established, the company fired all the personnel. I worked at Aracruz Florestal for 15 years...". While he was working at Aracruz, from 1979 to 1994, Cloves applied poison to the plantations, which caused the health problems that he still suffers from. Because of the poison that splashed into his eye, he has trouble with his sight, and also problems in the cervical spine, due to having carried the pump full of pesticide, which weighed more than twenty kilos, on his back for all that time.

These days Cloves lives off his land, planting beans, maize and cassava to make flour, in spite of the problems in his eyes and cervical spine. He evaluates the arrival of Aracruz in the region:

"...on one hand the situation improved, there were jobs close by, a lot of people worked, but on the other hand it was worse, it destroyed the land, drove the families to the cities, and they now live in shanty towns (...)They promised jobs for everybody and their descendents and they worked, became ill and went out on the street, with several problems with their health, sight, backs, mutilations."

There are 1,500 families from extinct *Quilombolas* distributed in 35 communities that currently survive in the midst of the eucalyptus plantations. To hundreds of these families, whose small portion of land no longer produces as it used to, the only possible type of work is the manufacture and sale of charcoal from the remnants of eucalyptus trees gathered on the vast plantation areas of Aracruz. This is also the case of the Tupinikim and Guarani Indians.

These families also suffer from the persecution of the company Visel, which, with its armed militia, is in charge of security on the plantations of Aracruz. The same persecution is also practiced by the Military Police, which, instead of working for the population, which pays its salaries through taxes, actually defends the interests of the company. In 2003, six *Quilombolas* were arrested while gathering residues from a plantation belonging to Aracruz, in a joint action of the Military Police and Visel. Later on, an association of residue gathering *Quilombolas* was founded and managed to enter into an agreement with Aracruz in order to guarantee the gathering. Even against the wishes of the company, the *Quilombolas* continue gathering the residue and facing incidents, which still happen from time to time, between the local population, Visel and the

Military Police. Organized, they are willing to continue facing the company to guarantee this source of survival which, for many, was the only one that remained.

The community of Vila do Riacho

Vila do Riacho is a centennial community from the municipality of Aracruz with around 5,000 inhabitants. According to the testimonial of one of its oldest inhabitants, Mr. Luís Lopes Vieira, age 71, prior to the arrival of Aracruz Celulose, the region was well inhabited where “... *everyone had work, planted cassava, beans, coffee, sugar cane, many types of fruit: bananas, plantains, (...) many bred cattle and fished*”. He also adds that “*we did not have any money, but there was no lack of food and work (...) we ate capybaras, paca and fish, I have no words to describe it*”. They also used to make some handicrafts such as baskets, hampers and mats.

When Aracruz Celulose arrived, many people sold their land, which was the case of the father of Mr. Nilton Amâncio Almeida, age 59. He used to hunt and fish, then he sold his land and went to live in the city of Aracruz. “*He went all ‘melancholic’ there, was never the same again; he died at the age of 62.*”

Luis however found work with the arrival of Aracruz, initially as a tractor driver in the construction of the first cellulose plant then on the land, working to cut down the native forest: “*...it was very hard work, we had to be out in the sun and rain*”. When his family wanted to go to the city, he handed in his notice. Like him, many people in Vila do Riacho worked at Aracruz. According to Glória, age 52, “*Aracruz Florestal took four truckloads of plantation hands from here.*”

Nowadays, Vila do Riacho is a community surrounded by eucalyptus, where, according to Luís, “*you cannot take a small bundle of firewood, because you are called a thief*”. He refers to Aracruz Celulose’s decision to prohibit the population from gathering residue from the plantations, which it also did to the indigenous communities and *Quilombolas*. In mid-2004, inhabitants had their furnaces for charcoal production destroyed, in a joint action by Visel, the Military Police and the Environmental Police. Others were arrested or had their work instruments confiscated.

This all means that many families in Vila do Riacho lost their main source of survival. According to Luís, “*almost nobody works at the company*”. Furthermore, he states that “*the company boycotts the inhabitants of Vila do Riacho, does not let them work there and persecutes those that want to work*”. The best job offer in Vila comes from a mortar plant that currently employs sixty workers. The traditional activity of creating handicrafts has practically come to an end due to the shortage of raw material.

