

P U L P M I L L S

From Monocultures to Industrial Pollution

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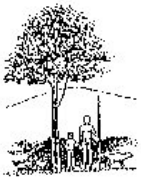


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World Rainforest Movement

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INTRODUCTION

The stained whiteness of a sheet of paper

The whiteness of a sheet of paper hides obscure stories of environmental degradation and social dispossession. However, those stories are seldom known by consumers living far away from where the raw material — wood — is obtained and from where pulp and paper are produced. It is therefore important to know — and tell — the story.

The story usually begins in a forest, which is either clearcut to provide raw material to a pulp mill — and then left to regrow or replanted with a single species — or is cleared for its substitution by a monoculture fast-growth tree plantation. In some cases, it is not forests but grasslands that are destroyed to give way to large-scale pulpwood plantations. In any of these cases, the impacts on local biodiversity, water and soils are huge.

Those environmental effects also result in social impacts. Forests and grasslands are not void of people. On the contrary, they are inhabited by millions of human beings, who obtain their means of living from those ecosystems. The story therefore continues with dispossessed local communities who suffer the consequences. Whenever possible, those communities stand up for their rights and have to face repression from State authorities that side up with the pulpwood sector. Sometimes the communities succeed, sometimes they don't, but in all cases they have to endure the consequences of their resistance.

The next part of the story begins in a pulp mill. The cheap raw material — extracted at a huge social and environmental cost — is brought to the mill to be processed. This process then results in water and air pollution that affects the health and life quality of communities living in the plant's vicinity. Here too local people are forced to fight back and face the consequences.

The story ends with the production and consumption of the paper produced in the process. What makes the ending even sadder is that

most of that paper was never meant at satisfying real human needs but at creating unnecessary consumption so as to ensure the pulp and paper industry's profitability.

The story can however have a totally different ending. Consumption can be drastically reduced without this resulting in paper scarcity. A French citizen now consumes annually some 190 kgs of paper and cardboard, to a large extent used in packaging. Why should a Finnish citizen not be able to bring down his/her 430 kgs of yearly consumption to that figure? Why couldn't U.S citizens do the same with their current per capita consumption of 330 kgs? But even French figures imply overconsumption, and could be brought down to the 40 kgs consumed by an average Uruguayan citizen — whose consumption could be also easily brought down even further.

Bringing down consumption is not however a matter of individual choice; it is a political issue. The pulp and paper industry, together with its many associates — machinery suppliers, consultancy firms, export-credit agencies, private and multilateral banks and others — will react to efforts for bringing consumption down. Successful opposition therefore needs to bring together all those impacted by plantations, deforestation and pulp/paper production with organized opposition in consumer countries and to campaign jointly demanding both respect for the rights of local communities affected by the paper cycle and national and global policy changes concerning the use of paper.

The white sheet of paper does not need to be stained; it can be socially and environmentally clean. That's the challenge. And the aim of this issue of the WRM Bulletin is to contribute in that direction. (WRM's bulletin N° 83, June 2004).

THE PULP AND PAPER SCENARIO

Growth does have limits, and scale is truly an issue

Transnational corporations are increasingly dominating all economic sectors where profits can be made. Most of them have incorporated social and environmental concerns to their discourse, though few of them actually comply with their own declarations in this respect. Regardless of their good intentions, the sheer scale of their operations make environmental sustainability practically impossible, while competition to dominate global markets has made social concerns almost antagonistic to profitability.

Examples of the above abound in all economic sectors, but the case of the Brazil-based Aracruz Celulose is paradigmatic, because it was one of the first transnational corporations to embrace the environmental issue prior to the Earth Summit in 1992. This company is the world's largest bleached eucalyptus pulp producer, with a production of 1,300,000 tonnes per year. Aracruz has been expanding its eucalyptus plantations and its industrial plant ever since its inception and there are apparently no limits to its expansion plans. It now aims at increasing its pulp production capacity to 2 million tonnes and this implies the occupation of thousands of more hectares of fertile lands with monoculture eucalyptus plantations.

Although local communities living in the area occupied by Aracruz — mainly indigenous and traditional AfroBrazilian communities — were dispossessed from their lands, the company initially received some support from other sectors of society, who were promised development and jobs. However, the promised development never arrived, while employment has been steadily decreasing as a result of mechanization and outsourcing. According to Aracruz itself, the company has a labour force of “1,689 employees, including our international subsidiaries, Aracruz Produtos de Madeira and Portocel. In addition to our own workforce there are 2,954 permanent outsourced workers, resulting in a total of 4,643 direct jobs in regions where we operate.” And these are the jobs created by a huge company, with a huge pulp mill and equally huge landholdings of some 220,000 hectares!

At the same time, existing rural employment has decreased as a result of land purchasing by Aracruz and its plantation to eucalyptus. Given that jobs per hectare in tree plantations are much less than jobs per hectare in agriculture, the resulting employment balance is negative in the rural areas. Additionally, environmental impacts of both plantations and pulp production have impacted further on local people as, for instance in the case of local fishing communities confronted by the depletion of fish due to Aracruz's activities.

The above and many other impacts have resulted in increased organized opposition which even led to a law recently passed by the state Parliament — and immediately vetoed by the Governor — banning further pulpwood plantations until an agro-ecological mapping of the state establishes clear rules on where they can and cannot be planted.

As stated above, the case of Aracruz is but one example of what is currently happening in many parts of the world — South and North. No matter how hard — when they actually do — transnational corporations try to take into account environmental and social issues, the end result is environmental degradation and increased marginalization of people. And the issue is in fact quite simple: the larger the scale, the larger the impacts. Is it not time to begin to rediscuss the “small is beautiful” and the “limits to growth” concepts? (WRM's bulletin N° 49, August 2001).

Biotechnology: The dangerous paradigm of modern industrial forestry

The word “modern” is usually understood as meaning progress. In forestry, it clearly means the opposite, particularly — though by no means only — with respect to biodiversity. Modern industrial forestry aims at the production of ever increasing volumes of wood per hectare, regardless of its impacts on people, soils, water and biological diversity.

The initial stages of industrial forestry are now perceived as primitive by modern foresters, because only few hectares of trees of a single genus (frequently several species of eucalyptus in the same plot) were planted in holes dug in the soil. They grew fast, though not fast enough to feed the ever-growing appetite of the pulp and timber industry.

Consequently, scientists and technocrats came to the rescue and provided the industry with further ideas. Ploughing and fertilising, herbicide and pesticide spraying were applied to increase wood yields which were still not high enough to satisfy industry. So-called “plus” trees (fast-growing, straight trunks, few and thin branches), were selected for seed production to produce new generations of even faster growing and more adequate trees to feed sawmills and pulp mills with homogeneous raw material. The following steps were the incorporation of hybridisation and cloning, which increased wood production, now tailored more closely to the needs of industry (e.g. low lignin content to meet the pulp industry’s economic interest of high cellulose content).

The above “innovations” — which were in fact only following on the steps of the Green Revolution in agriculture — led to the establishment of millions of hectares of very fast-growing plantations, which produce wood-yields unimaginable two decades ago. Establishment foresters portray such “progress” as a success story. It has resulted however, in serious social and environmental impacts. The fact that local people — who have to endure their consequences — describe them as “dead forests”, “green cancer”, “green desert”, “planted soldiers” (green, in rows and advancing ominously), “selfish trees”, etc. indicate the extent of those impacts.

In spite of the above, for the anti-social and anti-environmental mindframe behind this forestry model, genetic manipulation is the ultimate paradigm: imagine thousands, millions, billions of trees, all with the same chosen genotype, growing in straight lines at amazing rates and producing millions of tonnes of wood! But for people and the environment, biotechnology would be the ultimate disaster multiplying the present impact of tree plantations, which already make them socially and environmentally unsustainable, many times.

From a biodiversity perspective, genetically modified tree plantations pose serious threats and “nowhere are the contradictions of the GM ‘fix’ clearer than in the controversy over how to prevent genetic modifications from spreading from industrial to neighbouring ecosystems.”

The authors of the above quote (Sampson and Lohmann) stress that “the need to prevent GM trees and their genes from invading native

ecosystems is clear. Low-lignin trees have the potential to disrupt the forest composting cycle responsible for unique soil structures and nutrient cycling systems. An influx of low-lignin trees vulnerable to damage from insects and other herbivores, moreover, could result in pest population explosions. Insect-resistant GM trees have the potential to disrupt insect population dynamics and also are likely to enjoy an invasive advantage over forest tree species. More generally, invasions of GM trees could threaten the diversity of the forest gene pool from which trees are selected for conventional breeding — a reservoir already reduced by selective logging practices. Because trees are even more genetically compatible with their wild relatives than highly-bred agricultural crops, GM ‘escapes’ are especially worrisome in forestry.”

The authors' concluding remarks underscore the specific concerns that forestry biotechnology raise: “In these respects, the issues raised by GM trees are similar to those raised by GM crops. Yet in many ways, genetic modification in forestry is an even more serious issue than genetic engineering in agriculture. Trees' long lives and largely undomesticated status, their poorly understood biology and lifecycles, the complexity and fragility of forest ecosystems, and corporate and state control over enormous areas of forest land on which GM trees could be planted combine to create risks which are unique. The biosafety and social implications of the application of genetic engineering to forestry are grave enough to warrant an immediate halt to releases of GM trees.” (WRM's bulletin N° 56, March 2002).

The Paper Tread: From Need to Greed

Long time ago the need of our first ancestors to transmit words and images found their way on stone walls, clay tablets, wax-coated boards, animal hides and other media. Later, around 3000 B.C. the Egyptians began writing on papyrus reeds. Papyrus stalks were laminated into strips (as were bamboo slivers in China). Ts'ai Lun, a Chinese official, is credited with inventing the first real paper around A.D. 105 by pounding mulberry, hemp fishing nets and rags into a material that ultimately allowed the calligraphy brush to dance across a smooth surface. Rolled up scrolls remained the standard information storage unit until the codex, or folded leaf notebook, appeared around the fourth century A.D.

Paper manufacturing techniques were transferred westward when an Arab army defeated Chinese forces in A.D. 751 and captured, among its war prisoners, a few papermakers who were later set up to practice their craft in Samarkand. Papermaking abilities then spread slowly from Islamic Asia to Europe. The Middle Ages in Europe remained a time of illiteracy, finally broken by Gutenberg's 15th-century invention of movable type. The publication of the Gutenberg Bible in 1455 and the subsequent rise of mass-produced books facilitated the broad dissemination of ideas and information. This triggered a demand for paper. At that time, rags provided the main source of fibre.

In the 19th-century, French and English factory owners, struggling to overcome the power paper artisans held by virtue of their specialized knowledge, began to develop, with the help of the industrial revolution's new machine tool industries, paper machines which centralized paper-making technique in capitalist hands. The advent of tree-based pulping provided a cheaper, more readily available fibre source (still, contempt for wood-based paper was so intense among local residents that deliveries of the tree pulp had to take place at night). The discovery of elemental chlorine in 1774 and the invention of the Fourdrinier continuous sheet paper machine, patented in 1807 eventually enabled manufacturers to chemically pulp and bleach wood fibres and to drastically boost production by creating rolls rather than individual sheets.

It was not until the late nineteenth-century development of commercial techniques for pulping wood, a material which could be harvested at any time and easily stored and shipped in great volume, that the full potential of the new machine began to be realized. Conversely, once wood-based pulps had inaugurated an age of cheap, large-scale paper production in the mid-1800s, new commodities began to be developed which embedded paper use ever more thoroughly into business and household activities. Paper shirt collars, building materials and bags were soon supplemented by toilet paper, drinks cartons, nappies, fax and computer paper, and export packaging.

In its present phase, the tree-based, globally oriented paradigm came to dominate 20th-century paper production as industrial manufacturing processes and forestry methods expanded. Global paper use has grown 423% from 1961 to 2002.

By the mid-1980s, the environmental impact of tree-based papermaking surfaced to intense public scrutiny. Scientists realized that elemental chlorine, the main chemical used to separate and whiten wood fibres, combined with lignin produced dioxin, one of the most potent carcinogens and hormone disrupters (after incineration, pulp and paper mills are the second greatest source of dioxin and the largest source of dioxin contamination of water). Paper became associated with public health problems and the poisoning of fisheries.

The international industry responded by investing in technologies that might lead to pollution reduction. The straight substitution of chlorine dioxide (ECF process) for chlorine gas has significantly reduced but in no way eliminated dioxin pollution. Also totally chlorine free (TCF) technologies were implemented — though its market share is marginal. ECF pulp dominates the world bleached chemical pulp market with more than two-thirds of the world market share (75%), followed by the traditional elemental chlorine gas at around 20%, while TCF production maintained a small niche market at just over 5% (2002 figures).

However, new evidence shows that problems persist in either technologies. There appears to be no correlation between AOX (absorbable organic halogens, a surrogate measure of the amount of chlorinated organic compounds in pulp and paper effluent discharge) discharge levels and environmental impact in studies of specific responses of fish. In addition, other observations have documented a variety of lesions in fish sampled adjacent to a mill using sodium hydrosulphite as a bleaching agent, with no chlorine chemicals in use. Also, the concentrations of metals present in TCF wastewaters have been found to be higher than in other bleachery effluents. Overall, such studies demonstrated that while environmental improvements could be achieved by process changes — and the elimination of chlorine based chemicals was a key factor in such improvements — , effluents from all processes were toxic to some degree. Furthermore, every stage of paper production, from the cutting of trees to disposal of paper into landfills, significantly adds to the greenhouse gases in the atmosphere. All these risks are being magnified by the ever increasing scale of new mills.

One fifth of all wood harvested in the world ends up in paper, and it takes 2 to 3.5 tons of trees to make one ton of paper. On the other

hand, pulp and paper is the 5th largest industrial consumer of energy in the world. Also, in some Northern countries paper accounts for nearly 40 percent of all municipal solid waste. With global annual growth forecast at 2.5%, the industry and its negative impacts could double by 2025.

All this worrying data should lead us to consider the ultimate reason of exposing the environment and the people to such risks. Is it the unavoidable cost that human society has to pay for the sake of literacy, information, culture? Or is present paper consumption linked to the modern living's disposable pattern?

In terms of the uses of paper, packaging now outweighs communication grades. Although paper is traditionally identified with reading and writing, communications has now been replaced by packaging as the single largest category of paper use. The real expansion in paper packaging has come since the 1950s with the spread of supermarkets and pre-packed food (though in some cases it is declining both as a consequence of overall reductions in packaging and as a result of substitution by other materials, notably plastics). The electronic information revolution has to date multiplied rather than replaced paper use, and a number of other factors such as advertising and food retailing also influence specific patterns of paper consumption, notably the demand for newsprint and packaging papers. The overwhelming majority of paper is used as an input to other manufacturing sectors: demand is therefore filtered via other industries and is rarely a direct response on the part of final consumers. In the USA, only 15% of paper production is bought directly by final consumers.

From the point of view of consumption, the trend is in line with the gross inequities that allow for the accumulation and centralization pattern of market globalization and a gulf separates paper consumption in North and South: the U.S. is by far the world's largest producer and consumer of paper. The average U.S. citizen consumes 27 times the amount of paper used each year by the average inhabitant of the South, while many African countries now consume less paper per capita than in 1975.

Consumerism and poverty live together in an unbalanced world where there is no political will to stop the wasteful over-consumption of some

people and to enhance the standard of living of those in most need. Present paper (over) consumption is based on mortgaging humankind's future, and mainly to the benefit of a few corporations which control the global market through manipulation of markets, cartel agreements, price fixing and other similar practices. The size of large paper firms — the sales figures of International Paper alone rank above the Gross Domestic Product of more than 75 countries — make them influencing political as well as economic actors whose profit-driven operations hold major responsibility in the shaping of the present environmental, social and economic crisis. Huge supermarkets and shopping centres are the new cathedrals of the modern consumer society which makes room for just an elite — 28% of the world population, mainly from Northern countries, whose consumption habits have led to an unsustainable situation because of the huge consumption of water, energy, wood, minerals, soil and other resources, and the loss of biodiversity, contamination, deforestation and climate change. (WRM's bulletin N° 83, June 2004).

The production of pulp

Pulp mills process timber in order to obtain the main raw material for paper production: pulp. They are usually large factories located close to where timber is cut, that is to say, near forests or monoculture tree plantations, from where the logs can be easily transported, thus cutting costs.

