

**Perspectives on Nature, Conservation and Management: the Brazilian eucalyptus monoculture through the eyes of conservationist NGOs and local communities<sup>1</sup>.**

(Preliminary version, please do not quote)

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Eucalyptus cultivation and the cellulose industry are expanding fast in impoverished areas of Brazil, as a result of the global demand for cellulose, governmental economic incentives and the absence of economic-ecological zoning. Areas formerly devoted to family-farming and extensive cattle production are being bought by large eucalyptus corporations. As a result, areas formerly destined for the production of crops have reduced 168,3% (between 1980 and 1991) following the sharp withdrawal of public investments in small and medium sized crop producers. A great number of former rural workers have thus migrated to the cities - resulting in an exponential population growth of up to 82% - where they have become wage-laborers or unemployed.

For at least 2 decades, Brazilian governments – in their obstinate search for a balance of payment surplus through export-led growth in order to keep the so called monetary stability of the *real*<sup>2</sup> - have provided large subsidies for the eucalyptus and cellulose industry. This is the main reason why the costs of cellulose "made in Brazil" are the lowest in the world. These subsidies include direct investments from the Brazilian Bank for Economic and Social Development (BNDES) and tax exemption<sup>3</sup>. Government has

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<sup>2</sup> *Real* is the current Brazilian currency.

<sup>3</sup> According to José Koopmans (1993) in his accurate research, investments from the BNDES summed up the impressive amount of US\$ 529,700,000 until 1992. This means the company got US\$ 154,200 for each

invested, in one company alone – Bahia Sul Cellulose - 5 times more than the total investments received by all agriculturists and cattle producers of the south region of Bahia over a period of 5 years.

Although these figures are rather impressive, the motivation for this paper was not born out of a specific concern with the economic aspects of the expansion of eucalyptus industry in southern Bahia. In fact, an updated version of the meticulous work on economic data developed by José Koopmans (1993 and 1994) in the early nineties would be extremely valuable. My basic concern lays on the local configurations of this economy of inequality. Arriving in the extreme south region of Bahia for a fieldwork research in Social Anthropology I could not ignore the striking presence of eucalyptus plantations in an area where one would expect to see forests, rivers or grassland. Although in the town of Jangada<sup>4</sup> the presence of the company is not as visible as in the rural areas of the municipality, its action upon social agents and institutions is based on subtle but effective mechanisms of control.

The South of Bahia is a region of economic frontier where high technology eucalyptus plantations grow next to economically declined cattle farms and small-scale agriculture and fishing production of the local communities. The key actors in dispute are the eucalyptus industry and local indigenous, afro-indigenous and African-descendants communities. However, intermediate social players such as conservationist NGOs (SOS Baleia and Global Preservation) and governmental environmental agencies (Brazilian Environmental Institute – Ibama and Center of Environmental Resources - CRA) have an extremely important role in determining the principles for natural resources appropriation and use.

This study is the result of a second reading of my field notes focusing on the different social modalities of what is defined as "natural environment" by different social

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permanent job it create. Only through the tax exemption of 9,1% from the exported value, Bahia Sul Celulose profited US\$ 13,307,750.

Cf. KOOPMANS, J. 1994. Fomento Florestal: o que é? A quem interessa? Quanto ganha o produtor? Centro de Defesa dos Direitos Humanos, Teixeira de Freitas (BA).

\_\_\_\_\_. 1993. Eucalipto-Celulose: Desenvolvimento para quem? Centro de Defesa dos Direitos Humanos, Teixeira de Freitas (BA).

<sup>4</sup> The names of cities, persons and NGOs are fictional.

agents in the town of Jangada. There I developed my masters research on the ideas of culture and anthropology from the perspective of an afro-indigenous cultural movement. At the same time I researched, in a rather extensive way, a diffuse issue that frequently emerged in native discourses and disputes, which I will call "environmental question".

Deeply rooted in ethnographic data, this paper gives special emphasis to the perspectives of conservationist NGOs and local communities. Far from being a static position, what is at play here are the different conceptions of "environment", "common property resources" and "nature". Not only conceptions, but also practices: how the "environment" is actually been used, who is in fact managing it and who has access to its resources.

The town of Jangada aggregates different institutions whose function is to protect, control, preserve, manage, conserve, defend or even save the "environment". It is the headquarters of the regional governmental environmental agency (Ibama), of a Marine National Park and of conservationist NGOs, such as SOS BALEIA and Global Preservation. One observes a great concentration of initiatives and projects which have the "environment" and the "local populations" as objects of an integrated action of micropolitical mechanisms of *education*, *circumscription* and *control*.

My aim it to present an ethnographic outlook of the micropolitics which operate in actual social interactions<sup>5</sup>. I am less concerned with what is its "meaning" or what it "represents" and more inclined to describe *how* some of the above mentioned mechanisms work in concrete social relations, in order to give some intelligibility to apparently disconnected events and practices. In other words, what is effectively occurring when the State, NGOs and large private corporations act on what is performed as the "environment" and the "local communities".

In the town of Jangada, besides the NGOs, Ibama and the Municipal Secretariats which include the "environmental question" on their agenda, one observes the full presence, although not always obvious, of the Aracruz Cellulose Industry. In the rural areas of the

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<sup>5</sup> A micropolitical analysis focuses its attention on the mechanisms of subjectivity formations in the social field. It is interested in the intersection of two levels: one of the main social differences and another level, molecular, related to the process of subjectivity configuration. Both levels are one and the same thing, i.e. there's no contradiction or distinction between them, they are entirely connected. I aim to present here some situations from which processes of subjectivity formation emerge.

Cf. GUATTARRI, F. & ROLNIK, S. 1986. *Micropolítica. Cartografias do Desejo*. Vozes, Petrópolis.

municipality the eucalyptus plantations spread out beyond sight in homogeneous and dense masses along continuous land areas, constantly controlled by high towers set up by the company. Its presence is rather indirect in the town, and basically exists through "intermediaries" or "mediators" of its relations with the so-called "community".