2. Women and eucalyptus

Indigenous women, *Quilombolas* and peasants, who used to live with their families and communities in the places taken over by eucalyptus plantations, had their socioeconomic role well defined. As reported by Mr. Antônio dos Santos, from the Indian settlement of PauBrasil, Indian women had specific tasks. They produced certain types of handicrafts such as sieves, for example, while the men made bowls and oars. Together with the men, they worked on the land planting and

hoeing, and also fished. The *Quilombola* women, for example, produced bijú – a typical food of this population – to feed their families and to be sold and to produce income.

With the arrival of the eucalyptus plantations, the women, like the other inhabitants of the region, experienced the changes in the organization of their territory and of their place in the community; in what they produced and how it was produced. Their socioeconomic role in the family and community underwent alterations and several of these women, after having lost their land, were forced to seek another place to live and work. They migrated with their children and relatives to urban regions, close to the place where they used to live, which is the case of many families that moved to the cities of São Mateus and Aracruz. Others sought the metropolitan region of the state, increasing the size of shanty towns, and to continue caring for their houses and families, exchanged rural activities for those of maids, cleaning women or washerwomen of urban middle and high class families.

The women that still resist in the midst of eucalyptus also continue taking care of their homes and families, but at the same time, face more difficulties than before. For example, the rivers and streams that were used for washing clothing, and from where they used to take drinking water and fish in, are mostly contaminated. Accordingly, the members of the family, including the women, are forced to go to other places to obtain potable water. Doralim Serafim dos Santos, a *Quilombola*, says that “*nobody here washes clothes in this stream, since the clothes become yellow and filthy. When I was growing up we used to clean fish in the stream and the water was crystal clear.*”

Another problem is the lack of native forest, a source of the raw material necessary to create handicrafts. In addition, the contamination of the soil caused by the use of pesticides on plantations jeopardizes the planting of medicinal herbs by women. Medicinal herbs are used frequently by traditional populations to prevent and combat illnesses. The shortage of good and sufficient land also complicates the coordination of domestic tasks and agricultural production. Nowadays women have to cover long distances to work on third party plantations, in the coffee and sugar cane fields, for example. These women are more subject to occupational accidents.

It is also worth adding that today, in the state of Espírito Santo, 26% of the families, i.e., 800,000 homes, have women as heads of the family. This means that Espírito Santo is one of the Brazilian states with the greatest number of homes headed by women in proportionate terms. This item of data indicates that paid work for women has ceased to be merely a form of boosting the family income and has become vital for the subsistence of women and of their families.

There is also the experience of indigenous women that, with the loss of their conditions of subsistence, sought alternative ways of contributing to the family financially. Some have become the maids of the bosses of the company Aracruz. However, in 1998, after the process of self-demarcation of indigenous lands, they were discharged in retaliation. They had to go after other types of work outside the Indian settlements. However, some of them were luckier and managed to get jobs as teachers and health agents in the actual settlements where they live. All this effort on the part of women to contribute towards the family income has produced changes in their traditional role, which has been affecting the entire community to a certain extent. On the other hand, in spite of the ruin produced by the action of this large agro-industrial project, it seeks to be close to this population at all times, organizing aid actions. One of the last alternatives that we have news of is

the organization of professionalizing courses for these women, with the objective of making them into manicures, pedicures and waitresses, professions foreign to this population.

Another situation that merits emphasis is that of the reduced quantity of women from neighboring communities that work at the company Aracruz. It is not surprising that in the year 1998, only 6.8% of the company's employees were women, according to data from the time. Nevertheless, most of the women that worked at Aracruz performed cleaning services, worked in the administrative sector of the plant, or in the nursery and in planting of seedlings, perhaps because women are supposed to be more qualified for this type of activity that requires careful manual work. However, nowadays this activity is already almost totally mechanized. The majority of these services are now outsourced.