Basically, wood comprises lignin and cellulose fibres and the first step to obtain pulp is to crush the solid wood. Depending on the processes used, two types of pulp are to be distinguished.

- * Mechanical pulp. Mechanical processes crush wood and release the fibres. This process turns up to 95 per cent of the wood into pulp, but keeps the lignin, which gives the paper a brown or yellow tint. This type of pulp is mainly used for newspapers and other products where the quality of the print is not too important.
- * Chemical pulp. Solid wood is first broken down into small wood chips, which are then processed with chemicals, followed by a process of refinery. Chemical extraction separates the lignin from

the cellulose, that remains as the final product. This is achieved by means of hydrolysis (a reaction using water) under high temperature, using chemicals and a large amount of energy. Depending on the chemicals used, different processes can be identified: 1) the Kraft or sulphate process (presently the most commonly used), which cooks the wood chips with caustic soda; 2) the sulphite process (that predominated in the paper industry from the end of the nineteenth century until the middle of the twentieth century) which cooks the wood chips in an acid solution; and 3) the chemical thermo-mechanical process, where the chips are steam-heated and then treated with chemicals before crushing them.

Depending on the process and the type of wood used, different kinds of pulp are obtained: long fibre (from conifers) and short fibre (other tree species, with some exceptions). The importance of this difference regarding paper is that the long fibre paper is more flexible, and is therefore generally used for newspaper. Pulp produced both through mechanical or chemical processes, usually requires bleaching. There are various types of bleaching: 1) using chlorine gas (also known as elemental chlorine); 2) elemental chlorine-free (ECF) using chlorine dioxide (within this technique ECF has also been developed using ozone in the initial stages of the bleaching process and chlorine dioxide in the final stages, and "improved" ECF, which eliminates most of the lignin that gives the yellow colouring before bleaching, thus reducing the use of energy and chemicals for the process); and 3) "Totally Chlorine Free" (TCF), that is to say, bleaching without chlorine compounds, using oxygen and hydrogen peroxide or ozone.

The public discussion on pulp bleaching started in the mid-eighties. The analysis revealed a high concentration of AOX (a parameter measuring the total concentration of chlorine linked to organic compounds in wastewater) in pulp plant effluents, and later dioxins were also found. Dioxin is the common name for a family of chemical compounds (there are 77 different forms of dioxins), showing similar properties and toxicity; they appear as a result of thermal processes involving organic products with chlorine and have serious effects on health and the environment, heightened by their persistence and accumulation.

The world production of bleached chemical pulp has increased over the past 15 years from 56 million to close on 90 million tons. According to 2002 figures, approximately 20 per cent of the world pulp production is chemically bleached using the traditional chlorine gas and about 75 per cent is bleached with chlorine-dioxide by the ECF process, while just a little over 5 per cent is bleached by the TCF process.

- *The problems of pulp mills*

Pulp mills are increasing in size and production capacity, worsening the impacts of their industrial process that already presents serious environmental risks. Some risk factors can be identified:

*Size (scale)

Today's pulp mills are mega-factories and their very size makes them a risk. In an industrial process using so many toxic chemicals, any small detail that is altered, any small release is magnified because of the scale of the factory. Furthermore, toxic chemical releases may be small as compared to the volumes processed, but not with the magnitude nature can support. The effluents from a large 600.000 metric ton plant are approximately 1000 litres per second.

*Smell (emissions)

Emissions into the air by pulp mills (from the incineration of tons of residue left over from the process and used in energy generation) contain cancerogenic chemicals (chlorinated phenolics, polycyclic aromatic hydrocarbons and Volatile Organic Compounds), oxidized sulphur compounds causing damage to vegetation, compounds causing hormone imbalance (such as the chlorinated phenols) and reduced sulphur compounds causing the classical penetrating "rotten egg" smell that becomes a problem for the surrounding inhabitants. Recent epidemiological studies show evidence of possible effects on health caused by exposure to these compounds at levels usually present near a pulp mill. A Finnish study (The South Karelia Air Pollution Study) shows that exposure to bad-smelling sulphur compounds increases the risk of acute respiratory infections.

* Problems with the production of bleaching agents

Many chemical bleaches are reactive and dangerous to transport and for this reason must be made in situ or near by. This is the case of

chlorine dioxide (ClO₂), an extremely reactive greenish yellow gas that explodes easily, representing a major threat to the workers and the neighbouring inhabitants in the event of an accident. Another agent used, elemental chlorine (Cl₂), is very toxic. It is a greenish gas that is corrosive in the presence of dampness.

* Effluents and water pollution

The enormous demand for water in pulp mills may reduce the level of water and the effluents may increase the temperature, a critical issue for the river ecosystem. Generally, mills are installed near a watercourse with a good flow where they can get their supply (at a lower cost) and also discharge their effluents. The pulp industry is the second largest consumer of chlorine and the greatest source of direct discharge of toxic organochlorines into watercourses.

Pulp production processes that can potentially cause more pollution are the chemical methods, in particular those producing Kraft pulp, as the effluents may contain organic compounds present in the pulp and chlorine compounds that when combined can form a series of toxic products such as dioxins, furans and other organochlorines (also known as Absorbable Organic Halogens/AOX), each having different degrees of toxicity. The serious problem with these compounds is that their capacity for biodegradation is very limited, meaning that they remain in the biosphere for many years after they are no longer being released, building up over time in the tissues of living organisms (bioaccumulation). This means that concentrations in the fatty tissue of superior organisms (including human beings) are higher than the concentrations present in the environment where they were exposed, making this an important human health problem. According to the US Environmental Protection Agency (EPA), exposure to minute levels of dioxin (measured in trillionths of a gram) can result in alterations of the human immune system and of endocrine hormone activity, including the regulation of sex steroids and growth, and inheritable genetic changes. Not forgetting, of course, cancer. Among the major sources of dioxin emissions is elemental chlorine pulp bleaching.

In the case of the effluents of chlorine dioxide bleached pulp, these contain chloroform, chlorinated acids and sulfones. Chlorine dioxide bleaching produces large amounts of chlorate, which acts as a

herbicide. It has been proven that although effluents are more biodegradable than with the elemental chlorine technique and that the presence of organochlorines has been reduced, they continue to be produced and to affect the environment. Although liquid effluents are less toxic than they were ten years ago, they are still dangerous because they are persistent pollutants, that is to say, that they are permanently accumulating and do not degrade.

Furthermore, in addition to the effects of organochlorines, towards the end of 1994 the conviction took shape that substances contained in wood become problem compounds during the pulp extraction process, as fish affected by effluents from the production of bleached and non-bleached pulp showed toxic effects. Dissolved wood substances, chemical residues and compounds produced by reactions between chemical substances and wood substances produce pollutants that may reduce the oxygen levels in the watercourses where they are released and prove lethal to fish.

Effluents from the bleaching process generally contain between 40 and 50 kilos of organic substances (mainly lignin) per ton of pulp. Studies carried out in Canada and Sweden at the end of the eighties and beginning of the nineties on the chronic effects of effluents from pulp mills on fish in the nearby watercourses, revealed reproductive alterations, increased metabolism and changes in the structure of fish stocks. Other studies revealed genetic damage, hormone changes, liver alterations, cell function problems, changes in blood composition, skin and brachia lesions and reactions by the fishes' immunological system. A study carried out in 2003 revealed that 80 per cent of the female *Gambusia* fish living in a river downstream from a pulp mill were shown to be partially masculinised (alterations in the anal fins, a feature related with masculine hormone activity), and 10 per cent of the fish were totally masculinised. Although the researchers did not identify a specific male hormone compound in the pulp mill effluent, later tests produced a variety of reactions in the male hormone receptors.

On the basis of these problems, there is reason to wonder whether the aforementioned risks related to pulp and paper mills are justified in the name of some general welfare, whether this activity aims at

meeting genuine human needs or has contributed to alleviate poverty. According to the following reports and testimonies, the answer is no. Pulp mills are just one link in the chain of an unsustainable “development” pattern which allows big economic interests to secure their power. (WRM's bulletin N° 83, June 2004).

Pulp Mills and Tree Plantations: A Duo in Power

The dispossession, deforestation and pollution caused by the pulp and paper industry is tied to a dynamic of ever-increasing scale, concentration and capital intensiveness which has characterized the industry since the Industrial Revolution. Crucial to this dynamic are attempts by the industry and its allies to refashion the political and physical infrastructure through which they work, capturing subsidies, managing demand, centralizing power, and evading, digesting and regulating resistance. In such a context, the claim that the industry helps society meet its pre-existing needs “more efficiently” makes little sense.

Some common but false assumptions about the pulp and paper industry are that:

- * Pulp and paper companies do not alter society's goals and needs but leave them untouched; they merely provide wealth, goods and jobs which help society do better what it is doing already.
- * It is merely the drive to do so efficiently and competitively which causes such firms to increase the size of pulp and paper installations and to seek cheaper production sites around the world.
- * Any social and environmental disruption which results from this expansion requires at most some adjustments to the market apparatus or state regulatory systems, not a rethink of the industry's scale, structure or political relationships with the rest of society.

Despite these claims, the industry's current drive towards larger scale and global expansion cannot be explained solely by “economics”. But neither is it being driven by a political conspiracy of unseen masterminds in transnational corporation boardrooms acting with the

careless ease of omnipotence. Social structures sensitive to the needs of pulp and paper elites are built, expanded and improved upon only through the political efforts of a multitude of agents with different interests and motivations, working together in an ad hoc and sometimes uncoordinated fashion in interaction with an ever-varying background of resistance and of the varied qualities of land and natural materials.

The evolution of pulp and paper technology has always been intertwined not merely with profit or efficiency but with the attempt of small elites to rearrange structures of power in their favour.

The switch from rags to wood as a raw material reinforced papermakers' reliance on large, highly-mechanized mills — for one thing, the chipping equipment and stone grinders used to process logs produced too much pulp for small paper mills to absorb. Yet the more that the pulp and paper industry invested in huge, wood-adapted pulp and paper machines, integrated with the timber industry and decoupled from any other source of raw materials, the less inclined the trade became to consider any other approach. Today, 90 per cent of paper pulp is made of wood, either by grinding it up or chipping and boiling it in strong chemicals. Large quantities of fresh water and energy are required for the process, which consumes annually the rough equivalent of the timber that would cover 20,000 square kilometers of wooded land.

Status competition among early twentieth-century newspaper magnates in North America and Britain to build ever-bigger paper machines contributed further to growth in scale. By 1975, major machine manufacturers' investment in large machine tools had made it difficult for them to produce for anyone but the largest paper investors. Access to the dominant stream of papermaking knowledge was now restricted not just to capital, but to big capital. Today, most of the pulped wood used to manufacture newsprint, packaging board and writing paper today flows from a small number of sprawling plants, shining with expensive, computer-assisted machinery and costing up to US\$1 billion or more apiece.

One consequence of the fact that almost all new investment in pulp is large-scale is that any surge in demand inevitably results in more investment in productive capacity than is actually required to meet it.

This in turn leads to a savage boom-and-bust cycle. In 1993, for example, after one bout of overinvestment, pulp prices dropped to half of what they had been four years previously, leading to rampant losses, cost-cutting, closures, mergers and takeovers. It is not surprising that the industry feels pressure to create new demand in a way which might moderate future price dips. Large scale can be a cause as well as an effect of efforts to reorganize society in ways friendly to a few central actors.

The giant pulping machines characterizing today's industry have to be run nearly 24 hours a day if the massive debts incurred in their construction are to be paid off on schedule. This reinforces the mills' need for secure, convenient access to huge supplies of water, wood — and enormous, contiguous, dedicated areas of land. Today's gigantic pulp mills find it almost impossible to share the landscapes they occupy with local communities pursuing a variety of agricultural, fishing and subsistence-gathering activities. They work far better with simplified, compact populations of factory-friendly trees than with, for example, native woodlands reserved for a variety of uses.

In addition, today's big mills demand the construction of roads or waterways which run straight from cutting site to port or factory instead of a web of slow systems of transport linking one local area to another. They favour the growth of mill towns where everyone works for the industry rather than communities with diverse livelihoods. All this provides incentives for propagating an ideology which privileges a supposedly "global" demand for pulp over varied local demands for individual farm plots, diverse native woodlands, clean water and air, and the maintenance of fine-grained craft practices which make possible local control over native forests and wetlands.

The pulp and paper industry often justifies its preference for large-scale, single-centred systems over many-centred social mosaics by claiming that they help release latent economic "efficiencies". However, the demand which is to be met "efficiently" had to be created first, and landscapes homogenized by political means, before this talk of "efficiencies" could begin to make sense. From the point of view of a farmer in, say, South-East Asia, the engineering of today's centralized pulp and paper systems entails uncompensated losses of water, soil,

fodder, fish, transport, or livelihood generally — hardly a gain in “efficiency” from perspective.

As native forests are exhausted and local resistance provoked, pulp and paper industries are turning increasingly to industrial tree plantations to furnish large amounts of fresh, uniform raw material on a smaller land base, avoiding conflict with other land uses. Although industrial plantations currently supply about a quarter of world demand for pulpwood (2000 figure), this proportion is bound to rise, given deforestation, the limitations of recycling (fibres can only be reused a few times before disintegrating into dust), and the resistance of much of the industry to non-wood materials.

This shift to plantation pulpwood provides more incentives for the industry to move raw fibre production to new regions, especially to the South. In countries such as Brazil and Indonesia, trees such as eucalyptus or acacia grow faster, land is cheaper, and companies are able to benefit from lower-cost labour and severer political repression than in the North. All this entails low prices for wood, which, as Robert A. Wilson of the Anglo-French conglomerate Arjo Wiggins Appleton remarks, is “the strategic driver in the industry... the key competitive differentiator.”

Pulp mills are often integrated with the new Southern plantations. This is not only because it makes more economic sense to combine wood and pulp production than to keep them separate, and to export fibre in the more concentrated form of pulp than in the watery form of wood chips, but also because environmental regulations are looser in the South than in the North, foreign aid subsidies easier to obtain, and consumption, especially in the Asia-Pacific region, likely to grow faster. Thus Brazil and Chile, for example, none of whom have been traditionally strong in the pulp and paper industry, are now among the top ten exporters of pulp, their principal customers being in industrialized countries. Indonesia’s production of pulp rose from 980,000 tons in 1987 to 8 million tons in late 2000.

In sum, today’s large pulp and paper firm, like a biological organism, is constrained by its inheritances — including immense, unwieldy machines and a reliance on wood fibre — and owes its survival largely

to a whole array of actors behind the scenes: consultancy companies, technology suppliers, industry associations and alliances, bilateral agencies, State investment and export credit agencies, multilateral agencies, national governments, research institutes and NGOs, with which it has evolved in cooperation or symbiosis. Like a plant or animal, such a company does not adapt passively to a fixed environment, but, with the help of its allies, constantly recreates it — undermining forms of power necessary for stewardship of local land while extending the realm of uniform rules of exchange; constructing new financial, physical, legal, and cultural networks by which resources and subsidies can be pumped to central locations and new forms of influence exercised over workers and resisters; recanalizing customs and dreams into forms satisfiable through paper consumption; and attempting to substitute public relations for the risks of democratic debate. Large, destructive technologies, rocketing consumer demand and the growing phenomenon of globalization are products less of “economics” than of politics. (WRM's bulletin N° 83, June 2004).

How the Pulp Industry Tries to Manage Resistance

Pulp mills' extremely large scale makes it necessary for them to simplify under a central authority not only landscapes, biological diversity and genetic diversity, but also political systems. The sheer size of the mills and the landscape they reorganize around them means that to survive, they need constantly to attract subsidies, stimulate demand — and above all, control resistance, both from ordinary people and from the landscape.

Where opposition does not challenge the pulp and paper industry's most fundamental interests, it will attempt to contain it by internally redistributing its considerable resources in various ways, relieving tensions in one area through slack in another. For example, the industry will try to:

- * Buy off resisters or attempt to demonstrate to them how their concerns can be “met” within the industrial system, through, for example, bribes, contract farming schemes, promises of “economic development.”