Jangada is also the site of a vigorous cultural movement, which was born from a singular political and social conjunction in the middle-80's. The Tomorrow's Art Cultural Movement is composed of a group of artists that aim to produce art works and maintain its unique way of life, while raising a socio-environmental awareness about the situation of the rainforest in the region. This rainforest has been devastated firstly by wood extraction, then by cattle production and more recently by the expansion of the eucalyptus industry. The cultural movement has about 40 relatively young artists from 17 to 41 years old, mostly from low-income families, former rural workers in the region who descend from Africans and indigenous. For the last 15 years the group has been working basically with natural materials such as the dead wood found in the forests and in the mangrove vegetation around the town. The artists make impressive rustic furniture with the dead wood, on a small-scale production. On the one hand it aims to denounce the forest devastation and on the other it gives new life and meaning to the once dead material.

Although the relation between the artists and their environment is intrinsically interesting, considering the use of the "dead wood" as raw material for their sculptures and crafts, I decided to focus in this paper on other social agents in the town, such as the NGOs, Ibama and the company Aracruz Cellulose. I have analyzed elsewhere the cultural movement's perspective on culture, anthropology and their creative process of *bricolage* with natural materials.<sup>6</sup>

The data here presented was obtained through direct observation, informal conversation and formal interviews with various social agents that act – in either direct or indirect ways – in the production and dissemination of certain forms of relation with nature.

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<sup>6</sup> Cf. MELLO, Cecília C. do A. 2003. Obras de arte e conceitos: cultura e antropologia do ponto de vista de um grupo afro-indígena do sul da Bahia. Dissertação de mestrado, PPGAS/MN/UFRJ.

## I. Educating the community to preserve nature

The two main NGOs in Jangada are devoted to the protection of endangered animal and vegetal species and to the preservation of the region's marine and coastal biodiversity. This area is defined as a Hot Spot, which is, in the jargon of international conservationist NGOs, an area of highly endangered biological biodiversity, which explains its priority for conservation.

The Marine National Park was created by decree in 1983 and was actually implemented in 1987, together with the prohibition of whale and cetacean hunt in the Brazilian coast. The protection of an especially endangered species of whale was one of the projects of the Marine National Park and attracted many researchers to the town.

At first, biologists and oceanographers who arrived in the town were seen with a certain suspicion by the local population. People used to be astonished by their work of marking animals to monitor their population, a common activity in zoology and sea biology. At that time, they were considered "a bunch of crazy people hanging objects on the whales' tail", as told by an SOS BALEIA's director. Nonetheless, these outsiders certainly produced some curiosity, mainly among the youngest, who would ask them "what are you doing?", "Why is it for?".

Currently, this suspicion has been counterbalanced by some sympathy and openness from part of the local population. The young biologists interact in different sort of ways with the town's dwellers, many among them play *capoeira*, take part in cultural events and date the "natives". But the tension "us and them" reappears in certain situations. As a great part of the white middle and upper-class of the town, they are rarely seen at the *Avenida*, a peripheral area where most afro-indigenous inhabitants live. Even though this part of the town is definitely more respected than a decade ago, the region still carries a stigma of being dangerous. Therefore, when the absence of the biologists was noticed in a party promoted by the Cultural Movement, I could hear complaints of Avenida dwellers about "this people from the South [of Brazil], who never give us a ride, don't marry within the community, and don't socialize..."

What is operating in this kind of "distance" *vis à vis* the outsiders who came with the NGOs, Ibama and the companies sub-contracted by Aracruz? I suppose it is not

something like an opposition "native x outsiders", despite the fact that this kind of criticism that the long-established inhabitants have towards the outsiders is relatively common. In this particular case, the complaint was from another "outsider", who arrived in town just some years before. Bento, as I'll call him, shared with the "natives" some belongings, such as being born in a small town in southern Bahia, identifying himself as black and living in an area far from downtown. Therefore, in the given situation, he opposed the other "outsiders", who are, let's put it this way, sociologically different from him – they come from the capital cities of the south and southeast of Brazil, are considered white and live in pleasant areas in the town, in districts near the beach. Nonetheless, in other situations Bento may identify more with the outsiders and criticize those who were born in Jangada. Consequently, the relation between "natives" and "outsiders" depends on the given situation and the way the different levels of belongings at play are organized.

Initially, the NGO SOS BALEIA suffered from the stigma of being an alien institution, "only interested in the whales" and not in the local population. The strategy they found to project a friendlier image and gather the sympathy of the "natives" was to inform people about the importance of their work of protecting cetaceans through a project of environmental education. According to an SOS BALEIA's director:

"Our aim was to create an NGO to give administrative and financial support for the cetaceans project and develop a program of environmental education, our major tool to create a link with the community. Through that we can show them what we are currently doing, what is the sense of our work and at the same time, we can contribute for a better quality of life in Jangada".

The projects of Environmental Education take place in 8 primary schools in the municipality, with children from 7 to 11 years old. It is sponsored by Brazilian State Oil Company Distributor - *BR Distribuidora* - and Aracruz Cellulose. It works in partnership with Global Preservation, an international NGO which deals with conservation issues.

## **Ethnography of a Lesson on Environmental Education**

I had the opportunity to attend a class of environmental education for children of 8 and 9 years old from a municipal school in a district where the most important economic activity is fishing. The teachers were two Jangada natives, supervised by a young teacher hired by SOS BALEIA, who also studies Education at a private college in a neighboring town. The lessons take place twice a week in each school, with a different class each time.

As we got into the classroom, chaos surrounded us: screaming children running and laughing, presumably more excited than normal with the "visitors". I sat at the back of the classroom so as to observe it well, the supervisor sat in the front. The teacher responsible for the class shouted out loud and gave orders to the kids and they went back to their desks. The two young teachers asked the children to close their eyes. Lot's of agitation and laughing. One of the teachers said: "You can laugh until you relax. Let's do a creative activity!"

Little by little the kids were quieting down and closing their eyes. The teacher declared: now imagine you are flying up, feeling your body go up, getting out of the school, seeing the school's roof, seeing your district, and the sea from out there. Then you see something that looks like a fish. But it is huge. What is that? It's a whale. In fact, there are two whales, a male and a female one. They are hugging, they came here to reproduce their species. From there, high above, you can see the seaweed, the corals, the dolphins, there's an ecological balance. But then you see something that does not match with this scene: a being who insists in being evil towards all that. A species with plenty of good beings and plenty of those who still didn't learn how to deal with nature. A being who pollutes the forests, the air, the sea. It's a human being. He forgets he gets his food from the sea, the forests. He is the only one who contributes to environmental imbalances, he does wrong things to his environment. But you don't want to let it happen, you want to teach them all the importance of the environment. And then, you and your colleagues get together and start to fight for the environment. You all start to fly higher, you see Brazil, clouds, comets, stars and other planets."