In work on the land, women also suffered occupational accidents like men. One example of an accident occurred on July 14, 1986, when a former worker from Aracruz Celulose was descending a 'grota' with a box of 30 eucalyptus seedlings, weighing 45 kilos. She fell and broke her spine. After having been transferred to an office cleaning job, she was fired as she was unable to stand up any more. Now aged 51, she cannot even carry a chair and needs to control the pain in her spine with medication. She has never managed to get another job.

Often, however, women, in an invisible role, had to care for their husbands, sick and the victims of accidents caused by the work carried out on the plantations. Doralina says that "*there were days when he came home with his eyes hurting and was almost unable to get to sleep at night, then his eyes got really bad, he couldn't see properly, and did a few tests*". There are cases of widows of ex-workers from the company Aracruz and outsourced companies that need to maintain the house alone, without any support.

3. Work generation alternatives in the countryside

3.1. Introduction

According to Sérgio Leite (IBASE, 2004), a professor of Development, Agriculture and Society from Universidade Rural do Rio de Janeiro (Rural University), from 1995 to 1996 around 18 million people worked on the fields in Brazil, in activities related to agriculture. However, more than 75% of these jobs were concentrated in the family sector. The same researcher upholds that the sector of rural settlements, where small scale agriculture is generally practiced, currently constitutes a special field for a consistent policy of maintenance and generation of new jobs. But it is this very sector that has difficulties reproducing and guaranteeing its continuity, besides it's being threatened by the expansion of grazing land, by the invasion of land, and by the planting of eucalyptus and pine, as well as the increase of other wide-scale monocultures, such as that of sugarcane and soybean.

A new eucalyptus expansion cycle started in the north of the state of Espírito Santo between 2000 and 2002 after the construction of plant C of Aracruz Celulose. In an article published by A Tribuna newspaper, in 2001, the vice-mayor of Sooretama, Clarindo Manthaya, declared that "*around 400 people have already lost their jobs*" in Sooretama, due to the acquisition of land by Aracruz. It was for this reason that the City Council began to draw up a bill to prevent the sale of land to the company. In the same article, Jaceir Alves Fernandes, from the Federation of Agricultural

Workers of Espírito Santo (FETAES), declares that 15 hectares of eucalyptus generate only one job, while each hectare of coffee can provide jobs for up to two workers.

Veracel Cellulose conducted a study on its own account about the generation of jobs in its areas, in the State of Bahia, which totaled 146927 hectares (73 thousand hectares of eucalyptus monoculture), comparing the number of inhabitants, workers and employees in the purchased properties, before and after its arrival. (Table 4).

Table 4: Occupation of land, before and after the purchase of land by Veracel

Municipality	Property	Average size ha	Before the arrival of Veracel ¹			After the arrival of Veracel ²		
			Inhabitants	Workers	Employees	Inhabitants ³	Workers	Employees
Belmonte	101	249	213	130	89	2		206
Canavieiras	5	447	7	3	3	0		1
Encruzilhada	1	98	0	0	0	0	All	1
Eunápolis	78	511	167	72	57	17	included	553
Guaratinga	5	400	8	4	2	4	in the	1
Itabela	17	487	60	24	20	15	column	43
Itagimirim	14	235	32	17	9	4	on the	1
Itapebi	20	186	31	15	13	6	right	76
Porto Seguro	46	478	136	50	38	9		2
S.C.Cabrália	120	336	240	127	66	14		56
Total	407	3427	894	442	297	71		944

(Source: Veracel Celulose, 2003)

1. All the workers were living on the properties. Only some of them were formally employed.
2. As of July 2003
3. 17 employees and 54 dependents. Employees are included in the “employees” column

Based on table 4, Veracel concluded, in a positive manner, that the number of workers (442) and employees (297) in the area increased from 739, prior to its arrival, to 944, after its arrival. Hence the company intends to demonstrate that it is generating more jobs than the quantity created before when there were mainly cattle ranches.

Actually, the conclusion that can be reached with a basis on this data is that by substituting 73,000 hectares of grazing land for cattle breeding, by 73,000 hectares of eucalyptus monoculture, Veracel is substituting an activity that generated one job on every 99 hectares (cattle breeding), by another activity that generates only one job for every 78 hectares (planting of eucalyptus). But if we consider Veracel’s total area of 146,927 hectares (Veracel Celulose, 2003), the planting of eucalyptus only generates one job for every 156 hectares. This means that even if we accept the data from the actual company, which obviously gives rise to some doubts and questions, what is

certain is, that in terms of the generation of jobs, Veracel is showing that its project is a total disaster: one job on every 156 hectares of land that is in its power!