- * Help see to it that resisters are crushed by force, assuming that they are isolated, small-scale, poorly-coordinated, and out of the public eye, and the government sees it as in its own interest to foot the military bill.
- * Insist on discussing the issues in public only in the idiom of orthodox economics and “global demand” rather than in the languages of ordinary farmers or of politics.
- * Give in to certain demands made by opponents, if they cannot be bought off or persuaded to modify their demands, if suppression is difficult, or if industry interests are relatively unaffected. Japan's paper industry, for example, has had simply to accept environmentalist resistance to its exploitation of Western North American lands and shift its search for raw materials elsewhere. By the same token, Western industry is slowly capitulating to opposition to the use of chlorine in pulp treatment, and finds it easy for the industry to give in to demands for more recycling given that it is long accustomed to using waste paper as a raw material.

Some opposition, however, presents deeper threats. No paper corporation possesses the resources to adjust itself to falling demand for all its products, nor, faced with community-based opposition to plantations across very large areas of the South, to buy it off everywhere it arises, smash it wholesale, or shift its search for raw materials to another planet.

Such challenges, impossible either to accommodate or to crush outright, are met most intelligently by the ancient strategy of divide and conquer. Abandoning attempts either to conciliate or to wipe out groups with which it has irreconcilable conflicts at the grassroots, industry instead concentrates its attention on keeping those groups divided from potential allies in bureaucracies and in urban and Northern middle classes.

Thus pulp and paper interests in Indonesia and other countries have resorted to repression and abuses at home while hiring public relations firms such as the US's Burson Marsteller to present a softer picture to customers and legislators in the West, as well as to infiltrate,

undermine and monitor Western environmental groups. Industry-retained public relations firms also attempt to marginalize as “radical” or “irresponsible” movements for reduction of paper consumption in the West.

Some years ago Arjo Wiggins Appleton executives O. Fernandez Carro and Robert A. Wilson summed up such strategies when they urged their colleagues not to target “apparent opposition” if that means “forgetting the vast mass in between: the public”; not to “respond to the mobile agenda of others” but rather to “write the agenda and diffuse negative issues”. Politics, they went on, “provides the packaging and the vehicle to achieve the industrial objectives. Success is measured by the freedom to plant fibre crops, recognizing the sum total of all the political forces (in the broadest sense). There are two elements to the political subsystem [of the total quality system of industrial forestry]: the message and the target. The message needs to be short, non-technical, and fundamental: for example, ‘Trees are good. We need more trees not less’. Our objective should be to create and move inside an ever-increasing friendly circle of public opinion.”

In addition to “trees are good”, many other oversimplified “messages” have also proved to be useful to the pulp and paper industry in its divide-and-conquer strategy:

- * Indefinitely rising paper demand is either inevitable or desirable or both.
- * Demand for paper comes not from particular groups, classes, or societies, but rather from “the globe” or “the nation” as a whole, which is seen as having a moral status superior to that of local people defending their land or water. This idea helps license cross-regional and cross-class subsidies for the industry, as well as large forced evictions.
- * Pulpwood plantations are an economically productive use of unoccupied, degraded land. This “message” is effective only with environmentalists unaware of industry thinking and practice at the grassroots. As the Asian Development Bank and Shell International have both pointed out, industry is not particularly interested in

degraded land. What it requires instead is contiguous chunks of “land suitable for superior biological growth rates for those species the market wants” as well as “year-round water” and easy access to transportation. The message also cannot be used with groups who understand that what counts as “degraded” or “unused” depends entirely on who is talking.

- * Plantation expansion helps make underdeveloped countries “self-sufficient” in paper. This “message” can be usefully employed with audiences unaware, for example, that Indonesia's or Brazil's new pulp capacity is aimed largely at export; and that “self-sufficiency” in one or another paper grade counts for little in the face of the liberal trade policies advocated by the industry itself, which will push pulp and paper imports into any country not producing them more cheaply.
- * Plantations are up to ten times more productive than natural forests. This “message” narrowly defines “productivity” as “productivity of trees with market value as pulpwood over two or three growing cycles”. It is useful only with audiences unaware of other ways of being “productive” of more interest to local peoples, such as growing crops and maintaining surface water and community woodlands.
- * Promulgating plantation “guidelines” will make plantations “sustainable”. This message appeals mainly to Northern academics, technocrats and environmentalists unaware of or indifferent to what actually happens on the ground in areas in which pulp plantations have been, for example, certified by the FSC (Forest Stewardship Council).

Such “messages”, used selectively, encourage the globalization of the pulp and paper industry by helping block alliances between grassroots groups fighting monoculture pulpwood plantations and environmental groups elsewhere, particularly in the North.

Yet the converse is also true. It is only the global reach of the contemporary pulp and paper industry — its ability to exploit the spatial and cultural distance between residents of rural areas in plantation zones and intelligentsias elsewhere — that allow it to spread its

oversimplifications and falsehoods to ensure acquiescence in industrial tree plantation development among largely urban and Northern power bases.

This support is crucial, since a ballooning “free market” in wood fibre, pulp and paper can be constructed and coordinated only if the subsidies given to consultants, foresters, aid agencies, and non-governmental organizations to promote plantations can be justified before a large and diffuse public.

To use such mystifications, however, is always to gamble that they will not be exposed through the international coordination of plantation opponents. (By: Larry Lohmann, WRM's bulletin N° 83, June 2004).

Schoolbooks, Shops and Subsidies: Renegotiating Paper Consumption

Ashis Nandy, the Indian psychologist and social critic, once defined progress as “growth in the awareness of oppression.”

What he meant, in part, is that we are fortunate that due to the rise of feminist movements we are more aware of the way women have been exploited than formerly, that due to anti-racist struggles we are clearer about many of the ways of oppression, and that due to the long hours radical scholars put in at their libraries we understand economic exploitation better.

And who could deny that paper consumption — writing materials, books — have played a part in all this?

But does it follow that we can equate paper consumption with progress?

In today's world, it is impossible even to equate paper consumption with literacy, let alone progress. US citizens currently consume 1.7 times more paper per capita than British people, four times more than Malaysians and 83 times more than Indians. Does it follow that they are 83 times more literate than Indians, 4 times more literate than Malaysians and 1.7 times more literate than the British? Or consider another example: the single-year increase in per capita consumption

of paper between 1993 and 1994 in Sweden was double the total (!) per capita consumption of Indonesia.

This suggests that to understand what paper consumption is really about, we need to look at what paper is used for, and the power struggles out of which current patterns of its consumption have developed.

Two centuries ago the modern paper-making machine was invented in France — on the account of its own inventor, not to meet the needs of children clamouring for schoolbooks, but to take power away from paper artisans at a time of artisan unrest and put it more into hands of machine financiers and managers. It wasn't until a century later, when the invention of wood-based pulps inaugurated the era of cheap paper, that consumption began to take off and many of the uses of paper we know today began to be found. That's also when the paper-producing industry began to be wedded to its current dynamic of ever-increasing scale, capital intensity, large-scale industrial forestry, and recurring cycles of excess capacity. Trapped by this dynamic, the industry has been constantly haunted by what David Clark, a European paper industrialist, has recently called the “need to create our own growth [and] stimulate demand.”

Luckily for the industry, a number of powerful actors with their own political and economic agendas have continually lent a hand.

Over the last century, for example, manufacturers of food, soap, medicine and other goods have been constantly developing and redeveloping a remarkable invention: the modern paper or cardboard package.

One thing the package did was to eliminate shop staff who, many manufacturers felt, stood between them and potential consumers. If you don't have to ask a shopkeeper to get you something, but can merely pick a package off a shelf and pay for it, it's often a lot easier to buy it. Paper packaging, with its built-in colourful advertising, also made possible an explosion in “impulse” buying: purchases of things you didn't know you wanted until you saw them.

Small wonder, then, that over the 20th century, shops have been progressively turned into warehouses of individually wrapped, coloured packages containing their own sales pitches and constantly replenished by long-distance transport using still other types of paper packaging. The new type of consumption stimulated by supermarkets, of course, fed back into increased demand for yet more paper packages.

Today by far the largest use for paper — over 40 per cent of production — is not for books, not for newspapers, not for needy schoolchildren's notepads, not for indigent university students' studies, but in packaging and wrapping. An increasing proportion of the rest is devoted to advertising, mail-order catalogues, junk mail, disposable nappies, and computer paper. Even in the South, where there are real shortages of reading and writing materials, the biggest focus of paper marketing is not on goods to aid literacy, but rather on disposable nappies, tissues and the like.

Another part of constructing paper demand has consisted in simply moving the effects of production out of sight. By making sure that the people affected by the monoculture plantations established to feed paper pulp factories are not your neighbours and have no way of contacting or influencing you to convince you to rethink paper manufacture and paper subsidies, industry ensures that manufacturers and consumers will have fewer second thoughts about increasing their paper use.

By taking advantage of cheap land or forced labour or government-subsidized waste sinks, in addition, moving production around the globe helps keep consumer prices low and consumption growing. Dividing people from other people along power lines, race lines and gender lines is part of what consumption is all about.

Thus when the Japanese paper industry's supply of cheap wood residues from the US Pacific Northwest began to run out, threatened by environmentalist opposition and physical shortage, it simply expanded its operations in Indonesia, Thailand, Australia, PNG, Viet Nam, Siberia, Fiji, Chile, Brazil, New Zealand, Hawaii and elsewhere, leaving a trail of rural destruction and social strife all around the Pacific Rim.

Demand for paper, in short, like demand for many consumer goods, does not simply arise from people's pre-existing desires for basic necessities or even for progress. But nor is it simply imposed unilaterally on people by corporations and their helpers. Its construction is the result of two centuries of continuing social and class struggle and maneuver among many different groups over matters as diverse as industrial structure, access to information, and the cultural meanings of time, work and leisure.

It follows that consumption is going to undergo as many changes in the future as it has in the past. There's no reason why some of these changes, instead of increasing consumption in still more irrational and degrading ways, may not instead bring consumption once again under human control.

The question, of course, is how to do this. Here there must be many avenues of experiment. But all of them are bound to stress the close connections among consumption, production and power politics.

Companies engage in politics when they work at managing consumption. Bringing consumption under more democratic control also requires political action.

At a minimum that means bringing to light connections which corporations often work to conceal. It means opening channels of information and contact between consumers and affected people that have been blocked by corporate interest and cultural barriers. It means helping to make it possible for consumers and affected people to enter into a new, more civilized kind of negotiation over what reasonable consumption might consist in — a negotiation less dominated and mediated by industry. It means imagining ways of setting prices which take account of hidden subsidies for repression and environmental violence.

Consumption, in short, is simply too important a matter to be left to corporations and people's consuming selves. People are not only consumers but political actors and citizens, and with the political parts of their brains it's time to think new thoughts.

It's not enough to say that "if we want change it's up to us as individual consumers to alter our buying habits and pioneer new lifestyles". Saying that may be a good way of making people feel guilty or confused. But any action it inspires, because it will be likely to spring from personal guilt rather than from learning, or from anger at exploitation, or from solidarity with those who are being stomped on, is not likely to be very effective. Do the problems of consumption begin with you as an individual? And do the solutions depend only on the choices you make as an individual consumer? To think that is more likely to make you want to withdraw from society than to engage with it.

To say that paper consumption can be dealt with merely through the blunt instrument of standing in front of a supermarket shelf and deciding which brand to buy — or not to buy at all — is to deceive yourself. The labels on these products may ask you to choose them, but they can't tell you what happens if you do or don't buy the product.

They won't allow you to negotiate with the people affected by its production, and, if the company's advertising agency or PR firm have done their job, will conceal from you as much as possible about the political history which went into the product's development. If any problems require collective action, it is precisely those thrown up by modern consumption. "Feelbad" recriminations about individual consumption are likely to lead only to superficial "feelgood" solutions rather than meaningful social action.

Rather than Northern over consumers blaming themselves for having been made ignorant about the effects of consumption, it's perhaps time for them to join with others to counter the structures which make them so. Rather than taking for granted that their interests are necessarily opposed to those of others far away who produce the goods or raw materials they use, it's perhaps time to undertake some projects to see what struggles North and South might have in common. Rather than assume that increasing consumption of everything in sight is biological destiny, it's perhaps time to bring into play more of what Henry James called the "civic use of the imagination" in seeing what other, more humane futures people might negotiate for themselves. (By: Larry Lohmann, WRM's bulletin N° 83, June 2004).

The mythical correlation between literacy and paper consumption

The present scenario, where most countries have become mere markets for an increasingly reduced group of powerful corporations that share them between themselves while keeping up a network of commercial links — for which they want to have more and more elbow room —, has also been built up with language and the introduction of concepts that are imposed as truths.

Thus, regarding paper and its imposition as a product of growing consumption, the language has been used to create a misleading correlation between paper consumption and literacy, implying that more paper is required (and therefore more plantations to feed more pulp mills) to supply increasingly literate populations with reading and writing material.

The fallacy of such a simplification is demonstrated by the simple comparison of literacy rates and the per capita annual consumption of paper and cardboard, using the FAO and the United Nations Development Programme (UNDP) as information sources (figures for year 2000). On the following list, we have selected a few countries with high literacy rates in order to analyze the subject, but the sources mentioned at the end of the article show that the situation is the same in practically all the countries of the world.

Country	Literacy rate	Per capita consumption (Kgs.)
Finland	99 %	430.02
USA	99 %	330.80
Sweden	99 %	279.68
Canada	99 %	263.30
Japan	99 %	250.40
France	99 %	191.75
Chile	95.8%	52.82
South Africa	85.3%	40.54
Brazil	85.2%	37.97
Thailand	95.5%	30.81
Indonesia	86.9%	20.86
Kenya	82.4%	4.91
Vietnam	93.4%	4.23

It clearly follows from the above that Northern countries with identical literacy rates (99%) have very different consumptions of paper and cardboard from one another, whereas Southern countries with high levels of literate population consume less, or even much less, than the former. This situation does not correlate with unsatisfied paper needs, but with a wasteful consumption - particularly in the North - that has nothing to do with the satisfaction of human needs.

In short, the argument that a growing literate population requires a growing amount of paper is just one of many deceptions made up to justify the profits of the pulp and paper sector. There is no "hunger" for paper: there is an immense wastage. (WRM's bulletin N° 83, June 2004).

Genetically engineered trees: The pulp industry's dangerous "solution"

Making clean white paper from trees is a dirty business. To make bleached kraft pulp, trees are chipped, cooked under pressure, washed and then bleached. Toxic chemicals are used in the cooking process to remove lignin, a glue-like substance that holds wood cells together and makes trees strong. As lignin causes yellowing of paper, any lignin remaining has to be bleached.

Forestry scientists believe they have found a way of making paper from trees less polluting. Through genetic engineering they can produce trees with reduced levels of lignin or with lignin that can be more easily extracted.

"The costly portion of the pulp and paper making process, from both an economic and environmental perspective, is attributable to the removal of lignins. Therefore, it is highly desirable to develop means by which lignin content is decreased, or make lignins more extractable," explained forest scientists from Oxford University and Oregon State University in a paper published in *Plant Biotechnology Journal* in 2003.

David Herod, a biotechnologist at the US Department of Agriculture argues that the scientists have everything under control. "We are using the best available science to make sure this technology is used safely," he told Associated Press in 2001.

Unfortunately, the best available science is part of the problem. The risks associated with reduced-lignin GM trees include trees which are weakened structurally and which are more vulnerable to storms. Reduced-lignin trees are more susceptible to viral infections. Reducing lignin can reduce trees' defences to pest attack, which would lead to increased pesticide use. Low-lignin trees will rot more readily, with serious impacts on soil structure and forest ecology.

If reduced-lignin GM trees were to cross with forest trees these impacts would not be limited to plantations. Trees that cannot resist storms and which are at risk from attack by pests and viral infections would bring the survival of natural forests into question.

Malcolm Campbell of the Department of Plant Sciences at Oxford University is one of the world's leading researchers into lignin-reduced GM trees. He confirms the risks of "outcrossing" (the term that scientists use for trees in plantations crossing with forest trees). "Because most [plantation] trees have an abundance of wild or feral relatives, outcross, and display long-distance gene flow via pollen and sometimes seed, there is likely to be considerable activist and public concern about large-scale use of genetically engineered trees," he wrote in 2003.

Campbell's and other forestry scientists' solution to outcrossing is another techno-fix. They are working on genetically engineering trees to prevent them flowering. However, this presents two further problems. If the trees are indeed sterile this means thousands of hectares of trees without flowers, pollen, nuts or seeds. No birds or insects could live in such a plantation and the biodiversity of the plantation would be even lower than in today's monoculture tree plantations. The second problem is that trees have very long lifespans. The only way of knowing that trees genetically engineered for sterility will remain sterile for their entire lifespan is by repeatedly conducting trials lasting the hundreds of years of a tree's lifespan.