The children seem to be hypnotized, eyes shut, in complete silence, absorbed by the narrative. The teacher continues:

"From up there the Earth is very small and you realize you're a sand grain in that enormous blue globe. You were all born there, you like this balance. But you miss your place and feel like coming back. You see Brazil, Bahia, your town, your home, the sea, the whales, which are still there and you come and bring a star from the outer space. It is the symbol of the hope that one day everything will change for the better. You see the school, the classrooms, the children and your classroom, and realize that you are sitting in a desk. You notice that the star of hope and love is still inside you. Slowly you open up your eyes and start to remember the trip". Gradually the children were able to get out of this sort of trance and were completely silenced and lethargic. The teacher then asked them to write and draw what they had imagined.

While they wrote, the teacher who was responsible for this class started to walk around the classroom and monitor the children at work. She severely criticized the grammar mistakes of each student, screaming out loud: "Paula, the subject has to agree with the verb!!", "Luís, before p and b, comes what?", "Your handwriting is better, Rodrigo", "Will you start a sentence with small letters, boy?" Some children were so scared with the teacher's reprimands that they systematically rubbed off what they had just written. At the end they were not able to conclude the task in the given time and were therefore even more censored by the teacher.

Below is the transcription of some of the texts I read: "I've seen the whale and the planets and people mistreating nature and others taking care of it. I started seeing a better world", "I was flying through the clouds watching the sea and seeing beautiful things, the whales jumping in the sea. I saw people throwing garbage in the sea, the whale was gone and her garden was really dirty, so the whales went to another sea to live because their sea was too dirty". "I imagined I was flying and also that I cleaned the street and took care of the whale". "I saw good things and bad things. The good ones were the corals, the bad ones were men destroying the good ones."

Given the totality of texts produced, one can observe that all the kids invariably wrote that they had the sensation of flying, experiencing a sort of displacement from themselves. The so-called "creative exercise" in fact induced the production of very similar stories. The evidence is not only the commonly experienced sensation of being out of one's body but also the contents of the stories - the relation of human beings with an



anthropomorphic whale. The texts associated positive attributes of beauty, largeness, rarity with the mammal and at the same time, an uniform and undifferentiated "us" with the mission to protect it. Upon "men" or "the people" fell systematic accusations of being the responsible for the degradation of the environment where the whale lives and reproduce. Some children identified among those "others" some that "help" or "take care" of nature. The process or activities that threaten the survival of the whales and other species remained unquestioned neither by the children or the teachers.

### **To patrol, to inspect, to denounce: other NGO projects**

In addition to the work developed in schools with children, SOS BALEIA also has an environmental education project with the teachers, with the aim of disseminating environmental awareness in all school subjects. For instance, in Mathematics classes they propose the use of natural elements for calculations and in Portuguese classes to build sentences such as "the tree that was cut down was beautiful". Besides working in schools, SOS BALEIA also implements a project directly with children called "Ecological Patrol". It is conceived to raise the awareness of children and youth on the importance of a clean environment. During the summer (the tourist season), a group of children and adolescents spend the day at the beach collecting trash and giving the tourists and communities environmental information about the importance of preserving the beaches and the sea. The two young teachers that I introduced in the former section started working in SOS BALEIA in the Ecological Patrol. Children are also the target group of the "Environment inspectors", an organization founded by a couple of artists from the Southeast of Brazil, owners of a Natural Assets Private Reserve.<sup>7</sup>

The Environment Inspectors largely distributed a pamphlet to the lower income community of the town, sponsored by the NGO IAPA, an intermediary institution between Aracruz Cellulose and the community. This pamphlet is aimed at educating this part of the population to protect endangered species, emphasizing that those who are caught hunting wild animals are held without bail. Written as a fairy tale, it tells the tragic story of two female anteaters, mother and daughter, who are friends of the environment inspectors. The

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<sup>7</sup> This is a protected privately-owned area with relevant ecological features.

latter hear the complaints of the wild animals: the *paca* says "the water has a bad taste", the bird tells them "the fire destroyed our net", the *tatu*<sup>8</sup> complains that he finds garbage wherever he digs. Therefore, the environment inspector go back to town to present the complaints so that "everyone can get to know that the little animals are suffering because of people who don't respect the law".

But then two hunters show up in the tale, looking for animals to hunt. Their physical appearance is very similar to that of the fisherman of this region, one white and the other, afro-indigenous. They find the female anteaters, shoot and kill the mother. The daughter survives and has to watch her mother being horribly skinned, while the two evil men comment: "nice leather". A bird observes everything and gives the bad news to the environment inspectors, who run to the hunters' house in order to explain that "by law, you might be arrested and pay a very high fine". The afro-indigenous hunter denies being a criminal. So the inspectors explain that "until recently hunting was something normal, but today it has to be forbidden because the defenseless animals are disappearing. The law is here to protect what is left of nature, what men haven't destroyed yet". The inspectors ask for the daughter anteater and set it free in the forest, with the help of the white hunter, who regrets his past and decides to cooperate. However, the afro-indigenous hunter goes back to the forest and tries to hunt the small animal again. When he is ready to shoot, two policemen arrive and arrest him: "3 years of jail if you kill this animal", they shout. He had to spend half of the sentence in jail and the other half working for free at the town's zoo. Moral of the story: hunters are criminals and should be punished for their crimes.

A more accurate analysis on the social effects of this pamphlet would certainly require observing how children read it, what they think about it and to what extent it affects them. Nonetheless, I believe it is not a harmless object in itself insofar as its language and drawings have a special appeal for kids and it has been largely distributed in the town. Environment here are the "defenseless" animals in the forests (not by chance, female animals) threatened by afro-indigenous men who are "evil" and not willing to understand the importance of protecting nature. Given their stupidity and stubbornness, they cannot understand a language of duties and rights. Therefore, the only way to change their

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<sup>8</sup> Paca and tatu are Brazilian mammals which used to be largely found in forests and are supposed to be very tasteful.

behavior is by punishing them. As we will see below, this is literally the strategy applied by some officials of Ibama (the state environmental agency) in order to control those populations who, according to them, “use the environment” and challenge the law.