At the same time, the survey shows a concerning factor: the fact that there are almost no inhabitants in the midst of the eucalyptus plantations: 71 inhabitants on 146,927 hectares! According to the data presented in table 4, over 800 inhabitants had to leave their houses when Veracel arrived. This means that the people living on properties in the vicinity have become even more isolated, without neighbors. This isolation, pursuant to testimonials gathered for this study, becomes a new cause for the rural exodus. The absence of inhabitants also ends up enhancing the insecurity in these eucalyptus regions.

It is also important to observe that the figures from Table 4 give rise to several questions. In the table below (Table 5), we have simplified the data from Table 4 to illustrate this more clearly. Firstly, what attracts attention is the increase in the number of workers and employees in the Municipality of Eunápolis, which would allow Veracel to affirm that it is really generating many more jobs than there were before on the properties acquired in that municipality. It is worth emphasizing, however, that the increase in the number of jobs could easily be explained by the presence, in this municipality, of the company's nursery, in which seedlings are produced for all the planting areas. Furthermore, Eunápolis also houses the company's administrative head office for the coordination of activities related to the plantations. In this manner the increase of the number of jobs in Eunápolis clearly contrasts with the reduction in the number of jobs in most of the other municipalities, in which only plantations exist. This coincides with the tremendous reduction of "inhabitants" in these areas.

Furthermore, the general data presented here says nothing about concrete situations. The figures from the company itself show that for the inhabitants of the municipality of Santa Cruz de Cabralia, the arrival of Veracel was a tragedy of enormous proportions, since of the 193 workers and employees that existed, only 56 remain, and of the 240 inhabitants only 14 remain. Worse still is the situation in Porto Seguro, where the number of workers/employees went from 88 to 2, and that of inhabitants went from 138 to 9. In Itagimirim, only 1 of the 26 workers/employees remain. Only Itapebí, for some unknown reason, appears to have benefited with a real increase (48) of workstations, while in the other municipalities this figure was more or less stable, or decreased to some extent.

Table 5: Occupation of land, before and after the purchase of land by Veracel (simplified)

Municipality	Before the arrival of Veracel Workers and Employees	After the arrival of Veracel Workers and Employees	After the arrival of Veracel Increase or decrease
Belmonte	219	206	-13
Canavieiras	6	1	-5
Encruzilhada	0	1	+1
Eunápolis	129	553	+424
Guaratinga	6	1	-5
Itabela	44	43	-1
Itagimirim	26	1	-25
Itapebi	28	76	+48
Porto Seguro	88	2	-86
S.C.Cabrália	193	56	-137
Total	739	940	201

Within this study, the authors sought to conduct a survey in the municipality of Vila Valério, Espírito Santo, where eucalyptus trees were recently planted by Aracruz Celulose, on account of the company’s new expansion cycle. The occupied areas were formerly used mainly for the planting of coffee. Based on this data, the authors sought to compare the generation of jobs in areas of eucalyptus with areas of coffee production, and the latter proved to be much more significant in terms of the generation of jobs, work and income for the rural population, than extensive cattle farming – a reference for the study carried out by Veracel. The authors also seek to demonstrate the job and income generation capacity of small properties according to the logic of rural agriculture, defended by the Movement of Small Farmers.

3.2 Case study: Vila Valério

General information

The municipality of Vila Valério is located in the northern region of Espírito Santo, covering 42,270 hectares with an estimated population of 13,899 inhabitants, where 4099 inhabitants are from the urban area (29%), and 9,800 inhabitants from the rural area (71%).

The municipality basically lives off the agricultural production, particularly from the plantations of conillon coffee that occupy 22,800 hectares (IBGE, 2002), i.e., 54% of the municipality. The second largest crop is that of coconuts, which occupies 986 hectares. The planting of eucalyptus occupying around 700 hectares ranks third. Other plantations, on a smaller scale, are maize, beans, bananas, black pepper, fruit and rubber trees. In addition to the plantations, around 10,850 hectares of the municipality are occupied by grazing land.