By focusing on lignin as the cause of pollution from pulp mills, Campbell and his colleagues can argue that reducing the amount of lignin in trees is a reasonable solution. They overlook other possible solutions such as using crops like hemp which have lower levels of

lignin than trees. Rather than asking questions about the nature of the pulp and paper industry for which they are working, forest scientists are asking whether genetically modifying trees for reduced lignin will work.

I asked Malcolm Campbell some questions about his work on genetically modifying the lignin content of trees. I asked him whether he had ever conducted any research into the impacts of large-scale industrial tree plantations on local communities in the South, and whether he had visited any local communities without representatives of the company responsible for managing the plantations. Campbell declined to answer. Instead, he invited me to visit his laboratory in Oxford, "so we can discuss the complexities of your questions at greater length."

Since its invention in Europe in the mid-eighteenth century, scientific forestry has been dedicated to meeting the needs of the timber industry. Simplified landscapes and vast monoculture tree plantations are a direct product of this science. In the process of simplification local communities' use of the landscape are ignored or violently suppressed.

Genetic engineering of trees for reduced lignin is scientific forestry's latest offer to increase the profits of the pulp and paper industry. It will not provide benefits for communities living near the GM tree plantations. Rather than solving the problems of monoculture plantations, tinkering with genes to make trees more amenable to the pulp industry will only make things worse. (By: Chris Lang, WRM's bulletin N^o 83, June 2004).

AFRICA

Kenya: Pollution and deforestation caused by Pan African Paper Mills

The large-scale monoculture pulpwood plantation model being implemented in the South not only results in negative social and environmental impacts in the forest areas, but has also additional

impacts from pollution resulting from the industrial process for the production of pulp as well as deforestation linked to logging for supplying the pulp mill with raw material.

Such is also the case of Pan African Paper Mills (Panpaper), based in Webuye town, in the Western Province, with a population of some 60,000 people. The mill is situated in an environmentally sensitive area on the bank of River Nzoia, which flows into Lake Victoria. It has been denounced that the factory belches out smoke and sludge, polluting air, water, and nearby rivers. So strong has been the impact provoked by this plant, that the iron sheets within Webuye town are rusted, and people passing through the town, on the Nairobi-Kampala Road, have to lock the windows of their vehicles and close their noses until they are well passed the town.

Problems caused by Panpaper in the region are not new. According to a survey performed in 1994, pollution provoked by this mill is believed to be responsible for a number of health problems: more than 60% of the children born after 1974 — when the plant began to operate — have had breathing problems from the age of one to five years. Other health problems verified in Webuye are chronic coughing, flu, nervous disorders, diarrhoea, typhoid and migraine, which health officials attribute largely to the air and water pollution produced by the mill.

At the same time, the mill's wood supply needs constitute a powerful incentive to deforest the remaining forests in the region — Kakamega and Mt. Kenya forests in particular — which are being plundered at alarming rates. Pan African Paper Mills is one of the main buyers of the wood extracted from them. At the same time, the company is one of the three firms that have been exempted from the partial logging ban in force in the country. To the official viewpoint, this step was taken because “the government has shares in it and is important to the economy”. The record of Panpaper regarding forest conservation is terrible. From 1972 — when the mill was built — to the present day, the whole forest cover of the area — as well as that of Turbo and Mosorit, located 200 km far away — has disappeared.

The argument that this is the price to be paid to achieve “development” is no more acceptable nor accepted. As a result, local dwellers and

activists have organized themselves in the Panpaper Anti-Pollution Lobby Group, and have organized a protest to stop such abuses. (WRM's bulletin N° 45, April 2001).

Kenya: Pan African Paper Mills spread sickness

Pulp and paper production in Kenya is presently dominated by one firm, Pan African Paper Mills (Panpaper), which is a joint venture between the Kenyan Government, the World Bank's private investment arm International Finance Corporation (IFC), and Orient Paper Mills, part of the Birhla group from India. The pulp mill was established in 1974 and is based in Webuye town, with a population of some 60,000 people, on the banks of the Nzoia River which drains into Lake Victoria.

From the start, despite the potential environmental impacts concerning plantation establishment, liquid effluents, air emissions, sludge and solid waste disposal, the project did not benefit from a full environmental assessment. The IFC's Environmental Review Summary simply stated that the project was designed to meet all applicable World Bank policies, and environmental, health and safety guidelines.

However, fears have proved right. A report from the local newspaper *East African Standard* denounced in 1999 that local residents had accused the paper mill of having turned a vast area of countryside into an environmental wasteland and of being an economic and social burden. Pollution of the Nzoia River on which residents depend for their water needs was so severe that bathing in the river had become a health hazard and animals drinking the water died. As a result of the chemicals produced during pulping, the area around the mill was enveloped in foul smelling air. Acid fumes and fly ash were resulting in the corrosion of the corrugated iron roofs of the houses in the vicinity of the mill. In addition, the mill's solid waste, which was dumped on fields as manure, had led to a decline in local agricultural production.

At the time of the establishment of the mill, the Webuye area used to be a heavily forested region and formed part of the Kagamena Indigenous Forest. The mill's demand for wood had turned the area barren and the company trucks now had to travel for over one hundred miles for raw material.

In 2003, the mill's impacts continued unabated. People in Webuye complained that the smell emanating from the mill, mainly caustic, chlorine and sulphuric acid was hazardous. Webuye is now viewed as a "sick town". Experts said purification process of the waste from this factory was inadequate and that effluent was emitted into the River Nzoia half-way treated. Such half-purified effluent could be catastrophic for the river or lake's aquatic life as its high oxygen demand would suck the gas in the water bodies causing mass aquatic deaths.

The most recent event is the serious pollution of Lake Victoria, leading to investigations by the Ministry of Water. Effluent from factories including Panpaper are believed to have endangered aquatic life in the lake.

On the other hand, logging has been a major cause of destruction of the forests of Kenya, a country of environmental and ethnic diversity. The Ogiek People, inhabitant of the forest, have been suffering the loss of their homeland and livelihood, especially from the 90's onwards. Panpaper is exempted from a government logging ban and is allowed to fell trees to produce pulp for paper, being one of the actors held responsible by the Ogiek.

However, as recently as May of this year, a Director of PanPaper Mills, Harri P. Singhi, called on the government of Kenya to assist the company in solving the problem of shortage of wood supply. Would that mean more forests to be degazetted? This, as well as Singhi's appeal to the government to assist the company to reduce its cost of production lowering the electricity tariff, make up the typical fiscal incentives which include tax exemptions, investment, grants, subsidies, on which the global pulp and paper industry develops. For its globalization it has counted also on direct or indirect subsidies coming from bilateral agencies, State investment, multilateral development banks, among other actors.

In the case of Kenya, the IFC had invested 86 million in the pulp, paper and packaging production. According to Singhi, Panpaper is working closely with IFC to expand the paper mills. The IFC Chief Special Operations officer, Mr. Erick Cruikshank, confirmed that the institution would continue working closely with the government as well as other industries including Panpaper Mills.

Meanwhile, the Ogiek lose their lands, local agriculture is endangered, deforestation increases, the environment is destroyed and the quality of life of local residents worsens. For the sake of job creation, says the official discourse. But the local labour component created in pulp and paper mills is minimal and in many cases restricted to casual labourers working under conditions which put their health at serious risk. (WRM's bulletin N° 83, June 2004).

South Africa: Tree plantations render corporation profits but fire, damages and death for the people

For the global pulp and paper group Sappi, money does grow on trees. Indeed, the company's latest annual report suggests that it grows most efficiently in South Africa. The report noted that Sappi's southern Africa division, Sappi Forest Products, represented 15% of group sales, but contributed 36% to the group's operating profits in the year to September 2002. "We have an extraordinarily low cost base in South Africa, which has unique competitive advantages in fibre production because of the speed at which trees grow and low inherent energy costs," the report noted.

Sappi is a South African-based international forest products company, and is ranked in the top 20 pulp and paper manufacturers in the world. From a totally South African company in 1989, the company has become an international organisation with manufacturing facilities on three continents being a major producer in its core businesses of coated woodfree paper and dissolving pulp. Sappi Saiccor, in South Africa, is the world's largest and lowest cost producer of dissolving pulp, used in the manufacture of viscose fibre, with a 15% share of the world market.

During 1998 the Sappi group was restructured into a fine paper company and a forest products company, with head offices in London and Johannesburg respectively. The latter owns and manages nearly 540,000 hectares of monoculture tree plantations in South Africa and produces bleached and unbleached paper pulp for own consumption and market pulp.

Sappi's executive chairman Eugene van As noted that following the September 11, 2001 attacks, consumption of coated paper, much of which is used in producing glossy magazines, fell 12%, "the sharpest decline most participants can recall". However, despite losing money in the US, Sappi came through the year with reasonable earnings. He highlighted the benefits of the geographical diversity of the company, which has plants in North America, Europe and South Africa.

That's good news for the corporation. But what about South Africa and its people? The company boasts of the "excellent operating efficiencies" in the region, but that may be just a way of how profits and liabilities are settled. It's not the company who bear the environmental and human costs of its activities — externalities, they call it. It will not pay for the diminishing or contaminated water, the shrinking forests, the lost ecosystems. It will not pay for the poverty of the people deprived of their livelihood and now depending on meagre salaries that allow for those "excellent operating efficiencies."

According to a report from the South African environmental organisation Timber Watch, typical forests in this country are restricted to frost-free areas with mean annual rainfall of more than 525 mm in the winter rainfall region and more than 725 mm rainfall in the summer rainfall region. They occur from sea level to over 2 100 m above sea level. They rarely burn, mainly thanks to the humidity "bubble" that is trapped within the canopy, and the dense greenery of shrubs and small trees that make up the eco-tone or margin. Under extremely hot and dry (berg wind) conditions fires may occur and destroy the forest structure, but this usually occurs where the ecotone has been damaged, often as a result of timber plantations being too close to the forest margin which together with industrial crops such as sugar cane, have expanded into natural areas, thus increasing the pressure.

The most damaging impacts of plantations on forests are ground water depletion (SAWAC, South African Water Crisis, can bear witness to that), and displacement of human communities from farmlands. These lead to a wide range of secondary impacts such as overexploitation of forest products including mammals and birds, slash and burn clearing for subsistence agriculture, and increased exposure to alien plant infestations and fire.

Precisely, in July 2002, serious wildfires hit Mpumalanga Province, with several damages including death toll and injured people. Although prescribed, burns run out of control. Explanations pointed to dry and very windy conditions, the El Nino phenomena and sudden weather changes. However, it's worth noting that Sappi has established in Mpumalanga 245,000 hectares of pulpwood and sawlogs plantations as well as a pulp and paper mill which encouraged forestry. Some coincidence? (WRM's bulletin N° 67, February 2003).

South Africa: Pulping people and places

'Pulping the South' by Larry Lohmann and Ricardo Carrere was a watershed publication for many groups and individuals around the world. Concerned people had been aware of many issues and problems associated with the expansion of industrial monoculture tree plantations in Southern countries, but it was this WRM publication that made the world sit up with a jolt. Organisations such as Timberwatch in South Africa started to pay more attention to environmental and socioeconomic issues associated with timber plantations themselves, as well as the negative impacts of industrial processing activities that had escaped the awareness of society at large until then.

One of my first experiences of the horror of pulpwood processing was when there was a public outcry in response to a major toxic spill from the Sappi Ngodwana pulp mill into the Elands River in Mpumalanga Province in 1989. Newspaper headlines screamed the news of how thousands of fish and other aquatic organisms had died gruesome deaths after concentrated chlorine entered the river from the mill. As a consequence of this incident and the negative publicity that followed, the Ngodwana mill was forced to improve control measures, and public anger eventually subsided. No doubt this was not the only time that toxic substances would be discharged into the river illegally, but since then, Sappi has pursued a relentless programme of public relations propaganda to paint themselves a bright shade of green.

Sappi owns and operates five woodpulp mills in the region. Besides Ngodwana, which is the largest, producing over 500,000 tonnes of pulp per annum, there are:

- The Sappi Usutu pulp mill in neighbouring Swaziland (230,000 tonnes);
- The Sappi Kraft mill at Mandeni in KwaZulu-Natal-KZN (350,000 tonnes);
- The Sappi-Saiccor plant on the Umkhomazi River in KZN (600,000 tonnes);
- The Enstra mill in Gauteng near Springs (110,000 tonnes)

The Sappi website informs that a total of 540,000 hectares of plantations can produce sufficient timber annually for 1,690,000 tonnes of pulp, 80,000m³ sawn timber and 830,000 tonnes of paper. This does not include pulp derived from recycling or sugar cane bagasse, which is used exclusively at their Stanger mill in KZN.

Sappi has not been the only culprit in terms of polluting the planet whilst trying to portray themselves as saviours of the natural environment. Mondi, part of the Anglo-American group of companies owns and operates a giant mill at the harbour town of Richards Bay, with a capacity of 575,000 tonnes at present, but is most well known for the notorious Merebank mill at Durban. This is one of the largest individual paper mills in the world with a currently rated annual capacity of 540,000 tonnes.

Mondi takes pride in sponsoring a project to restore degraded or destroyed wetlands on their own estates, and puts out meaningless advertisements such as this one claiming:

“We’re into green. At Mondi Paper we really care about the environment. In fact, we’ve taken a number of steps to ensure our commitment is felt. Like introducing an Environmental Management System, which has been recognised with an ISO 14001 accreditation. We also have FSC Chain-of-Custody Certification for our un-coated woodfree grades of paper and locally we are members of The Durban Chamber of Commerce Environmental Committee and the National Association of Clean Air. NOT to mention we’re also at the forefront of paper recycling. We’re serious about taking care of our planet and if a little green is what it takes to make it better, we’re all for it.”

Corporate green-wash like this typifies the bulk of advertising placed in journals and other media by the timber industry. It is a sad reality

that millions of ignorant readers are duped into being uncritical of the timber industry by this kind of impertinence.

It should be obvious to all that the truth about the plantation and milling activities of both Sappi and Mondi is a lot less attractive than how they portray themselves in their advertising, and by sponsoring “environmental education” and books on birds and trees.

Not only behind the scenes, but also often in full public view, these companies exploit people and the environment. They destroy or degrade natural grasslands where their plantations are grown, and damage plants and wildlife in adjacent forest or wetland habitats. They cause the loss of surface water in streams and marshes, depriving people and animals of access to water in the areas where plantations are established. They introduce toxic chemicals that pollute soil and water, and destroy natural processes in the soil. And now they can do all these things under the banner of FSC certification!

Timber plantations have forced thousands of people off the land in the past, and continue to do so in the present time. As access to natural resources is denied rural people, thanks to the encroachment of timber plantations, more and more people must leave their traditional homes in search of a means to survive elsewhere, more often than not in squatter slums around the cities.

The harsh reality is that the timber plantations that are grown to feed wasteful demand for paper and packaging are both socially and environmentally destructive and no amount of industry gobbledygook can change that. They may have succeeded to mislead and confuse the public into believing otherwise for the moment, but the truth must emerge.

In the meantime, both companies have plans to increase woodpulp production.

The Mondi mill at Richards Bay is proceeding with plans to expand their annual pulp production by 145,000 tonnes. By some strange coincidence there is also a process underway to seek government permission to increase production at the Sappi Ngodwana mill by 225,000 tonnes or 60% of existing production.

In both cases the plans to increase pulp production are motivated by claims of increased demand for pulpwood products and that the expansion will incorporate new technology that will be beneficial to the environment in numerous ways.

To quote Mondi: "Our expansion will not only increase pulp production, it will also streamline operations in terms of cost and efficiency. The best available technology used in the upgrade will have many positive environmental spin-offs" (press statement 25 March 2003).

The background information document issued by Sappi in July 2003 makes a host of claims in support of their proposed expansion: "Currently the Mill is unable to increase production with the existing equipment as further increases in production would have a negative effect on the quality of the product, efficiency of the plant and on the environment. Therefore in order to increase production to meet the demands of its customers in the paper industry and prevent/reduce the environmental impacts associated with the increased production, the mill has to install state-of-the-art process technology. Due to the increase in demand for its products, Sappi is investigating the feasibility of expanding the Mill to make full use of the potential to produce pulp, by installing the latest technology in the washing, bleaching and drying plant and processes."