### **The eucalyptus carnival**

It goes without saying that children from Jangada town are being educated to love the whales, to feel responsible for the garbage on the beaches, to suspect men who look like their fathers and to be afraid of being arrested for environmental crimes. In addition, children are learning to love the eucalyptus. In the carnival of 2002, the company Aracruz sponsored the two town samba schools. Not by chance, the theme of both schools was the eucalyptus. And in both schools there were rows of children dressed up as eucalyptus trees. Everyone was dancing and singing the samba songs, with lyrics that expressed the idea of valuing the eucalyptus plantations and connecting them to environmental concerns: "From the protection of the environment to the seduction of carnival – the eucalyptus shows its value". The lyrics established a connection between the cultivation of eucalyptus and environmental protection, together with a diffused romantic nationalism:

"Men planted, cultivated, produced/ to contain the deforestation/ Navarro was the great pioneer/ preserving the forests/ strengthening the richness of this Brazilian soil". Moreover, the lyrics emphasized the diversity of eucalyptus uses and connected it to improvements in living standards: "From it one produces cellulose/ and also wood for construction/ essence for perfumes/ burn it to make charcoal/ makes medicines and cleaning products/It is the eucalyptus, theme of this carnival/ congratulating Jangada for its social development". Finally they present the supposed benefits that the eucalyptus industry brought to Jangadas: "I'm showing you the progress/Cellulose offered to Jangadas/ The environmental protection, the regional production/education and social work". Although many Jangada inhabitants enjoyed the “eucalyptus carnival”, as they called it, singing the lyrics and dressing green clothes, there were many people who not only criticized it but also could hardly believe in such an ostensive propaganda. While the schools were parading in the main town’s avenue, a member of the cultural movement exclaimed in astonishment: this is worse than brainwashing!!”

## Strategies of Capture

The company Aracruz Cellulose<sup>9</sup> is currently under exponential expansion in southern of Bahia. One cannot separate this tendency to privilege the states of Bahia and Minas for investments from the intense mobilization of social movements of the neighboring state of Espírito Santo (ES), original site of Aracruz's activities. In October 2001 a State Law (6.780/01) which imposed conditions for the eucalyptus cultivation, such as an agro-ecological zoning was approved in the state of ES. It was the result of a strong mobilization of different social agents who joint actions against the expansion of eucalyptus plantation in the state of Espírito Santo.

In the state of Espírito Santo, Aracruz has been accused of a series of violations of basic human rights, including threats to economic rights, such as illegal appropriation of indigenous, *quilombo*<sup>10</sup> and family farming lands. Furthermore, the deforestation of native forests has caused environmental degradation and loss of biodiversity, as well as the drying up of rivers in the regions where eucalyptus have been cultivated for years. Aracruz has more than a hundred law suits related to work exploitation and work-related accidents such as the mutilation of a number of forest metalworkers. The waste of eucalyptus plantations is used for making charcoal by families of coal makers living in extreme poverty, most of which depend on child labor. These families live in miserable conditions isolated at the borders of the plantations, with no water or electricity. Finally, the automation of productive chains brought mass unemployment leading to the mobilization of trade unions and consequent death threats against participating workers. In 1999 an informal coalition of organizations, social movements, unions, commissions and church pastorals – the Network Alert Against the Green Desert – was created as a reaction of organized civil society against the expansion of this company and to denounce its long-term systematic violation of fundamental human, social, economic and cultural rights.

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<sup>9</sup> Aracruz's stocks are shared by the groups Lorentzen (28%), Votorantim (28%) and Safra (28%) and by the National Bank for Economic and Social Development (BNDES) (12,5%). The company's stocks are negotiated at the stock markets of São Paulo, New York and Madrid.

<sup>10</sup> *Quilombos* are black rural communities of African descendance which have their origins during slavery period and persist until today.

In order to escape from the pressures of this vigorous social movement and keep its condition as "one of the producers with lowest costs in the world"<sup>11</sup> the company's strategy was to relocate and expand its plantations to southern Bahia, northern Minas Gerais and Rio de Janeiro. In June 2002, just some months after the approval of the state law in Espírito Santo, the company filed a motion at the Brazilian Supreme Court and got a favorable injunction. Soon afterwards, under huge manifestations of organized civil society, the company launched its 3<sup>rd</sup> industrial plant in Espírito Santo, which would later raise their production from 1,3 million tons of cellulose/year to 2 million tons/year. The cultivations in ES started again but the company opted to maintain and strengthen its presence in the regions where the social pressure and costs were lower.

As mentioned above I observed the actions implemented by the company's department of "community relations", in two municipalities in the extreme south – Jangadas and Japar. In Japar, cellulose companies reformed the municipal health unit and 24 public schools, besides building a small park, organizing new libraries for the public schools and supporting the town's philharmonic orchestra. Bahia Sul Cellulose<sup>12</sup> sponsors the *Seeding Project* of environmental education and vegetable garden plantations in the town's municipal schools. The town of Japar also has a project called "Nature Army", with volunteer students who carry out activities of urban cleaning and tree planting, following the same model as the "Ecological Patrol" and the "Nature Inspectors" in Jangadas.

The officials at the Environment Secretariat of Japar informed me that they had only recently received a complaint against the company Plantar, sub-contracted by Aracruz to plant the eucalyptus trees. Plantar caused a major environmental "accident" with 3000 liters of herbicide spill in the river Santo Antonio that runs through the municipality. When asked about the possible existence of other accidents the officials coldly replied that "these companies ended with the Atlantic Forest, that's all." Nevertheless, the easy acceptance of this fate cannot be generalized: one of the officials, trained in Forestry, mentioned that it is

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<sup>11</sup> As described in their annual report of 2001. Aracruz Cellulose responds for 31% of the global offer of whitened cellulose from eucalyptus in the world.

<sup>12</sup> A cellulose company in which the main stock owners are Suzano Holding S.A. (35%), BNDES participations S.A. (12%), and the Caixa de Previdncia dos Funcionrios do Banco do Brasil (4%) e o banco J. P. Morgan (2%).