Another relevant item of data is the large quantity of properties: 1590. Of these, 29% are properties measuring from 0 to 10 hectares and 58.2% from 10 to 50 hectares, which means that the vast majority of properties are small. Only 4.5% of the properties are large, above 100 hectares.

The population of the urban area basically lives off the production of coffee. According to city counselor Moacir Olidonio, there are seven coffee warehouses in the seat of the municipality and each one has around twenty to thirty employees. There are also warehouses in some villages in the rural area of the municipality.

In 1993, the Evangelical Church of Lutheran Confession of Vila Valério and Vila Pavão created the 'Denes' project, with the proposal of investing in family agriculture. The project has banked on the cultivation of fruit, an activity capable of producing up to ten direct jobs per hectare, as affirmed by Mr. Decimar Schultz, technical advisor to Fundação Luterana Sementes (Sementes Lutheran Foundation). According to the Lutheran priest Christian: "*Our main intention is to diversify the planting of crops in the region, in line with a consistent ecological concept and with the concern of expanding the market for the sale of production*". Besides questioning the environmental impact of eucalyptus monoculture, father Christian says that it provokes the rural exodus, because both the planting and the harvesting of the crop are mechanized, leaving farmers without a job.

The commercial planting of eucalyptus and the purchase of land by Aracruz Celulose in Vila Valério started in 2001. Now, three years afterwards, is a good time to perform an evaluation of this crop in a municipality that basically lives off the agriculture of coffee.

Situation of employment in the areas of Aracruz, before the planting of eucalyptus

Some visits were paid and some interviews carried out with people that worked in the largest areas purchased by Aracruz Celulose: Fazenda Breda farm with 473,44 hectares and Fazenda de Luiz Menigueli with 68,60 hectares.

At Fazenda Breda, around forty people were living and working permanently as employees of the farm owner, pursuant to a testimonial from an ex-employee, by the name of Teresa. During the coffee harvest, the number of workers increased to 1300 people that came from other municipalities, and from other states, such as Bahia. When the Farm was acquired by Aracruz, the owner sat down with the families and said that there was no other way that everybody would really have to leave. Since then, the town of Arariboia, which basically lived off the movement of people and merchandise around Fazenda Breda, has entered a state of decadence. These days this can be perceived by anyone visiting the town, where some families that have stayed on suffer from the lack of jobs and perspective. Martim, an old inhabitant of the region, declares that he is "*..against the invasion of land, but this farm should have been invaded to avoid this planting of eucalyptus...*". Another local inhabitant declares that the "*...problem is that once the land is occupied by eucalyptus, it never goes back to agriculture...*".

A family of former inhabitants of Fazenda dos Meringueli was also interviewed. This family recently moved to the seat of the municipality of Vila Valério, after having worked at another farm, subsequent to their expulsion by Aracruz from Fazenda dos Meringueli. They said that they used to live on that farm with another five families prior to the arrival of Aracruz. The family consisted of four members that worked directly with an area of around 12 hectares with 25,000 coffee plants, as

sharecroppers, which means that half of the crop belonged to the boss. They earned around 10,000 to 12,000 reais per annum with the coffee, and had small animals, a vegetable garden, plenty of firewood and water and had started a plantation of black pepper. At harvest time, around thirty to forty people worked on the farm. When Aracruz acquired it, Teresa's family managed to negotiate the coffee crop another two times. They complained about the pain of having to leave that property, and admit that they are anticipating many difficulties in the new stage of their life in the city, since they are not accustomed to living in cities and have no job prospects. They complain that on the land life was much easier than in the city. With the purchase of the property by Aracruz, Teresa's house and the houses of the other sharecroppers, with whom they always had contact and worked, were destroyed.

According to the testimonials, the conclusion is that there were between 60 and 100 people working permanently on the areas purchased by Aracruz in Vila Valério, areas that when added up cover around 1,000 hectares (around 700 hectares of arable land, currently occupied by eucalyptus). These areas, in conformity with several testimonials, are almost all flat and considered the best in the municipality for agricultural purposes. The main crop in these areas was coffee.