"Sappi has indicated that the proposed production capacity to operate more efficiently and to produce a better quality product to meet the increasing market demand. This project is also important in terms of ensuring that the Ngodwana Mill remains globally competitive and thus ensuring its economical viability into the future. Sappi expects that components of the project such as the increased use of waste paper is expected to have indirect socio-economic benefits by stimulating the development of small waste paper supply businesses. In addition, the proposed increase in production will require additional timber and may result in increased job opportunities in the forestry sector."

"Sappi expects the proposed project to result in less air emissions per ton of pulp produced. This includes a reduction in total reduced sulphur, and particulate (dust) emissions, which has been a source of

major concern to people living in the area. The installation of modern technology will result in less water, chemicals and energy being used per ton of pulp. As a result of the conversion from softwood to hardwood, Sappi expects less solid waste to be produced by the Mill for disposal. In addition, Sappi has indicated that the proposed expansion will be able to use more waste paper, which will have a beneficial effect on the environment.”

One has to laugh at the insincerity of these claims. Most are seriously inaccurate and exemplify corporate doublespeak. The Sappi claim “will require additional timber and may result in increased job opportunities in the forestry sector” is amazing in its audacious modesty. It cannot be disputed that both expansion plans would require additional raw timber equivalent to the percentages of the proposed increases in pulp production. Whether this additional pulpwood is obtained as per Sappi’s claim, by conversion from pine to eucalyptus, or from new plantations is a moot point. The reality is that an additional amount of raw timber will have to be produced somewhere. If we are talking about pine, then the going rate is about a hectare per 3 tonnes of pulp per annum. On this basis it would need about 120,000 extra hectares of pine or a lesser amount of eucalyptus, depending on growing conditions and availability of water and nutrients. The main flaw in both Mondi and Sappi’s expansion plans appears to be that the negative impacts associated with the additional plantation timber needed to feed the mills in order to produce the additional 370,000 tonnes of pulp annually have been ignored.

No matter how clean and efficient pulp production can be the real problems remain where the production of wood in timber plantations takes place. Rural communities and the natural environment will carry the burden of the associated impacts and costs, so that corporate money lust can continue to feed. (By: Wally Menne, WRM's bulletin N° 83, June 2004).

Swaziland: Paper mill pollutes river and people

Residents south of the Matsapha Industrial Estate, where the nation's manufacturing sector is based, recently complained of ailments resulting from the consumption of “poison” water from the Lusushwana

river. The river is clean when it flows out of Mantenga Nature Reserve, but then it passes through the Matsapha industries where its colour changes, according to residents who depend on the river for their water needs. "It is brown one day, grey the next," said Thab'sile Dlamini, who lives in an informal settlement that has sprung up along the riverbank. The head teacher at Mthonjeni Primary School has reported widespread stomach ailments among students, though no fatalities. Two-thirds of Swazis live below the poverty line and many still source their water from nearby streams. Residents blamed several factories operating in the area, including Swazi Paper Mills.

The Swaziland Environmental Authority (SEA) was established seven years ago under the Ministry of Tourism to monitor compliance with environmental laws in a country where a largely peasant population is dependent on untreated water hand-drawn from rivers. Rather ineffective for the first five years of its existence, it has recently surprised environmentalists by threatening to shut down one of the country's oldest industries when it discovered chemical effluents originating from Swazi Paper Mills that flowed into the river via a canal leading through a power station. The director of SEA, Jameson Vilakati, investigated the mill and reported: "They did not deny anything, but stated that a certain machine was not functioning, which forced untreated waste material to be deposited into the river." Vilakati added that an SEA directive would compel the company to shut down operations until the discharge problem is fixed.

This has been a signal to Swazi Paper Mills that the approval of permits and expansion plans — for a new planned paper pulp and wood-chip mill — in future will be tied to a company's environmental record.

"This is a new reality," said a SEA source. "Before, it was 'anything goes'. Swaziland wanted to attract industry, and we had what seemed to be unlimited land and rivers, which most people took for granted. We're now running out of resources, and conservation is essential." Unfortunately, polluted rivers and ill people have had to bear witness of that.

As usually happens, polluters are portrayed — prior to "accidents" — as environmentalists. Swazi Paper Mills is no exception. The

Swaziland Business Year Book 2003 describes the company in the following way: “Corporate responsibility in terms of the environment is a key consideration ...” The fact that “a certain machine was not functioning” and that untreated waste material — meaning highly toxic effluents — was being knowingly discharged into the river shows the true meaning of “corporate responsibility” and the importance of government control over corporations' activities. (WRM's bulletin N^o 70, May 2003).

Swaziland: Timber Plantations Impacting on People and Nature

In many respects, there is very little difference between Swaziland and South Africa. Climate, topography, and geology are similar, so it is no wonder that the natural vegetation is much like that found in the South African Provinces of KwaZulu-Natal and Mpumalanga, that virtually enclose the Swazi Kingdom.

Before the arrival of large-scale timber plantations in Swaziland, the area that they now occupy was grassland, interspersed with patches of evergreen ‘mist-belt’ forest in moist, sheltered spots. The characteristic climax grasslands evolved over thousands of years with human influence and fire playing a big part in their development. A mischievous theory has claimed that the whole region was originally forested, and that grassland is a secondary vegetation type that manifests where forests have been destroyed. This has been used to help justify so called “afforestation” which aims to plant alien monoculture timber plantations wherever conditions will allow, in particular in grasslands.

It is known that there were Bushmen in these parts from the evidence of rock paintings in caves. Swazi people farmed cattle and other livestock as well as some food crops. Their domestic crops and animals, hunting, and natural resources from the forest and grassland provided all they needed to survive. Establishment of more than 100,000 hectares of plantations meant the displacement of these people and their livestock to adjacent steep, rocky and dry land, where they would be more prone to disease and attack by wild animals.

The issue of industrial timber plantations in Swaziland must be viewed within the larger southern African context. The timber industry in Swaziland could not survive if it was not linked to the extensive (1, 6 million ha.) plantations in South Africa, and heavily dependent on capital from that country. This anomaly is supported by the way the FSC (Forest Stewardship Council) lumps certified Mondi plantations in Swaziland together with those in South Africa. From the FSC website, it appears Mondi has no certified plantations in Swaziland!

About 9% of Swaziland is under timber plantations. Sappi Usutu, owning more than half the plantations in Swaziland (70,000 ha), and the only pulp mill, employs about 3,000 people directly and indirectly. 1044 people are employed by Mondi Peak in two sawmills and 19,000 ha of plantations. Shiselweni, the third largest plantation area covers about 12,000 ha. The Mondi and Sappi plantations were originally established about 50 years ago by the Commonwealth Development Corporation (CDC) that also started the Usutu pulp mill at Bhunya. These were sold to the present owners recently — Mondi in 1984, and Sappi in 1992. The Shiselweni plantations were established in 1967, also by CDC, but later sold to the Transvaal Wattle Growers Co-operative (TWK) also based in South Africa.

How do these plantations benefit the Swazi people? Swaziland imports most of its finished timber products from South Africa, whilst nearly all of the local timber production leaves the country as logs, pulp or rough cut planks.

The extent to which plantations impacted on water resources must have had serious consequences for people relying on water from streams and rivers flowing from the highveld catchment area. People born in the area before plantations remember waterfalls and deep streams that no longer exist.

An analysis of the negative impacts of plantations shows that there are two main categories: Ecological, and socio-economic, or more simply put — impacts on biodiversity and impacts on people. Further analysis shows that within these two main groups, some can be direct or primary, and many others indirect, consequent or secondary. Examples of primary impacts: destruction of natural vegetation; loss

of grazing for livestock; loss of medicinal plants, depletion of water resources. Secondary impacts: increase in grazing pressure elsewhere; conflict over access to resources.

Impacts that manifest over time can be described as cumulative, downstream or tertiary — such as the accumulation in organisms of toxic agricultural chemicals, used to kill plants and animals that are an obstacle to plantation establishment; and invasion into wetlands, streams and forests by alien trees and weeds.

All of these impacts come with a cost, sometimes easily quantifiable, but mostly causing long-term losses to the natural environment and to people's health, welfare and wealth that are difficult to put a value to. Like the future cost of the loss of a wetland, or poisoning of a river, or the effect of toxic fumes on workers in a pulp mill. One thing that is clear however is that the timber industry does not cover these costs. This 'externalisation' of costs by the industry enables them to continue to operate profitably, keeping their shareholders in some distant city happy, and no doubt increasingly wealthy. On top of this, it seems that timber companies have benefited from special deals that exempt them from paying certain taxes, and also receiving cash handouts from government if they plead poverty! All the plantation companies in Swaziland claim to be struggling to remain profitable. If they were to carry the full true costs of their operations, whilst operating on the current basis, it could mean they would no longer be viable.

The reality is that it would be virtually impossible to undo what has been done. However, new approaches that ensure most proceeds generated by the plantations remain in Swaziland and benefit local people are needed. Ownership and control of the plantation resource should revert to the people of Swaziland. Maximum beneficiation at the local level is needed to ensure the greatest possible number of work opportunities is created in Swaziland.

The CDC needs to take responsibility for the mess it has left. Ideally they should instigate and finance a process to restore ownership of the plantation areas to the communities that were displaced. The CDC should fund the costs of restoration of the natural areas that became degraded as a consequence of the establishment of plantations. This

could create much needed employment for many people in the future, especially those that suffered as a consequence of losing access to land and water.

The social and ecological debt of the Sappi Usutu Pulp mill will need to be carefully assessed and remedied. Community health will need special attention. The workers' village at Bhunya should be flattened, and workers provided with alternative opportunities for accommodation away from the polluted environment near the mill. The three schools at Bhunya, where young people are exposed to polluted air, should be relocated as a matter of urgency. An alternative would be Mhlambanyatsi, where there is good infrastructure, and a healthier environment.

On a final note, I feel compelled to comment on the attitude of disdain and disrespect for local communities displayed by management at all the three timber plantation companies where interviews were held. It seems that as is still often the case in South Africa, the rightful owners of resources being exploited for foreign profit are viewed and treated as second-class citizens in their own land. The natural environment has been abused in a similar way, and the land under plantations overexploited. All of this must change. (By: Wally Menne, WRM's bulletin N° 82, May 2004).

Swaziland: The impact of 50 years of industrial forestry

Looking at the statistics for Swaziland is a depressing experience. Unemployment stands at 40 per cent. More than two-thirds of the people in Swaziland live on an income of less than US\$1 a day. About one third of the people in Swaziland rely on food aid to survive. Nearly 40 per cent of the population is infected with HIV - one of the highest rates in the world. Life expectancy has fallen to 33 years for men and 35 for women.

The country is one of the world's last remaining absolute monarchies. Political parties are illegal. The king, Mswati III, has a luxurious lifestyle which is in stark contrast to that of most people in Swaziland. Last

year, the king's 36th birthday party celebrations cost US\$600,000 and in December Mswati spent US\$500,000 on a sports car.

Swaziland's main industries are sugar and forestry. Both require large areas of land. "They are a disaster for a country like Swaziland, where there are still feudal social relations," said Nhlanhla Msweli of the Swaziland Campaign Against Poverty and Economic Inequality (SCAPEI) at a meeting in South Africa in 2003. In a country where the majority of people are landless, industrial tree plantations cover almost 10 per cent of the land.

The Swaziland Solidarity Network (SSN) is a group campaigning for democratic change in Swaziland. In 2002, Bongani Masuku, SSN's secretary, said, "Unless land is a central component of any liberation, that liberation is not worth the noble name of freedom, but a mere fantasy for a few and continuation of suffering for the poor majority."

A new report written by Wally Menne of the TimberWatch Coalition, "Timber Plantations in Swaziland" describes the impact that industrial tree plantations have had on the people and the environment in Swaziland. Although many of the plantations were established more than 50 years ago, the impacts of industrial tree plantations "still have a profound effect on society and the environment and will continue to do so as long as the plantations remain," writes Menne.

Menne's research, based on interviews with community members, environmentalists as well as government and industry representatives, explains how industrial tree plantations have damaged ecosystems and caused loss of biodiversity. Plantations have been planted on the land with the most productive potential, at the expense of other agricultural land uses, states Menne.

Today, two South African pulp and paper companies control most of the 120,000 hectares of industrial tree plantations in Swaziland. Mondi owns 30,000 hectares of eucalyptus and pine trees around Pigg's Peak in the north of the country. The eucalyptus is exported to Mondi's pulp mill at Richards Bay, 400 kilometres away in South Africa. The pine goes to local sawmills.

Another South African pulp and paper giant, Sappi, leases 70,000 hectares of plantation land in the highveld region in western Swaziland. Planting started in 1950, with funding from the UK's Colonial Development Corporation (CDC - now called CDC Capital for Development). CDC and UK company Courtaulds built the Usutu pulp mill in 1962. Today the mill produces 220,000 tons of pulp each year, most of which is exported to Southeast Asia.

Although the forestry sector accounts for as much as nine per cent of Swaziland's GDP, it employs only 8,000 people directly. SCAPEI's Nhlanhla Msweli told Menne "The timber industry has not contributed meaningfully to the economic upliftment of their workers." In recent years, much of the work has been outsourced to contractors, many of whom were ex-employees.

Even the remaining jobs are not safe. Mandla Dlamini, Public Affairs Manager at Sappi's Usutu pulp mill, told Menne that Sappi had considered closing its mill, because of "economic uncertainty" caused by the exchange rate and "other economic factors", which affected company profitability.

Menne reports that Sappi's Usutu pulp mill is "notorious for regular releases of effluent into the nearby Lusutfu River". He adds that "Additional pollution comes from the industrial waste dump that is situated in the worker village."

The government describes the poor rainfall in recent years as a "serious drought, which seems to be the worst in recorded history". But Menne's research suggests that the water scarcity is at least in part a human-made problem. Rex Brown of Environmental Consultancy Services, a Swaziland consulting firm which works for the government and private companies, considers plantations to be one of the causes of water shortages in the country. He told Menne that "The plantations occur in important upland catchments - essential areas for the provision of water for equally important irrigation activities in the Swaziland Lowveld."

I visited Swaziland with Wally Menne in October 2004. At the border, we saw new Volvo and Mercedes trucks loaded with eucalyptus trees

waiting to leave the country. We drove through seemingly endless monoculture plantations and past huge clearcut moonscapes. We saw farmers' dry fields and we saw villagers lining up for maize donated by the World Food Programme. We saw, and smelled, Sappi's Usutu pulp mill. We saw the smoke from the mill drifting over the workers' village immediately next to the mill.

Clearly not all of Swaziland's woes can be blamed on industrial tree plantations. But more than fifty years of development by the pulp and paper industry has failed to bring benefits to the majority of Swaziland's population. Instead it has made matters worse. (By: Chris Lang, WRM's bulletin N° 90, January 2005).

ASIA

UPM-Kymmene and APRIL: The Chinese-Indonesian connection

UPM-Kymmene Corporation — one of the world's largest forest products companies and paper producers, with industrial plants in 15 countries — the APRIL Group (Asia Pacific Resources International Holdings Ltd.) and APRIL's majority shareholder have recently signed an agreement to sell APRIL's 51% interest in the Changshu paper mill to UPM-Kymmene. The value of the transaction is US\$ 150 million. As a consequence of the agreement, the Finland-based UPM-Kymmene has now become the sole owner of the Changshu paper mill. At the same time, it has been agreed that APRIL will enter into a six and a half year contract for supplying bleached hardwood kraft pulp to the Changshu paper mill.

The Changshu paper mill, which started to operate in March 1999, is located by the Yangtze River in Jiangsu Province, about 100 kilometres from Shanghai. The mill's paper machine — provided by the also Finnish company Valmet — has an annual capacity of 350,000 tonnes of uncoated fine paper. Since the beginning, UPM-Kymmene has had the management responsibility of the paper mill. During year 2000 the estimated production of the mill will be about 290,000 tonnes of

uncoated fine paper, and its exports will represent a half of the total Chinese paper sales to neighbouring countries.

It is interesting to note that until 2006, the now formally separated partners will continue carrying out joint activities but in a different scenario. UPM-Kymmene will produce paper in its own plant in China, but with pulp supplied by APRIL. The strong criticism received by the alliance between both companies was to a large extent based on APRIL's bad reputation in Indonesia, where it destroyed extensive areas of rainforest, which were substituted by monoculture pulpwood plantations. Additionally, APRIL generated conflicts with local communities over land tenure issues and between local dwellers and the company's workers. The new situation will allow UPM-Kymmene to try to dissociate itself from those negative impacts, while at the same time to benefit from purchasing cheap pulp for the cleaner and less contentious process of paper production.