“a sad irony” that the companies that historically have caused the major environmental destructions – in his words, Petrobras (which owns BR Distributor) and Aracruz – are exactly those who are implementing social and environmental actions in the town, protecting the whales and offering environmental education. "The ones who really need environmental education are those guys from the board of Aracruz".

In Jangadas, Aracruz gave brand new cars to the town counselors and to the Center of Environmental Resources (CRA), the State Environmental Inspecting Agency. In February 2002, the official of CRA was dismissed due to his attempt to impose restrictive conditions during the licensing process of a private port for eucalyptus transportation. The port was finally built on the river shore, in the middle of a mangrove protected area. Trucks filled up with eucalyptus go to and from 24 hours a day in this small and previously peaceful district of Ponta do Farol.

A teacher from Japar and a member of Global Preservation filled me in on the details of the ways in which the companies are able to gather public support for their initiatives: “Most people believed that the installation of the company would bring jobs and progress and those who didn’t were heavily criticized”. The participants of the cultural movement were the "community" voice against the construction of the port during the public hearing in Jangadas. A great part of the town's dwellers present reprimanded this action.

The affinity links between Aracruz Cellulose and public power can be more than clearly seen in the company's report on "Professional Qualification", from 2001. In the chapter "Partners Evaluation", one can see the photographs of the town's mayor, the president of the town council and a well-known town counselor. Next to the mayor's portrait, his words: "If we didn't have this partnership with Aracruz Cellulose, we wouldn't have so many qualified workers to implement this work. There are two different towns of Jangada: before and another after the arrival of Aracruz". The town counselor says: “The companies are arriving. We are rescuing our dreams. Aracruz is responsible for it.”

During the licensing process of the port, Aracruz offered "professional courses" of crafts, baking, sewing, silk-screen and construction. Although these were activities in which many workers were already qualified the effect of these courses on the inhabitants imaginary wasn't negligible: many of those who took the courses were anxiously waiting

for workplaces that either Aracruz was expected to offer or other companies attracted by the town's growth.

As soon as the works for the private port were completed, Jangada inhabitants woke abruptly up from their dreams of acquiring employment. The quasi-totality of the unloading process of eucalyptus trees is carried out by machines. The rafts and dredge machines that work day and night employ 12 people, most of them from out of town. The dredge machine operators work in journeys of 24 hours and earn less than 2 minimum salaries a month.

Besides offering luxury gifts to politicians and raise inhabitants' expectations with vain promises of work, Aracruz cellulose has also extended its good neighbor policy to the local conservationist NGOs. At first, these NGOs were against the port construction. Later on, they became responsible for implementing some of the environmental and social pre-conditions for the port construction, due to their recognized knowledge in environmental education and whale protection.

One of the conditions SOS BALEIA was able to impose was monitoring the trajectory of whales and small cetaceans such as dolphins. The other condition was a project of environmental education whose target groups were all the organized sectors of Jangadas: the teachers, the fishermen, dweller's associations, masonry, religious entities and so forth.

In a visit to the port construction site I was able to talk to the Aracruz official responsible for community relations, who told me how they implement the company's "social projects". According to him, social work is a fundamental dimension of the company's presence in the town where it is placed. "We carry out our social work through NGOs such as SOS BALEIA and Global Preservation, as well as through Ibama. We also offer donations for improving the town's infra-structure. For instance: reform of the fishermen association and donation of a radio and computers; computers for the Education Secretariat, donation of 5 computers for the masonry, construction of a small bridge in Ponta do Farol, production of an institutional video on Jangadas and reform and expansion of the fishermen deposit."

I asked him how these conditions were defined and, according to him, conditions are based on the law, but *where* this money is to be applied and *for whom*, is a decision

under the entrepreneur scope of action. As he told me: "this makes things easier insofar as the company itself is responsible for giving the funds for the projects."

### **To discipline dangerous classes**

Environmental education is not only directed at the town's organized groups, but also at the unorganized "dangerous classes" who arrived in town as sub-contracted workers. They were disciplined not to be polluting agents neither of the environment or of the population that lives near the port.

When the port was being built I had the chance to attend a class of sexual and environmental education, directed at the construction workers, this being a legal conditionality for the realization of the works. The teacher was a worker at the SOS BALEIA, who I'll call Paulo. The methodology had the aim of mapping "all potential problems that might come together with a port" and try to minimize them from the beginning. These problems were not only the environmental impacts of the construction but also the risks of STDs dissemination and drug use, two social problems that are supposed to irrupt naturally, together with the installation of the port.

### **Ethnography of a sexual and environmental lesson**

While we waited for the lunch break, when the workers would be released for the class, in an improvised small space, I was talking to a security technician, who would later give them a lesson on work security. He told me there was an accident at the construction that same day. According to him, "a worker had suddenly felt dizzy because he had eaten and gone right back to work. His blood pressure fell causing him to fall head first from a height of 4 meters. To his luck he fell on the mangrove, a smooth soil and was taken to the hospital".

There were 10 "students", wearing their work helmet. Paulo introduced himself and projected a power point file on sexually transmitted diseases. According to him, "Port areas have a tendency for developing prostitution, drug use and therefore transmission of STDs. This is a great concern of the community, so we are doing a preventive work. Many people working here are not from Jangada, so we have to take care and prevent STDs. AIDS is the



most dangerous of all, it has no cure and is transmitted by a virus, through the blood, usually through sexual intercourse and needle sharing”.

Paulo showed the workers a picture of an attractive woman and said: "she doesn't know she has AIDS". He explained that people may look healthy but nonetheless have the virus and that the idea of risk groups does not exist anymore, since anyone can get it. He explained in detail how the HIV virus is transmitted or not and suggested that they go and get free condoms at the municipal health units: "if you have no money, it's no excuse. Just go to the health unit with your ID, register and get the condom".

He told them that there are many cases of syphilis in Jangadas, because people don't go to the doctor. He showed them a large picture of an injured penis and said: syphilis produces a pus which gets bigger and bigger. Genital herpes causes a small wound. Herpes produces pus and syphilis a bigger wound. If you realize you have a small wound go find an urologist". He then showed more astonishing images of sexual organs affected by STDs and explained in details other kind of diseases: "One of the symptoms of gonorrhea is burning when you urinate. It might spread around your body and may reach your articulations." All workers pay extreme attention to the images and listen to Paulo's advices. No questions were asked.