Situation of employment in the areas of Aracruz, after the planting of eucalyptus

With the arrival of the company Aracruz in Vila Valério, the contractor Plantar managed to enter into an agreement with the company to plant eucalyptus and apply pesticides in the acquired areas. Plantar initially hired 40 people. Today only 28 people work on a daily basis. Even so, according to one of them, this group works partially in the municipality of Vila Valério, and also in neighboring municipalities such as Sooretama, Jaguaré and São Mateus. The motive is that there is not sufficient work for the 28 workers on the 700 hectares of eucalyptus already planted in Vila Valério. The worker from Plantar also states that the work is tough and the salary low (350 reais, from which around 300 reais are left after a few deductions). He would like to have another job of better quality and a better salary. Although the worker acknowledges that Plantar supplies individual protection equipment, the worker is terrified of applying certain pesticides in areas of 'grotas', where workers are totally exposed to the applications of colleagues. He prefers to work with a hoe, instead of using pesticides. He also complains that workers are not paid for productivity, which discourages them. However, he admits that even so, he is scared of losing his job.

The proposal of the Movement of Small Farmers

The Movement of Small Farmers (MPA) appeared in Espírito Santo in 1998 and defends the continuity of men and women in the fields, fighting for the guaranteed alimentary assurance of farmers, and at the same time, against the strengthening of the Brazilian agro-industrial model, which continues to cast out entire families from the rural area, defending monoculture, the introduction of transgenic species and the application of chemical fertilizers and pesticides. In Espírito Santo, around 10,000 families of small farmers out of a total of 55,000 have already participated in MPA, in some way or another. There is a municipal center of this movement in Vila Valério.

Visits with members of MPA were paid to various farmers that work concretely on the implementation of the proposal of MPA: *rural agriculture*. What attracts attention is that on few hectares (most small farmers have up to 20 hectares of land), the farmers are capable of planting a wide range of crops that practically guarantees their alimentary assurance. On average there are

four people working on the properties, considering that at harvest time, particularly in the case of coffee, this number can double or even triplicate. No pesticides are used, which reduces the production cost and guarantees the health of workers and of the food that they and their families consume.

MPA also defends the planting of coffee, even though it is a monoculture, as a basis for the farmers living, never as the only crop. A quantity of 3,000 well-cultivated coffee plants (around 1,5 hectares) can guarantee around 150 bags of crushed coffee per annum. With the current price, this quantity of coffee can yield around 18,000 reais per annum for farmers, i.e., 1,500 reais per month. The highest coffee productivity rate in Brazil was registered a few years ago in Vila Valério, on the property of Ozílio Paterlli: over 208 bags weighing 60 kilos per hectare.

MPA defends an agrarian reform that guarantees that more people can live off small-scale agriculture. It considers large properties one of the greatest drawbacks in the rural area, as is the case of large farms with grazing land and eucalyptus monoculture. According to MPA, wide-scale mechanized monoculture produces very few jobs and causes negative environmental impacts, besides concentrating income in the hands of few.

Conclusion

It is possible to compare, based exclusively on quantitative data, the generation of jobs in eucalyptus plantations and other rural activities, like Veracel Cellulose did in table 4. However, it was observed that the conclusion of Veracel, which was apparently positive – increase in jobs with the planting of eucalyptus –, is a hasty conclusion because the topic “work and employment” in rural areas is much more complex.

In this case study, based on the data gathered in Vila Valério, it is considered that the most suitable alternative is to compare not only one, but several quantitative and qualitative aspects related to the topic of ‘employment and work’ in order to be able to evaluate the advantages and disadvantages of each alternative, comparing eucalyptus and coffee monocultures with the rural agriculture proposal of MPA (Table 6).