At the same time — and according to the company itself — “the Changshu paper mill will become a significant platform for UPM-Kymmene's strategy in Asia. The strong growth in paper consumption in China and elsewhere in Asia create favourable circumstances for further development of the Changshu paper mill”. Will the next move be to plant eucalyptus — with advice from Finland's Jaakko Poyry — and to produce pulp in China? Would that be the reason for the “six and a half year” contract with APRIL? (WRM's bulletin N° 38, September 2000).

The international pulp and paper industry in the Mekong Region

Over the last decade the area of fast-growing tree plantations in the Mekong region has expanded dramatically. Villagers throughout the region have seen their forests, fallows and grazing lands replaced with eucalyptus, acacia and pine monocultures. A new World Rainforest Movement report, “The Pulp Invasion: The international pulp and paper industry in the Mekong Region”, written by Chris Lang, gives an overview of the industry, profiles the actors involved and documents the resistance to the spread of plantations.

The report looks into the current plans to expand plantations in the region. In Thailand, a US\$1 billion Chinese-Thai project aims to create a new 700,000 tons a year pulp and paper mill, with 96,000 hectares of plantations. The Phoenix pulp and paper mill is looking to cheap loans from the Finnish and Swedish governments to fund its plans to double the capacity of its mill. In Cambodia, the Taiwanese-Cambodian joint venture, Pheapimex, aims to build a US\$70 million pulp and paper mill, with 300,000 hectares of plantations. In Laos, BGA Lao Plantation Forestry is planting 50,000 hectares of mainly eucalyptus plantations to feed a wood chip mill, for export to Japan. In Vietnam, Sweden's aid agency, SIDA, with support from the Swedish Export Credit Corporation, is funding the expansion of the Bai Bang pulp and paper mill. Recently, the Vietnamese government announced plans for a new pulp mill project in Kontum province.

Plantation proponents put forward several arguments to justify the expansion of industrial plantations to feed the pulp and paper industry. Depending on the situation, and the audience, they describe plantations as a way of preventing soil erosion, of protecting watersheds, of reducing pressure on native forests, of absorbing of carbon, of alleviating poverty, of reforestation or of afforestation. Plantations have been promoted as a source of fuelwood, as an alternative to “slash and burn” or as a means to “sedentarise” local communities.

Almost invariably, however, the real reason for the expansion of industrial plantations is the exploitation of the cheap land, cheap labour, rich soils, warm climate, and freely available subsidies — which vested interests close to the pulp and paper industry work hard to maintain. For example, the Phoenix pulp and paper mill in Thailand claims to have the cheapest supply of eucalyptus pulp in the world. Behind this boast are cheap loans in the form of “aid” from the Finnish, Swedish and Austrian governments, and an eight year tax holiday from the Thai government. The European Overseas Development Corporation (EODC), the company that established Phoenix, was set up specifically to benefit from projects funded through European export credits.

A wide range of organisations promotes and supports the expansion of industrial plantations and the pulp and paper industry, including

“aid” agencies, export credit agencies, forestry consulting firms, suppliers of pulp and paper making machinery, pulp and paper industrial associations, forestry educational establishments, research institutions and even NGOs.

A few examples: The Asian Development Bank (ADB) funded a US\$12 million Industrial Tree Plantation project in Laos, and is coordinating the Five Million Hectare Reforestation Programme in Vietnam (one million hectares of the proposed five million are to feed the pulp and paper industry). In the 1990s, three new mills started operations in Thailand. All three use eucalyptus as raw material and all use technology and machinery from the North to produce pulp. Consulting firms, such as Jaakko Poyry provide “expert” advice on these projects. Poyry has won consultancies on approximately two-thirds of all new pulping operations in Southeast Asia since 1981.

In the Mekong region, Poyry has benefited from a vast range of pulp and paper projects, many backed by aid funding. Poyry's consultancies include the ADB Industrial Tree Plantation project in Laos, the Thai Forest Sector Master Plan, consultancies for Phoenix, Advance Agro, Siam Pulp and Paper in Thailand, and (perhaps most notoriously) the Bai Bang pulp and paper mill in Vietnam, funded by Sweden's SIDA.

In 1998, SIDA produced a brochure celebrating 30 years of Swedish aid involvement in Vietnam. In it SIDA explains who benefits from its aid:

“Sweden has benefited a lot from development cooperation with Vietnam. Development aid has cleared the way for Swedish companies. The Bai Bang project, with its many branches, has produced a lot of spin-off effects.”

Between 1974 and 1991, SIDA handed out US\$1 billion out on the 55,000 tons-a-year Bai Bang mill. Of this, 40 per cent went to Swedish workers at the project site and to consultancy headquarters in Sweden. Around 80 per cent of the goods and services for Bai Bang were bought in Sweden. Yet, despite (or perhaps because of) Sweden's aid, the cost of paper produced at the mill is 10 to 20 per cent above the international price of paper.

In an attempt to promote discussion of the issues surrounding the pulp and paper industry and the associated expansion of plantations, WRM's report looks at government and international support to the industry and profiles the major companies and consulting firms operating in the region. (WRM's bulletin N° 58, May 2002).

China: Following the trite pattern of monoculture tree plantations

The Great Leap Forward in 1958 and the Cultural Revolution had thwarted in China the establishment of high yield timber plantations put forward in the late 1950s by the Chinese Ministry of Forestry. However, since 1980s, along with the implementation of the reform and open-door policy (namely China's entry to the global market arena), the existing imbalance between wood demand and supply was altered. This seems to be not very different from the process undergone by other countries which end up engulfed by the global commerce and its packaging demand. Apparently, the response to the gap has been also very similar to the one implemented in most of the free market economies: large scale monoculture tree plantations of high yielding species (generally alien) which are even mainly the same. That's how Australia's national tree is expected to become a new choice for China to ease the soaring pulp needs of its cardboard and paper industry.

The Chinese Government decided in 1988 that, in the next 30 years, fast-growing and high-yielding timber bases of 20 million hectares would be established. China's forestry scientists have developed eucalyptus varieties and created a plantation area dubbed Asia's largest "eucalyptus gene bank" in southwest China's Zhuang Autonomous Region, a subtropical region where the trees are widely planted to provide more cost-effective pulp material. New varieties grown at the base are generally "ultra fast-growing eucalyptus" which can be felled six years after planting with a yield of more than 60 cubic meters per hectare per year.

However, the pulpwood rush has been at the cost of food. Last year, China's tree plantations increased 1.53 million hectares from 2001, while farmland acreage decreased by a total of 1.68 million hectares since China turned 1.42 million hectares of farmland into tree

plantations, according to the Ministry of Land and Resources in its “2002 China Land and Resources Communiqué”.

As usual, the World Bank is meddled in. In order to boost State investment, the World Bank Forestry Development Project (Credit 605-CHA) had been introduced in 1985 to establish and transform commercial timber plantations, construct forest roads and procure accessory equipment. In 2002, the total area of tree plantations reached 230.72 million hectares, of which 3.4 million hectares were fast-growing and high-yielding timber plantations, with 980.000 hectares being established under the 1991 National Afforestation Project Financed by a World Bank loan of US\$ 300 million and domestic funding equivalent to US\$ 200 million.

Also foreign MILLS companies have sought to enter the coveted huge Chinese market. Since the late 1980s, a number of large foreign companies have invested in plantation development in China, especially in south-eastern coastal provinces that are characterised by a favourable investment climate and natural conditions. Singapore-based Asia Pulp and Paper Co. Ltd.; Thailand-based Soon Hua Seng Group; Hong Kong-based Sino-Wood Partner Co. Ltd.; Japan Princes Co. Ltd., have projects under way. Asia Pulp and Paper plans to establish 1.3 million hectares of fast growing Eucalyptus and Acacia plantations throughout China. By May 2000 it had 65,300 hectares of tree plantations.

The Swedish-Finnish integrated forest products giant Stora Enso has been also a major agent in research and development on this field. Together with the Government of the Guangxi Zhuang Autonomous Region, it has conducted a pre-feasibility study for industrial-scale plantations and integrated pulp and paper operations. Stora Enso also signed in 2002 an agreement for co-operation with the Chinese Academy of Forestry in Beijing.

China has been entering the global economy at its own rhythm, no doubt. Restrictions on foreign investment and private land ownership mean that foreign companies have gained access to forest land by forming agreements with local communities, which are in turn approved by government. However, the process has eventually made room for

the same pervasive elements of the western unsustainable pattern of production, consumption and commercialisation. In this case, the large scale plantations of monoculture trees with all their notorious harmful impacts on the people and the environment. (WRM's bulletin N° 70, May 2003).

China: Restructuring the paper sector to suit a globalised industry

Since 1996, in an attempt to control pollution, China's State Environmental Protection Administration has closed thousands of pulp and paper mills. "A significant portion of urban as well as rural water pollution problems came from industry and, in particular, the pulp and paper industry," commented the World Bank in a 2000 report about China's pulp and paper industry.

China has closed down 7,000 small mills according to Petteri Pihlajamäki of Finnish forestry consulting firm Jaakko Pöyry. "The Chinese pulp and paper industry caused more pollution than the pulp and paper industry of the rest of the world combined," he told Tove Selin, Coordinator of the Finnish NGO campaign to reform Export Credit Agencies.

Before 2000, only ten per cent of China's pulp was produced from wood. Most of the closed-down mills used non-wood raw material like residues from rice and wheat crops. The World Bank described these mills as "outdated, inefficient, and too small, and they rely heavily on locally grown feedstocks, in particular rice straw."

The old mills were no doubt highly polluting, but closing mills down was not the only possible solution. In many provinces, selling wheat straw to local paper mills was an important source of income for farmers. Pollution from non-wood fibre mills can be reduced by improving chemical recovery, by reducing the amount of silica going into the waste water and by using alternative pulping techniques.

While the government is closing down pulp and paper mills, China is the world's fastest growing pulp and paper market. Although per capita paper consumption is less than ten per cent of the amount consumed

in the US, China accounts for 14 per cent of global paper consumption. Jaakko Pöyry estimates that consumption will increase at 4.4 per cent a year between 2000 and 2015.

To meet the increasing demand, China increased imports of pulp by more than four times between 1997 and 2003. China is now the world's second largest importer of forest products (after the US). Sixty per cent of these imports are pulp and paper products.

The restructuring of China's pulp and paper industry from small-scale mills using local raw materials to massive, modern mills using wood-based pulp has created a bonanza for the consulting firms, machinery suppliers and paper companies that make up the global pulp and paper industry.

During the 1990s, China's paper industry received around US\$1 billion from international financial institutions, foreign governments and foreign direct investment. "China is still the Promised Land as far as pulp and paper equipment suppliers are concerned," wrote Pulp and *Paper International's* editor Graeme Rodden in December 2003.

Finnish-Swedish paper giant Stora Enso announced earlier in 2003 that it would increase the capacity of its Suzhou mill from 160,000 to 240,000 tons a year. Stora Enso has eucalyptus plantations in Guangxi province in south China.

Finland's UPM-Kymmene's Changshu mill started operations in 1999 and today produces 350,000 tons of paper a year. By 2005, capacity will be increased to 800,000 tons a year, with pulp imported from Indonesia.

Indonesia's massively indebted Asia Pulp and Paper has plans to build a 600,000 tons pulp and paper mill in Qinzhou, Guangxi province. Raw material is proposed to come from the company's eucalyptus plantations in south China. APP aims to establish 600,000 hectares of plantations in China.

Japan's largest paper company, Oji Paper, plans to establish a total of 200,000 hectares of fast-growing tree plantations in China.

Chinese companies are also getting in the act. Yueyang Forest and Paper has 65,000 hectares of plantations and hopes to plant 100,000 hectares with poplar, alder and pine by the end of 2005. The plantations are to feed Yueyang's 550,000 tonnes a year pulp and paper mill.

The World Bank dismisses China's small-scale paper mills as inefficient, but is unlikely that the boom in fast-growing tree plantations in China would have been possible without subsidies.

The Chinese government has set aside US\$13 billion for plantation development between 2002 and 2020. The aim is to plant almost 6 million hectares for the pulp and paper industry between 2001 and 2015.

Meanwhile, China is the largest recipient of World Bank loans to the forestry sector. Since 1980, China has borrowed more than US\$600 million from the World Bank to establish plantations to feed the pulp and paper industry. In 2002, the World Bank approved a US\$93 million loan for a "sustainable forestry development project" in China, aimed at forest protection and "ensur[ing] a supply of wood to meet China's growing demand."

China's small-scale polluting pulp and paper industry, which employed large numbers of people and supported millions of farmers, is being replaced by a modern polluting industry, which employs few people and which relies on vast areas of monoculture plantations to supply its raw materials. (By: Chris Lang, WRM's bulletin N° 83, June 2004).

India: Local villagers rallied against polluter paper mill

The Kali Bachao Andolan (Movement to Save the Kali) made a dramatic move against the serious pollution that the West Coast Paper Mills (WCPM) is causing to the Kali River by discharging untreated effluents. For long local people have suffered enormously from the pollution as they were repeatedly threatened with job losses if WCPM was pressurized to be environmentally responsible.

On 30 September, villagers from worst affected Kariampalli, along with representatives of Environment Support Group, Parisara Samrakshana Kendra, Alternative Law Forum and Samvada, rallied through the Dandeli town and entered the WCPM campus in time for the Annual General Meeting.

Shareholders were met with individually and pressed to hold their company's leadership accountable for their lax environmental management and criminal neglect of affected communities. Clearly caught off guard, and deeply embarrassed, Mr. Chandak, Executive Director of WCPM, offered to meet with key 'leaders' of Kali Bachao Andolan. He was told that he must meet all, or none would meet him.

In over two hours of deliberations that followed, Leo Saldanha, speaking for KBA and the affected villagers, charged the company with:

- * Willful negligence causing serious pollution of the Kali River, and its ecology and extracting water far in excess of consented quantities.
- * Causing grievous injury and harm to villagers downstream of the effluent discharge point.
- * Criminal neglect of villagers affected by the pollution incident which on 29/30 June 2003 led to an epidemic outbreak of gastroenteritis and death.
- * Lax approach to statutory warnings requiring the company to install a state of the art effluent treatment plant. Further, carelessly discharging fly ash from the power plant, including in a local college campus.
- * Gross violation of production limits set, as the company was on record that it was producing more than twice the consented quantity. This resulted in more fresh water intake, and doubling of pollution, with consequent adverse impacts on public health and environment.
- * The regulatory authority appears to have colluded with the company by not examining report details and failing to take appropriate action.
- * The company has behaved in a manner as to threaten the local communities with dire action if they questioned its errant behaviour.

Mr. Chandak had little to offer in explanation. He was also unable to deny any of these charges. Consequently he made the following commitments:

1. WCPM will undertake the expenses of providing drinking water to all villages affected by pollution of Kali due to discharge of effluents.
2. WCPM will invest in a mobile medical unit to provide immediate health relief to affected villages.
3. WCPM will accept monetary claims from all affected families. These claims would include cost of loss of income and livelihood due to disease, death and disease of cattle and failure of crops.
4. One year's livelihood support would be extended on claim to Jahnu, a Gowli who suffered acute renal failure, and also his sister-in-law, who lost a new born infant, due to pollution from WCPM. Mr. Chandak also confirmed that the production process would be modernized to make it elemental-chlorine free, but not soon.

This protest marks an important departure in the nature of events in Dandeli. Local people have now been shown the way ahead in negotiating a better deal for themselves and those who work in this large paper mill. (WRM's bulletin N^o 75, October 2003).

Indonesia: The pulp and paper sector's unsustainable growth

A study sponsored by CIFOR and WWF International's Macroeconomics Program Office, provides an in-depth analysis of the features and consequences of the rapid expansion of the pulp and paper sector in Indonesia during the last decade.

Concerned Indonesian NGOs have for years been denouncing the severe process of deforestation and forest degradation affecting the country and the role played by the pulp and paper industry in this respect. The CIFOR/WWF-sponsored study reveals some interesting facts and figures, which show that such allegations were well founded. Since the late 1980s, the Indonesian pulp and paper industry has grown by nearly 700 %. Investments in pulp and paper processing capacity have far outpaced the development of pulpwood plantations and as a result, most of the raw material has come from the clear-cutting of forest — mostly illegally — resulting in the deforestation of over 800,000 hectares per year. To understand the importance of the pulp and paper sector in the country's overall deforestation, it is important to point out that according to the World Bank, deforestation

rates reach one million hectares annually, which would mean that this sector is the major actor in the destruction of Indonesia's forests. Even taking into account the NGO figures on deforestation — which they estimate in some 2.4 million hectares/year — this sector would also be considered at the top of the list. The study states that the sector will suffer a growing fibre supply deficit over the next 5-7 years, which will have further implications for the country's forests.