Paulo closed the power point file and addressed them in a different tone: "it is important to talk of the relation between you guys and the community. We know some people are outsiders. And we are very worried here with these issues. Gossip runs fast, it is a small town. If anyone sees you guys doing something wrong, no doubt people will know and, if it serious, we will also find out. Even though you guys work for a subcontracted company, the community sees you all as Aracruz workers. You'd better respect the community, don't do here what you wouldn't like to see in your own community”.

The theme of the lesson shifted to the importance of the region's environment. According to Paulo: "The main environmental problem here is the dredge process that is opening a channel for the ships to come here, the port. When the dredge works, it takes thousands of tons of mud from the bottom of the ocean and this mud may reach the corals. If the corals die, then the small fish die. If the small fish die, the bigger ones also die and soon the fishermen who will have nothing left to fish. So we implemented a system for

monitoring the sedimentation level, to check whether the mud is reaching the corals. If it is close, the works of the dredge have to stop.

Paulo also alert the workers that hunting is forbidden by law and that if one is caught hunting he/she will be subject to two years in prison, with no right to bail. According to him, "those who live here or work in the construction have money to eat meat in the weekends. There's no excuse, if you're caught, you'll be arrested. Those who own birds should register them, some you can't have at home, such as toucans. You are forbidden to have small monkeys and can only certain animals if you have a special license and the appropriate vivarium."

It goes without saying that the workers got important information of STDs prevention and on the Brazilian law on hunting. At the same time, they got the information that their bodies represent a risk of STDs dissemination and that they would be under intense control. The fear, provoked by frightening images and the threat of getting sanctions for bad behavior were the educative tools for imposing a sexual discipline over them. They were pre-judged as "polluting agents", who might contaminate the town in an analogous way as the environmental risk of the mud that might spread out by the dredge works.

Currently, with the conclusion of the compensatory measures and conditions for the port installation, Aracruz has become the sponsor of SOS BALEIA's environmental education project: its logo, an eucalyptus tree, is seen in all the project's pamphlets, t-shirts and in the cars driven by SOS BALEIA directors.

### **Dissonant cartographies**

The fishermen association of Jangadas had been led for 7 years by Zé, with whom I talked right after he left his position, under accusations of condescendence with Aracruz and of not defending his fishermen colleagues from the ostensive control of Ibama. According to him, his major contribution along those years was helping to legalize the fishermen identification, so that they could have access to specific rights. Many fishermen resist to submit their boats and instruments to periodical inspection, because it implies the payment of relatively high taxes to the "responsible organs", which, according to them,

never provided them with any assistance. Old Robson, 32 years of fishing complained about the fact that if the boat is not legal they are charged with an extremely high fine of about 1000 reais (about 350 dollars). As a result he and his colleagues are often afraid to go fishing.

A nostalgia permeated Zé's narrative on the process of change in fishing practices along the 3 last decades. He talked about when he was a kid and man would fish with a spear, in a wood canoe, preserving the fish with salt. In the 70's the first motor boats arrived and in the 80's industrial fishing was highly established: "it was the engine of the town's economy". However, from 1998 on, one observes a decline in production due excessive fishing and, as he said, the "lack of capacity". Zé affirmed that the solution for this problem would be to "raise scientific data" in order to determine how much fishing that environment supports. Therefore, fishing could be better controlled and become sustainable. These are the basic principals on which Ibama's project "Sustainable mangrove" is grounded (see below).

Zé was disgraced by his own colleagues when he accepted to sign an agreement with Aracruz, about the compensation for the environmental risks involved in the dredging operation. As mentioned before, the eucalyptus transportation depends on the permanent presence of a dredge machine, which takes the mud from the bottom of the ocean and throws it to another part of the sea. Unlike what the fishermen would expect, the place chosen for mud discharge is the main shrimp fishing site of the region. From the point of view of some fishermen this may strongly affect the shrimp fishing, their main economic activity. They feel betrayed by Zé, considering he accepted the first offer from the company (improving the house of the fishermen association, a computer and a radio) and did not negotiate any kind of compensation in the present nor in the future in the case of shrimp fishing becoming unfeasible.

Zé told me he "applauded Aracruz because it brought a long-needed benefit, always denied by the organs supposed to support the fishermen. They reformed the association's house, gave us a complete computer with printer and a VHF radio with 90 channels. I am seven years leading this association and never received any benefit from the Brazilian Fishermen Federation, nor the Ibama or the Agriculture Ministry. Rather the opposite, they only gave us expenses, and BAHIA Pesca (another organ) is not for the fishermen but for

the big fishing companies. And now Aracruz arrived. In four months they gave us a benefit of 10-15 thousand reais (3-5 thousand dollars), while in these 7 years I didn't get even a penny from those institutions".

The only criticism Zé pronounced against Aracruz was related to the way it conducted the public hearings and how they disseminated information on the dredging process. He regretted the lack of opportunity to talk with the company's engineers, so as to "ask them to throw the mud one mile further". He told me that during the public hearing the company's technicians presented a digital map which showed the areas that would be affected. However, according to him, for one to understand that kind of graphic representation "one should have oceanography notions. On the graphs it seemed very far, around 3, 4 miles. But when I went to see it on a boat, I saw it was one and a half miles from the coast. I'm sorry I don't know nautical scales... But I questioned them whether the dredge was really happening in the area they told me. I called Ricardo [the responsible consultant] to explain me and he showed in his computer every place where the dredge was taking place. I told him: but this computer obeys your signals, it does not have a signal of its own. I felt there was something strange, manipulative. But I could not discuss, I should have had people who understand of this technical part with me. I don't like to discuss issues that I don't know."

At a dinner in the fanciest restaurant in town with a group of consultants, I could talk to different specialists and repeatedly heard the sentence: "I can guarantee you there will be no impact on the shrimp fishing". I asked them which arguments would justify such a statement and only got arguments based on their authority. The engineer responsible for environmental issues in Aracruz told me: "I am from Aracruz, but all our technicians and consultants are university professors, PhDs. I can guarantee you their report is independent".