Table 6: Aspects related to work and employment in eucalyptus and coffee monocultures and in rural MPA agriculture

	Eucalyptus monoculture	Coffee monoculture	Rural MPA agriculture
Job generation capacity	Low (1 direct and indirect job /28-37 hectares)	High (up to 1 job/ ha; during the harvest up to 2 to 3 jobs/ha)	High (up to 1 job/1-2 ha; during harvest up to 4 to 5 jobs/ha)
Income generation capacity	Low (1 to 1.5 minimum salary for the worker)	Medium-high (up to 1000 reais per hectare)	Medium-high (up to 1000 reais, or more, per ha; coffee with other crops)
Risks to health	High (crop with application of pesticides)	Medium-High (crop generally with application of pesticides)	Low (does not use pesticides; the actual food is healthy)
Alimentary assurance	Low (they need to purchase food for the family)	Low (they need to purchase food for the family)	High (they produce their basic food: beans, rice, maize, vegetables, etc.)
Risk of losing job	Medium-High	Medium-low (average risk in the case of daily workers)	Low
Water, gas, electricity bill	High (worker needs to pay water, gas and electricity)	Medium (always has access to water and firewood on the cleared land)	Medium (always has access to water and firewood on the cleared land)
Circulation of production in the municipality	Generally low. Goes from the municipality to cellulose plants of Aracruz	High. Circulates in the municipality, generating taxes and work	High. Circulates in the municipality, generating taxes and work
Transport to work	Lengthy. With a bus and sometimes takes a long time	Fast (the land is usually close to the house)	Fast (the land is usually close to the house)

Final considerations

Besides presenting specific information about the generation of jobs, the study also intends to offer some elements for reflection about a complex topic. This reflection is essential to enable people, communities and movements that face large-scale eucalyptus planting projects in their regions for the production of cellulose – symbols of “modernization” and “progress” -, to create a more comprehensive and critical view of the situation of employment and work involved in this type of project.

We can observe a huge gap between the “promise” of a company like Aracruz Celulose and reality. The company is concerned about presenting figures that always sound favorable to the ears of the public in general, however a more careful look confronts most of these numbers, especially when you evaluate the volume of investments and geographical coverage of the company. The “promise” is repeated to an entire sector, mistakenly designated “forestry” sector. This sector seeks to expand plantations in Brazil wherever it can, pursuing more profits for the shareholders of the companies involved. In this task it banks on a series of partners, especially the State, which unfortunately appears to be even more optimistic than the companies themselves in relation to the “promises” of employment.

The study also demonstrates the contradiction of investing so much in the planting of eucalyptus and in the production of cellulose, which tend to require a steadily decreasing quantity of workers, in a society that needs more jobs so badly. The mechanization and outsourcing organized at Aracruz Celulose in the last 20 years, led to the discharge of thousands of workers, besides having stimulated the growing precariousness of work conditions and the fragility of unions, which are supposed to act as a point of support for workers, and not for the company. In this respect, the drama of former workers from the sector, in addition to the situation of those that continue, for example, to apply pesticides, are very worrying. The violated rights of ex-workers are still waiting for redress on the part of Aracruz Celulose.

One of the most important aspects that this study brings to light is perhaps that the project for the expansion of tree monoculture plantations and cellulose production, by generating a certain number of jobs, destroys other work opportunities that are harder to quantify. Examples of this are the different traditional activities of the indigenous communities and Quilombolas, as well as the production of coffee by farmers in Vila Valério. It is also clear that women are the chief victims, of the dominating project of Aracruz; there is no room for them in the plans of the company’s managers and strategists.

The loss of “work” does not appear to be relevant in today’s modern world that only talks about “employment”. A statement by Aracruz shows how the actual company defends this view: *“Forestry activities offer job opportunities, even in the most remote areas of the country”*. This proves that according to Aracruz, the diversity of traditional work activities, a characteristic of indigenous, Quilombolas and rural communities, simply does not exist.

We need to once again stress the importance of human work which often is not synonymous of a formal job, with a salary and work contract, like the situation of those currently working on the eucalyptus plantation, totally dependent on a company, with low salaries and high risks to their

health. When we think about the importance of work to people, we need to reaffirm the importance of the autonomy of traditional and rural communities, which tend to lose their resources and traditional activities due to the “hunger” of companies that continue to appropriate their land, promising a few jobs in exchange.

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I. Rosgal S.A.
Dep. Legal 335773/05
Dec. 218/996