The study reveals that many pulp and papers projects now in operation entail a substantial decree of financial risk, since several companies have made investments in infrastructure without first securing a legal and sustainable raw material supply. The seemingly irrational behaviour of the investors is explained by the fact that the owners have been able to avoid much of the financial risk involved by taking advantage of the government's subsidies, including the provision of pulpwood fibre at costs well below its value, the weak regulations reigning in the country for the financial sector and the failure on the part of international financial institutions to adequately assess the risks involved in pulp and paper industry investments. Poor corporate governance of large-scale pulp and paper companies — promoted by the Indonesian Bank Restructuring Agency (IBRA), which allowed companies in bankruptcy to continue operating under their pre-crisis management teams — is also mentioned as a factor for the present crisis.

In sum, the research illustrates on how unsustainable the “Indonesian economic miracle” in the pulp and paper sector has been. After a decade of unbridled growth, based on the destruction of the country's forest heritage, the expansion of tree monocultures, the violation of indigenous peoples' land rights, and the spread of social conflicts between local peasants and industrial workers, the result is negative even adopting the limited approach of conventional economy.

The case of Indonesia shows clearly that the much publicized myth that plantations help to alleviate pressures on native forests and consequently help to preserve them is totally false. On the contrary, they constitute a major factor for their destruction, given that enormous areas of forests are actually being cut and set on fire to make way for pulpwood plantations. (WRM's bulletin N° 41, December 2000).

Indonesia: Paper production threatens communities and forests in Sumatra

It is well-known that the pulp and paper industry in Indonesia — and in the world — is environmentally and socially destructive. One of the most important companies in pulp and paper production is the Asia Pulp & Paper Company, ranking tenth in the world. One of its branches is Indah Kiat Pulp & Paper, which has a pulp and paper mill located in Perawang to the south of Sumatra.

This company has a long history regarding environmental impact. It is accused of environmental devastation, of blatant disrespect to the rights of local communities and the country's legislation, resorting to undue pressure and to bribes to government officials. The “cheap” paper they produce — obtained at a high cost in destruction of forests, river contamination and liquidation of the local inhabitants' means of living — is finally exported, mainly to Europe and Asia.

Indah Kiat Pulp & Paper acquires most of the wood it uses as raw material through a long term contract with the PT Arara Abadi company (a company affiliated to Indah Kiat Pulp & Paper) which has a concession granted by the Government of Indonesia to exploit 300,000 hectares of forest.

This company is responsible for the destruction of forests to ensure a supply of wood to the Indah Kiat Pulp & Paper. Presently, it is also starting to use as raw material wood from plantations of fast-growing species such as acacias and eucalyptus, which are also causing the destruction of forests and means of life of the local populations.

Not only do the activities of the Indah Kiat Pulp & Paper Company destroy the forests of Indonesia — that have always been and still are a very important element in the lives of the local peoples — but they also contaminate rivers with emissions from the pulp and paper mill, thus depriving the local communities of an important source of subsistence.

In fact, the inhabitants of Perawang used to earn their living by fishing in the Siak river. According to declarations to the British newspaper

The Guardian made by one of the inhabitants in the area “each fisherman's daily catch used to average 10 kilos ... now those few people who still do it are lucky if the catch one or two — fish, not kilograms — a day.” As a result the inhabitants have been forced to resort to illegal logging to ensure their subsistence.

According to studies on the subject, it is estimated that unless there are changes, the forests of Sumatra will disappear within 5 to 10 years and by then the communities will have to face a much worse crisis than the present one, as the rivers and forests that historically ensured their survival will have gone.

This is yet another example of a company generating very serious negative social and environmental impacts. On the one hand it generates deforestation due to the logging of forests for raw materials — with the endorsement of the Indonesian government that has granted the licences — for its pulp and paper mills and also through its monoculture plantations of acacias and eucalyptus which result in the definitive destruction of the forest. And as if this were not enough, its predatory and contaminating activities oblige the local inhabitants of Perawang to change their life style — based on fishing — and turn to illegal logging in order to survive, thereby making the company responsible for this additional deforestation. (WRM's bulletin N° 48, July 2001).

Indonesia: Pulp and paper company APRIL and forest destruction

Friends of the Earth-UK has just published a detailed report on forest destruction in Indonesia, focused on the damaging environmental and social impacts of Asia Pacific Resources International Holding Ltd, otherwise known as APRIL, one of the biggest pulp and paper companies in the world.

Part of the Indonesian Raja Garuda Mas Group and owned by the business magnate Sukanto Tanoto, APRIL is a Singapore held company. APRIL's main pulp subsidiary is Riau Andalan Pulp & Paper (RAPP), located in Riau Province on the Indonesian island of Sumatra. RAPP began operating in 1995 and has now developed a pulp mill

with a capacity of 2.0 million tonnes per year, making it the largest pulp mill in the world.

In production since 1995, the vast majority of the fibre going to APRIL's RAPP mill has been mixed tropical hardwood obtained through the clearance of natural forest. In 2000, 100 per cent of APRIL's fibre came from cleared rainforest. In 2001, 80 per cent of its fibre was still sourced from cleared rainforests. As a result, Friends of the Earth estimates that by the end of 2001 APRIL's operations had already led to the destruction of 220,000 hectares of rainforest. APRIL admits that it will continue to depend upon clear-cutting natural forest until 2008, when it estimates its plantations will meet all its pulp capacity requirements. Industry analysts vigorously question APRIL's claims regarding its acacia tree planting rates and some estimate that APRIL may be clearing rainforest well beyond 2008. By APRIL's own estimates, it will be clearing an additional 147,000 hectares of rainforest over the next six years.

APRIL's logging sites are the natural habitat of numerous endangered species, including the tapir (*Tapirus indicus*), the Sumatran elephant sub-species (*Elephants maximus*) and the Sumatran tiger (*Panthera tigris sumatrae*). But even if all its wood consumption came from plantations it would mean the conversion of these natural rainforests into tree plantations, inevitably leading to the reduction of the area available to these species, thus making extinction increasingly likely.

To make matters even worse, a study by the independent auditors SGS, commissioned by APRIL in 1998, found that over 40,000 hectares of APRIL's concession area has been claimed by local communities. The area where the RAPP factory has been built is land claimed by the indigenous people of Delik, Sering and Kerinci villages. As a result of this dispute the legal representative of these villages was imprisoned for three years. In another land dispute case at Lubuk Jambi village, a member of the community is reported to have been stabbed to death during a protest in 1998.

The report also highlights the role of Northern paper merchants buying APRIL's paper as well as that of the Finnish pulp and paper giant, UPM-Kymmene, which is the biggest buyer of APRIL pulp for its

Changshu paper mill based in China. According to the report “APRIL would not be able to undertake its destructive activities without this market support. These companies must therefore accept partial responsibility for supporting the catastrophic damage that has occurred in recent years to Indonesia’s forests.”

Financial institutions from within and outside Indonesia (UK, the Netherlands, Switzerland, France, US, Finland, Japan) are also held responsible for the massive injection of capital investment of between US\$12 billion and US\$15 billion which contributed to the exponential growth of Indonesia’s pulp and paper industry.

APRIL is now facing a serious financial crisis. It is renegotiating repayments on US\$1.9 billion in debt while facing a possible raw material shortage in the future. The global pulp and paper industry is suffering from low prices and the financial institutions are potentially facing massive losses. But the greatest losers are undoubtedly the indigenous peoples of Indonesia who are losing their homes and livelihoods. Who will pay this debt? (WRM’s bulletin N° 55, February 2002).

Indonesia: Report on paper industry's abuses on human rights

“Without Remedy: Human Rights Abuse and Indonesia’s Pulp and Paper Industry” — a new report released by Human Rights Watch on January 7, 2003 — extensively documents the underlying links between disregard for human rights and unsound forestry practices.

“Indonesian police and company security forces are responsible for persistent human rights abuses against indigenous communities involved in the massive pulp and paper industry in Sumatra”. Abuses include land seizures without compensation and brutal attacks on local demonstrators.

Indonesia’s pulp and paper industry has rapidly expanded since the late 1980s to become one of the world’s top ten producers. But the industry has accumulated debts of more than US\$20 billion, and expanding demand consumes wide swathes of Sumatra’s lowland

tropical forests. This land is claimed by indigenous communities, who depend on them for rice farming and rubber tapping. The loss of access to forests, together with companies' hiring from outside the province, has been devastating to local livelihoods, leading to violent conflicts.

Asia Pulp & Paper (APP) is Indonesia's leading paper producer, and owner of one of the largest stand-alone pulp mills in the world, the Indah Kiat mill in Riau, Sumatra. The mill's primary fiber supplier, Arara Abadi, established its pulpwood plantation in the 1980s-90s, under then President Soeharto. Arara Abadi, backed by state security forces, routinely seized land for the plantations from indigenous communities without due process and with little or no compensation.

Since the fall of Soeharto in May 1998, local residents have attempted to press their claims, but have met with unresponsive law enforcement. With no remedy for their grievances, communities have increasingly turned to vigilantism. Arara Abadi has responded with violence and arrests.

In its new report, Human Rights Watch details three cases in 2001 in which local villagers in Mandiangin, Betung, and Angkasa/ Belam Merah, frustrated by unresolved disputes with Arara Abadi, set up blockades or began logging plantation trees. Hundreds of club-wielding company militia attacked residents, seriously injuring nine and detaining sixty-three. Indonesian police, who trained the civilian militias and also were present during the attacks, were complicit in all three cases. Incidents of ongoing violence against villagers refusing to give up their land to APP suppliers continued to be reported in Riau last year.

Out of hundreds of assailants, Human Rights Watch is aware of only two who were brought to trial, and those two, convicted of assault and battery, were released after thirty days' time served. Human Rights Watch does not condone illegal actions by protesting villagers, and recognizes the company's need to protect personnel and property. But the use of excessive force by company-funded militia cannot be justified, and impunity for those responsible for the beatings is directly fuelling the cycle of vigilante justice. Further abuses are likely to continue under current conditions of impunity, financial pressure, and

lack of internal corporate guidelines for security, Human Rights Watch warned.

The majority of police and military spending (70 percent) comes from off-budget business ventures, many of which are in the forestry sector. These business ties set up an economic conflict of interest in law enforcement. In addition, Arara Abadi's security personnel have no guidelines for the use of force and are not held accountable for violations of the rights of local people. (WRM's bulletin N° 66, January 2003).

Indonesia: Reopening of Indorayon pulp mill encounters strong local opposition

The reopening of the PT Inti Indorayon Utama paper and rayon pulp mill, in Porsea, North Sumatra, has caused strong local opposition to resume. The factory is located at the centre of a densely populated district near to Lake Toba, one of the largest fresh water reservoirs in South East Asia, and releases pollutants, often unfiltered, into the environment, pollutes the water and air in the region and destroys the local Batak population's basis for life. During the 1990s, scientific evidence demonstrated that the mill was responsible for the damage caused to the health of the local population: skin diseases, respiratory illnesses and damage to the nervous system are consequences of the production of pulp and rayon. Furthermore, land clearing, essential for production, has had a devastating impact on local farming: landslides, uncontrollable fluctuations in the water supply, damage to plants and fish. Local people have been opposing for a long time the mill and the plantations that feed it.

Indonesian churches and NGOs which have joined the protest against the reopening of the factory are supported by the United Evangelical Mission (UEM). In a letter to the Indonesian President Megawati Sukarnoputri, the UEM, together with Misereor, the Diaconical Work of the Evangelical Church in Germany, Watch Indonesia! and INFID, appeals to the Indonesian government to refrain from reopening the mill, to avoid risks to the population and the environment.

Although environmentalists and the then Indonesian Minister for the Environment had already warned of the foreseeable consequences

from the outset, the project was implemented under the patronage of former ruler Suharto. After the downfall of Suharto, and as a result of the massive protests by the people, production was temporarily stopped, but since then the company has been fighting incessantly for production to be resumed — as it turns out, successfully. Although the Indonesian Minister for the Environment had recommended the final closure of the plant at the beginning of 2000, the government gave the company management permission to resume operations in November 2002. Since then, there have been recurring violent clashes between the local population and the police, leaving eighteen demonstrators imprisoned, among them two pastors from the Batak Protestant Christian Church (HKBP), one of the UEM's member churches.

Local NGO KSPPM and the North Sumatra branch of environmental group WALHI are also supporting the protestors. Local groups set up a crisis centre and kitchen in the neighbouring town of Tarutung to help victims of the conflict. A Porsea man in hiding in Jakarta said: “The government does not care about the environment — about the damage Indorayon has caused — or about what the local people want. The government takes the company's side, but 90% of the community don't want Indorayon here.” (WRM's bulletin N° 67, February 2003).

Indonesia: The Pulp and Paper Industry, A Growing Disaster

In the early 1980s the Indonesian government launched an ambitious forestry plan entitled “Industrial Timber Plantation (HTI) and Pulp Industry Development.” In the early stages of its development, pulpwood plantations were claimed to rehabilitate degraded land and to reduce the pressure on natural forests. This misleading propaganda was indeed intended to disguise an ambitious plan of the Indonesian government for the country to become a world major pulp and paper producer.

To achieve this plan, the government did not only issue a large number of regulations that enabled concessionaires to log natural forests, but it also disbursed millions of dollars in interest-free loans as an incentive to encourage corporations to get involved in the business, with the

additional benefit of extracting timber from the concessions as well as receiving many other political and economic privileges.

The expansion of the project was running smoothly. Up to 2001 more than 8 million hectares of land had been given to some 175 companies to be converted into HTIs. Some 5 million hectares of the total were allocated for fast growing monoculture tree plantations (*Acacia mangium* and *Eucalyptus*). Pulp production sharply rose from 980,000 tons in 1987 to 8 million tons in late 2000. This changed Indonesia's status from net pulp importer into net pulp exporter.

However, as plantations expanded, the process was gradually generating a disaster chain to the environment and to the economic, social and political lives of the Indonesian people.

There is no relevant data to support the argument that the pulp industry is efficient and productive. On the contrary, the official data showed that only 1.85 million hectares (23.5% of the total designated area) had been planted with trees to feed the pulp mills. The figure might be even lower in the field, as plantations were often established on land unsuitable for HTIs such as the peat swamps or swamps (for example, the Asia Pulp and Paper Company in Jambi had a 1:3 qualitative-quantitative ratio, meaning that for every 3 trees planted on the swamps only 1 survived). Free timber in the concessions was obviously the main reason for corporations' involvement in the business: once the forest was cleared and the timber removed, the concession was abandoned without having planted the trees that were supposed to be planted.

HTI concessionaires themselves did not maintain their plantations well. In 2002 the government revoked the license of some HTIs for various reasons such as unpaid debts, mismanagement and misuse of the Reforestation Fund, thus showing that the HTIs did not perform well.

Ironically, no care was given to the logged-over sites, degrading millions of hectares of land, once primary forests or sources of livelihood for local communities, and turning it them into "no people's land" (abandoned land). This in turn degraded the balancing function of the land and when the structural environmental degradation built up, the results were floods, forest fires and landslides.

To make matters worse, it was clear that the seven pulp industries based in Sumatra and Kalimantan were using raw material from natural forests. The 2003 data of the Ministry of Forestry showed that on average each of the industries had a raw material deficit of 700,000 — 2,000,000 cubic meter per year, with plantations only supplying 20-25% of the total demand, and with half of the wood from natural resources being extracted illegally.

The above figure might have been much higher if we had taken the ministry's previous data. The 2001 Forest Management Statistic showed that while demand reached 25 million cubic meters of wood per year, the total production of related plantations, was only 3.8 million cubic meters per year, meaning that 85% of pulpwood was extracted from forests and not from plantations.

It is obvious that pulp industries will continue to rely on natural forests to fulfill the demand of raw material. In March 2004, a national newspaper reported statements from Asia Pulp and Paper (APP) and Asia Pacific Resources International Holding Ltd (APRIL) that they would stop receiving raw material from natural forests in 2007 and 2008. However, we doubt that this will be so, because their HTI's production was far below their industrial capacity, as revealed by research carried out by Indonesia's NGO network.