I could also talk to the consultant hired by Aracruz to monitor the dredge works, quoted above in Zé's narrative. I decided to provoke him, by saying that the fishermen's position is not consensual in what relates to the dredging process. I added that many still doubt the works will have no negative effects on the shrimp fishing, contrary to what all specialists were insistently affirming. He replied: "In our days it is important to be flexible". I insisted that, from the point of view of the fishermen families' subsistence some

things are not under negotiation. According to him, my position would follow an inflexible logic of "win-lose" and that his aim in his job was to find a "win-win" solution, in which "all parts are satisfied".

Fishermen with whom I talked to didn't seem to believe in the feasibility of a "win-win" solution. They told me that the day before I arrived a biologist found a fish suffocating with mud in its gill. She asked them to identify the fish. Renato, one of the fishermen told me: "the rope will always break on the weaker side. We are scared of so much mud that is being taken out of the bottom of the sea. It's damaging the fishing area. Fishing employs much more people than the dredge or the eucalyptus raft since it involves everyone in the family: the wife helps to take the skin off, the kids can get crabs and small fishes. The mayor is supporting the company. The radio says life will be better for the fishermen, but the fish is dying full of mud in its gill. They had the means to throw this mud on the land, but they say it would have been economically unfeasible. And they got the license from Ibama to throw the mud on our shrimps. Eleven million square kilometers of mud. Where is justice for them there? We have justice here, with Ibama forbidding the invasion of the mangrove for the construction of houses. But the company gives them lot's of money and they shut up".

Renato stated that the population supported the company due to their belief of job offers, understandable in a town with a high unemployment rate. When the port was under construction he predicted that the company would employ some people but that, at the end, only 12 people would work in the rafts, a specialized task. Two years later, the rafts are functioning with 12 employees and his prediction proved to be correct.

### **Ibama, fishermen and river banks populations**

Ibama is undoubtedly the institution whose work is most controversial, from the point of view of the fishermen and the river banks populations. Old Robson, with 32 years of fishing experience told me Ibama inspectors have already threatened him with a fire gun. According to him, Ibama's actions are never predictable: "sometimes they do injustices, sometimes they don't. Sometimes the boat is not in the Protect Area and it is confiscated and sometimes it is in the Protected area and is confiscated."

He explained that there are certainly bad fishing practices, which may have caused the extinction of many species of fish. However, according to Old Robson, the main factor and source of major environmental impacts on fishing over the last decades are the eucalyptus plantations. In his words: "The environment became unbalanced the last 20 years of eucalyptus plantation. It dries the rivers and this has caused a major imbalance. Formerly I could tell the weather and in which season I would get this or that fish. Summer hasn't arrived here this year. In all of the Northeast only now, end of February, is the weather improving. Old Robson could not hide his worry about the climate changes in the region: "before it would rain all the time. Now it hardly rains. This year, as I told you, there was no warm weather, constant sunny days, or abundance of fish. At the same time, there's a lack of rain; it is hard to predict the weather. There's little fish in the high seas." He expected the dredge works wouldn't affect the shrimp fishing and adds that they have a final alternative for subsistence: collecting crustaceans in the mangrove – "we've never had a lack of crabs. Unless the rafts cause an oil spill, then there may be a lack of crabs".

Jangadas has one of the biggest mangrove extensions in Brazil. There are small islands along the Jangada river where communities, previously densely populated but now decreasing in size, live. This decrease in the population is a result of migration to the neighboring towns especially due to the lack of transportation and other social disadvantages. They live from the cultivation of coconut, manioc, lime and palm tree oil, and from collecting crustaceans. In the family groups in the interior of the islands, most of the houses are mud huts, although some are made of bricks. One can find old houses where flour is made, next to parabolic antennas and photoelectric energy dishes. From the manioc the island's inhabitants prepare the flour, and culinary delights such as *beiju* (a small biscuit filled with grated coconut) and *moqueca*, a cylindrical roll of the gum of manioc filled with coconut and wrapped with banana tree leaves. In addition, the island inhabitants make a pure palm tree oil, which, together with the *beiju* and the *moqueca*, are sold at Jangada's Saturday market – on the other side of the river.

The forest around the family houses was dense and completely filled with a large quantity and diversity of fruit trees, such as jackfruit, cocoa, avocado, papaya, mango, *dende* and *jabuticaba*. There were also cedar and other kinds of superior timber. The men who led that family groups were visibly proud of the trees that they and their ancestors

planted. However, there was also a feeling of regret that the trees could not be chopped down to make a canoe, the only transport means to reach the town and the market where the products are sold. According to one of these men, he cannot make a new canoe for his family because, in his words "if I do, Ibama will come and destroy it. We cannot even talk to them, they arrive here destroying".

I talked to an Ibama official, who defended the idea that the social segment with which Ibama has most conflicts with are "those who want to use the environmental resources". He specified: "those who fish shrimps and shellfishes, those who use the wood for fire and those who invade the mangrove to make houses". In other words, the target groups of Ibama's repressive actions are the fishermen, the crustaceous and shellfish collectors, the families, usually run by women, who don't earn enough to pay for gas, as well as the town's homeless. The technique of controlling this population, that according to him, "lacks educational basis", include, sometimes, the threat with fire gun and the use of physical violence, both spoken out as perfectly normal procedures: "sometimes we go out carrying guns, we get two or three of them to beat them around a bit to scare them because if there's no demonstration of force, they don't understand."

He denies that the posture of Ibama is congruent with its image in the town, which is that of an institution that "forbids everything". This official wrote a project to find solutions of how to manage "those who want to use the environmental resources". It is called Project Sustainable Mangrove<sup>13</sup> and is funded by Aracruz Cellulose, through the compensation resources of the dredge, with 1.3 million *reais*, according to figures given by Mr. Sabino, the official for Community Relations of Aracruz<sup>14</sup>. This project, to be implemented by the Ibama staff, has the declared aim of providing "capacity building" and "create alternatives of employment and income raising" for the local communities. Through this Project fishermen and collectors are expected to learn how to "manage small businesses, as well as new fishing technologies, such as oyster, shellfish and shrimp farms".

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<sup>13</sup> The full name of the Project is "Integrated Project of Management and Monitoring of Jangada's Mangrove for a Sustainable Use by the River Bank Population."

<sup>14</sup> According to the official of Community Relations of Aracruz, the Mangrove Project involves the "mangrove recuperation, environmental education, cooperatives, oyster cultivation, qualification courses for adding value to the fishery, construction of a storage house and an ice industry". According to the Ibama technician, Aracruz would invest 50% of the total costs, while Ibama would pay the salaries, the equipment and infra-structure.

The Project includes a "grassroots work", so that the river bank populations "feel as if they are participants of the process" and a sort of interaction of "scientific and popular knowledge considering there are things they don't understand". According to him, the aim is to build a sense of ownership of the mangrove amongst the population. However, at the same time he emphasized that "in fact the mangrove is a State patrimony". The project contains the construction of a community center where meetings would be held, as well as environmental education classes and capacity building. One aims to change the seafood collectors' association into "a profitable organization".

At the same time, Ibama would be developing scientific research to determine the "carrying capacity of the mangrove". The Ibama official believes that the introduction of seafood farms will help to promote a natural recovery of the degraded areas. It is expected that after 2 years the project will become self-sustainable. The next step would be to start a more complex and delicate part of the project, in his words: "discussing the areas that may become intangible". To avoid people going into these mangrove areas to possibly be considered permanently intangible in the future, he imagines a sort of partnership with the local population, who would help in monitoring the entrance of "outsiders".

In collaboration with Ibama the entity formally responsible for this project is a consultancy company hired by Aracruz to write its environmental impact report required to obtain its operating license. The resources come through an NGO called LAPA, founded in 2001, whose director is also the owner of the biggest tourism agency in town, a diving school and a transportation company. LAPA has in its *portfolio* of social actions reggae festivals, t-shirts for the Week of the Environment and the pamphlets produced by the Environment Inspectors, *supra* analyzed. LAPA also pays the salaries of part of the Marine National Park staff. According to its founder, "those resources are destined for the community's well-being and for the NGOs and the government. So, in this manner, we have been supporting Ibama, getting lot's of resources for the National Park. We have also provided some support to SOS Whale. And all of this is non-profit." He then concluded that: "as the financing for compensatory actions of Aracruz cannot be through government agencies, LAPA works as the entity which receives resources from companies, to then transfer them to other NGOs and to Ibama, where it is used to pay salaries and implement social projects.



To end this section what better than the words of an Ibama official which evidently speak for themselves: "the mangrove project is part of the conditionalities related to the licensing process, but it is more than that. It goes beyond the limited model of environmental compensation. It is not an obligation anymore, it is a sponsorship. That's the reason why we use the company's logo in all the project's materials."

### **Conclusion: education, circumscription and control**

The present work, eminently ethnographic, searched to describe the combined mechanisms of education, circumscription and control, through which different social agents regulate the appropriations of the natural environment in a region of the extreme south of Bahia.

Even before the arrival of great eucalyptus and cellulose corporations in the region, the conservationist NGOs had been improving educational tools with a double objective. On the one hand, to legitimize its presence in the town and on the other to transform the perceptions and practices of "local populations" in relation to the environment. Environmental education would work as a means to get closer to the community and to efficiently transmit a message about the environment. Basically that it is bounded, indivisible and belonging to a transcendent and universal being – humanity, men or a diffuse and totalizing "us". Above all, the environment is viewed as something equally appropriated by all; the fact that people have access to an unequal share of the environment is actively neglected.

The only differentiation that operates within this universalizing subject is that there are those who pollute and those who protect. Children are taught that those who "use the environment" are considered polluters: those whose livelihood depends on a direct and constant contact with natural resources, a social group to which they themselves and their families most certainly belong to. When children receive this information, they learn to stigmatize the groups that "use the environment" in a supposedly inappropriate manner. In addition, the logics of control and punishment is naturalized as a normal tool to regulate the *deviations* of certain dispossessed social groups. Obviously, the environmental education

lessons do not teach the children who the main polluters of rivers, seas, bays and forests and destroyers of traditional ways of living actually are.

With the entrance of the great eucalyptus and cellulose industry in the region, all organized segments of the town of Jangada began to be captured. The company funds and reinforces its activities through a NGO that defines itself as intermediate between the company, the community and Ibama. Educational tools are not only destined for primary school children but are also extended to the workers who arrive into town for the port construction, adding a component of sexual education that aims at controlling and marking their bodies as potentially contagious.

At the same time, the intermediate NGO finances a project of circumscription of the mangrove spaces together with transformation of production technologies in the mangrove, from a subsistence economy to cash economy. This action, though financed by a private company, is to be promoted and implemented by the regulation state agency for the environment. This form of territorial delimitation based on a scientific reason defines a quantitative limit supposedly inscribed in the natural dynamics of the mangrove, which might in the future legitimize the creation of intangible areas. This may lead to uncertainties related to the very access of river banks populations to the mangrove, on which they largely depend for their subsistence. Nevertheless, the mangrove natural resources are already, in a sense, intangible, considering the systematic control to which the islanders are submitted when they make use of the natural resources that they themselves or their ancestors have produced. Scientific knowledge also circumscribes marine territories through technical instruments that fishermen cannot have access to. Even though possessing the knowledge of navigation without radars or radios in an instable and sedimented area, they ignore the one-dimensional logics of digital mapping.

The control of the community's perception about the company takes place in a context of absence or omission of the State in functions understood as basic by the local population, such as the support for income generating activities, like fishing. This space is largely fulfilled by the company Aracruz, which offers a wide range of benefits, such as infra-structure for the town's organized groups, professional courses for those who expect a workplace, gifts for the politicians, as well as support for the samba schools which are willing to praise the qualities of the eucalyptus.

Against this process of capture some sectors, such as the fishermen, express their suspicion that in the long term the company's activities may cause damages to their sole economic activity. Others explicitly present the perception that the decades of presence of the eucalyptus plantations might have already caused substantial changes in the climate, therefore affecting their productive activity. They understand that "justice is not for them, just for us", in a sentence where justice means the punishments to which the weaker ones are subjected. One can feel the distrust towards this great corporation, which has been able to transform legal mechanisms for compensating social and environmental damages into sponsorships, benefits, or gifts for which only a small proportion of the population has access to. For those who can perceive the mechanisms of production of environmental inequality few options are left that go beyond the apparatus of education, circumscription and control operated by the partnership NGOs-Regulation State Agencies-Private corporations. Nevertheless, they do exist.