The authoritarian system implemented by the government in the forestry sector produces a closed licensing system, which has fuelled corruption, collusion and nepotism. More technically, the land allocation processes have suppressed indigenous/local community's sovereignty, resulting in prolonged social conflicts between the concessionaires and local communities.

According to data from the Ministry of Forestry, during 1990-1996 more than 5,700 conflicts over HTI's establishment occurred throughout Indonesia. The conflicts were mostly of struggle for land ownership between indigenous peoples and other local communities with the concessionaires.

In Porsea, North Sumatra, conflicts between the local community and PT Inti Indorayon Utama (IIU) escalated into the use of violence

by the government-supported company. Hundreds of people were attacked, with the result of some suffering permanent disability, scores going to jail and several dying. The company also completely destroyed the harmony between the environment and the local community. Areas around the factory were contaminated by stinky chlorine odor, making it difficult to breathe. The community's rice land was polluted by the factory chemical waste.

After long years of struggle, the mill was eventually closed down. However, the corrupt legal system and the political complexities led to the re-opening of the business run by tycoon Radja Garuda Mas. The re-opening of the company under a new approach, a new name (PT Toba Pulp Lestari) and a new orientation (no longer producing rayon, but producing only pulp) by President Megawati clearly showed that she turned a blind eye to the military violence against the local community.

Other companies have used different though equally oppressive methods. For instance, APP created a kind of local militia (called PAM Swakarsa) to quell local community's protests and so did Indah Kiat Pulp & Paper and Riau Andalan Pulp & Paper. In Jambi, PT Lontar Papyrus and PT Wira Karya Sakti cleverly managed to use their influence to have the local administration accommodate their interests in local regulations; for example, they managed to convert the designated rice land into HTI in the vicinity of Parit Pudin.

It can be concluded that the pyramid of social conflicts generated by the establishment of pulp mills and HTIs is the result of the structural and systematic policies carried out by the government in collusion with the companies, and of the paradigm of natural resource and conflict management that place the environment and communities as mere objects.

Excessive expectations from a prosperous pulp industry has made the government violate its own regulations. The government supports HTI concessionaires not only through an unclear and business-favorable licensing system but also through interest-free loans as an economic incentive for such business. Moreover, it keeps issuing policies favouring the companies.

In late 2003, through the Ministry of Forestry, the government arranged some ministerial regulations concerning the HTI sector and four ministerial decrees were issued. Ironically, all of them refer to HTIs' privileges and continue to ignore the problems. The decrees stipulate that any HTI can be established without having to conduct feasibility studies. The decrees thus elude the issue of HTI's bad performance and open the way to industrial pragmatism and to environmental and socio-economic problems. The decrees also stipulate that both established HTIs and non-performing ones are allowed to alter their investment structure through divestment, which clearly puts public funds (channeled through government loans) at risk. Any HTI's assets or shares sold to the private sector will no longer belong to the public.

Problems surrounding the pulp industry and HTIs have eventually led to natural occurrences that communities have had to endure: i.e. the natural disasters that are increasing in frequency, scope and intensity. Bad HTIs leave degraded land or badly-maintained plantations. This might alter the weather, i.e. increasing the local temperature. In early 2003, an extensive fire occurred in Jambi. Almost 500 hectares of the HTI managed by PT Dyera Hutan Lestari (PT DHL) were burning for 3 weeks due to bad management, to the conversion of peat swamps to plantations that destroyed the sedimentation structure of water and mud, and to a bad canal system. In another part of Jambi, in the vicinity of Mendahara Ulu the area was flooded because the mangrove forests in the upper course had been destroyed by an HTI.

The beginning of 2003 saw a big flood lasting for almost a whole month in Riau. The flood destroyed everything along its course and caused a loss of up to 764 billion rupiahs, equivalent to 64% of the 2002 regional budget. A report from the Indonesian NGO WALHI revealed that the large amount of converted land in the upper course had caused the loss of carrying capacity of the soil, resulting in erosion, sedimentation and flooding.

Still in Riau, mid 2003 saw another big flood followed by a forest fire that destroyed more than 245,000 hectares of forest in less than 23 days. Thirty two of the 54 companies clearing forests with fire were HTIs.

Floods, landslides, forest fires and smog are not the culmination process of nature, but the products of exploitative management

regulated by economic interest-seeking policies that ignore sustainable resource management. The disasters therefore prove to be structural ones, generated by super-structured policies and corrupt governmental officials. It is therefore crucial to understand the roles of actors and policies outside the forestry sector -which directly and indirectly relate to forestry issues- in viewing the pulp and HTI sector. (By: Rivani Noor, Rully Syuamanda, Rudy Lumuru & Longgena Ginting, WRM's bulletin N° 83, June 2004).

Japan: Paper industry involved in genetic engineering of eucalyptus

In spite of the potentially devastating impacts it might entail, Japanese paper manufacturers are carrying out research on genetic engineering aimed at the “creation” of trees yielding more cellulose.

Eucalyptus is the most widely used tree by the paper industry as raw material for the production of cellulose. The wood from this tree is composed of more or less equal quantities of cellulose and lignin and therefore the latter needs to be removed to obtain cellulose. In their quest for more profits, paper companies are thus working to genetically modify eucalyptus so that its wood will contain less lignin and more cellulose.

Several strategies are being developed with this aim. Nippon Paper Industries' research aims at blocking genes that adjust various stages of lignin synthesis, and its output is a genetically modified eucalyptus that produces less lignin and more cellulose, thus yielding 5% more pulp. Mitsubishi Paper Mills has developed a recombinant eucalyptus that comprises 14-16% less lignin, expecting to yield 10% more pulp, while Oji Paper focuses on facilitating removal of lignin during the pulp-making process to cut manufacturing costs and also to reduce the amount of bleaching agents needed for pulp production.

It is important to underscore that Oji Paper — Japan's largest paper manufacturer — owns a total of 200,000 hectares of fast-growing plantations overseas, distributed in Papua New Guinea, New Zealand, Australia and Vietnam. Now it is planning to increase its annual overseas paper production 20 fold (to one million tons), counting on

expansion in other Asian countries through mergers and acquisitions, with an investment of some US\$ 124 million. China is one of the major targets, as well as Thailand, Vietnam and Indonesia.

As of the end of 2000, Japan's paper industry had some 140,000 hectares of plantations in Japan itself, and some 280,000 hectares abroad. By 2010, the area overseas is expected to reach 430,000 hectares and much of the latter might eventually be composed of genetically modified eucalyptus plantations. (WRM's bulletin N° 49, August 2001).

Laos: EcoSecurities helps ADB provide carbon subsidies to the pulp industry

The Asian Development Bank (ADB) has big plans for plantations in Laos. World Rainforest Movement has obtained a leaked report of a recent ADB mission to Laos which describes how the Bank hopes to attract international pulp and paper companies to invest in Laos.

Over the past ten years, the ADB has funded an area of approximately 12,000 hectares in Laos through its \$11.2 million "Industrial Tree Plantations Project". Under its planned "Forest Plantations for Livelihood Sector Project" the Bank intends to finance 30,000 hectares of plantations.

As part of the preparations for this project, an ADB mission visited Laos from 19 June to 4 July 2003. In the leaked mission report, the Bank argues that "the best way to develop the plantation subsector is to attract and facilitate the entry of MPCs [Multinational Plantation Companies] to establish LCPs [Large Commercial Plantations]." The ADB plans to establish a "package of incentives" to encourage multinationals to establish 500,000 hectares of plantations. In addition, the ADB hopes companies will build two \$1 billion pulp mills, each with a capacity of one million tons a year.

According to the ADB's mission report, several multinationals are already interested in establishing plantations in Laos, including Stora Enso (Finland-Sweden), Riau Andalan (Indonesia), and Phoenix Pulp and Paper (Thailand). The Bank plans to hold an international

investment seminar which “will provide a good opportunity to the interested firms to better understand the significant potential of establishing large commercial plantations in the country,” according to the Bank's mission report.

The ADB's mission also proposed establishing a Lao Plantations Development Corporation, which would facilitate investment in plantations in Laos. The Bank is “already exploring” possible funding for the Corporation from the French government and the Nordic Development Fund.

Another possible incentive for plantation development in Laos is funding through the Clean Development Mechanism of the Kyoto Protocol. Through the CDM, Northern countries can obtain “carbon credits” (effectively permits to continue polluting) by funding plantation (and other) projects in the South that are supposed to reduce or absorb carbon emissions.

However, calculating how much carbon will be absorbed by a plantation, and for how long, involves many assumptions. In order to calculate how much carbon would be absorbed by a plantation, a comparison is needed with what might have happened without the plantation. Once planted, a plantation might burn down. The fire might spread into neighbouring forests. Pests might wipe out large areas of the plantation. Droughts or floods might affect growth rates and therefore the rate at which trees absorb carbon. Villagers might decide to cut the trees down to reclaim their land. They might clear another area of forest to replace farmland lost to the plantations.

Luckily, a new breed of clairvoyant expert is at hand to gaze into the future for us. Louise Aukland, a “carbon sequestration specialist”, was one of the consultants on the ADB's mission to Laos. At the time Aukland worked with EcoSecurities, a consulting firm which “specialises in advising on strategy regarding global warming issues”. Among the services offered by EcoSecurities is advice for clients on designing projects in order to increase the chances of obtaining funding under the CDM.

Aukland has now left EcoSecurities and her colleague, Jan Fehse, has taken over responsibility for her work. Fehse is an expert: a

“specialist in forestry and land use carbon projects” with “in-depth knowledge of global climate change policy in relation to land use, land use change and forestry,” according to EcoSecurities' web-site.

I asked Fehse how EcoSecurities attempts to determine how much carbon a plantation might absorb, how EcoSecurities calculates what might happen if the plantations were not planted and how EcoSecurities determines what might happen to the plantations in, say, 100 years' time.

Fehse did not answer my questions. Instead, he explained that the questions are “about methodologies for the setting of baselines, the determination of the project boundary, the modelling of carbon dynamics within the project boundary and without (leakage).” He added, “I suggest you should first read the Marrakesh Accords.”

The Marrakesh Accords were agreed at the seventh Conference of the Parties (COP7) held in Marrakesh in 2001. The issues covered are highly technical. Fortunately, as Fehse pointed out, “EcoSecurities has a great deal of experience with these highly technical issues.” Unfortunately, Fehse appears unwilling to explain these highly technical issues.

EcoSecurities may argue that it is in the business of providing funding for sustainable development for poor countries. However, through their involvement with the ADB's plantations projects in Laos, the company is helping to provide subsidies for the international pulp and paper industry, an industry responsible for major environmental and social problems in neighbouring Thailand.

In 1995, Thai economist Pasuk Pongpaichit wrote: “Economic theory tells us it's all right to subsidize education because it benefits the whole society. But while eucalyptus and pulp and paper industries earn profits for some, they cause problems for society. Therefore, economic theory tells us, they should be taxed. But instead the government does the opposite.”

The ADB is intent on providing subsidies to the pulp and paper industry - without the benefit of a comprehensive discussion in Laos about the

impacts or whether converting vast areas of the country into monoculture plantations really is “sustainable development”. Pasuk’s conclusion about subsidies in Thailand is equally relevant to Laos: “This is a matter of influence and power.” (By: Chris Lang, WRM’s bulletin N° 76, November 2003).

Malaysia: Campaign against plantation and pulp mill project in Sabah

A plantation project that would occupy about 3% of the area of Sabah, in northern Borneo, and provoke the clearcutting of 6% of its dwindling primary forests is being promoted in Kalabakan by a joint-venture between the State-owned company Innoprise Corporation Sdn Bhd, Lions Group of Malaysia and the China Fuxing Pulp and Paper Industries of China. The plantation and pulp and paper mill megaproject, whose cost has been evaluated in US\$ 1.1 billion, will require the felling of 240,000 hectares of forest to be replaced by a massive monoculture plantation of black wattle trees (*Acacia mangium*) — also known as dry acacia or mangium tree — a fast growing tree native to Australia.

The project has sparked criticism because of its expected impacts and for not having even adhered to the weak legal environmental requirements existing in Sabah. According to the Sabah Conservation of Environment Prescribed Activities, any forest which is cleared for the felling of timber covering an area of 500 hectares or more or any development of forest plantation of 500 hectares or more requires an Environmental Impact Assessment (EIA). Nevertheless 12,000 hectares of the land of the proposed project have already been logged without a single EIA done. Innoprise Corporation has claimed that no EIA is required since the logging operation was approved before the State EIA requirement was enforced, and announced the logging of another 33,000 hectares. The company completely ignores the Federal Government’s Environment Quality Act of 1974 and the Environmental Quality Order of 1987 which oblige to perform EIA for these kind of activities. Sahabat Alam Malaysia (SAM) — Friends of the Earth Malaysia — has denounced that by allowing the logging to proceed without an EIA, the Sabah Government is completely disregarding the environmental impacts of the logging activities and is manipulating

the law in favour of the interests of big companies and to the detriment of forest conservation.

It is reasonably feared that this huge plantation will provoke deleterious impacts on the environment. The plantation area will cut the biggest remaining block of continuous forest in the region which extends between the Danum Valley and the Maliau Basin, both classified as Class One Protection Areas. The area contains high biodiversity levels, including 120 mammal, 280 bird, and more than 2500 tree species. This biodiversity rich ecosystem is in danger of being substituted by a uniform and biodiversity poor agrosystem. Already wild animals are reported to have been sighted more often, probably fleeing from the logged area. Since the land of the proposed project is mostly steep, felling for plantations will expose the soil to direct erosion by rainfall. Sediments could reach the coastal mangrove vegetation in Cowie Bay, depleting marine resources. Consequences are already apparent: with only 12,000 hectares logged the Danum Valley has been recently flooded. Local microclimate will also be affected because often once the rainforest is replaced with a plantation it will dry and heat up. Additionally, this could create negative conditions for the plantation itself, which would become more prone to fires.

The effects of pulping and bleaching are also threatening. The use of chlorine in bleaching the pulp has caused the industry to be the third largest source of dioxin and its related compounds in the world. This problem is further compounded by the fact that Malaysia still has no policy on dioxin damage prevention. Carbon dioxide, sulphur oxides and chloroform are some of the polluting gases emitted by this industry. Furthermore about 300 chemicals, among them organic pollutants, chlorophenolics, acidic and organichlorine compounds have been identified in pulp and paper mill effluents.

To stop further destruction, SAM has called the State Government of Sabah and the Federal Government to halt all further logging activities, take action against the parties that are responsible for logging the 12,000 hectares of forest without an EIA, undertake a comprehensive EIA of the project, seek extensive and genuine feedback from the public in relation to the reviewing of the EIA, review as a whole given the magnitude and scale of its expected environmental impacts.

Additionally an international campaign has been launched to oppose this project. (WRM's bulletin N° 40, November 2000).

Thailand: Massive eucalyptus plantations planned

Over the decade of 1990, Thailand has seen repeated protests against eucalyptus plantations. Villagers have taken part in marches, uprooted trees, set fire to plantations, declared their lands "eucalyptus free" and reclaimed plantation land by regenerating community forests. Despite these protests and the problems associated with eucalyptus plantations, Thailand's two largest pulp and paper producers Phoenix Pulp and Paper Plc and Advance Agro Plc are planning large scale expansions.

Phoenix plans to more than double its production capacity by adding a 270,000 tonne-capacity mill to its operations in Khon Kaen, at a cost of US\$450 million. Advance Agro is planning a new 750,000 tonne-capacity plant in a joint-venture with the Chinese government. The cost of Advance Agro's new mill and the associated eucalyptus plantations is estimated to be US\$1,000 million. 80% of the output from Phoenix's new mill would be for export, while Advance Agro's new mill would produce pulp entirely for export to China.

Phoenix management is negotiating with the Swedish and Finnish governments attempting to arrange low-interest loans to fund the expansion. Phoenix funded a previous expansion, Phoenix II, constructed between 1990 and 1994, with interest-free loans from the Finnish and Swedish governments. The Finnish companies Jaakko Poyry, Sunds Defibrator, Ahlstrom, Suomen Puhallintehtas, Sahko Lahteenmaki and Valmet Automation subsequently benefitted from contracts to supply technical advice, designs and machinery for Phoenix II.

Part of the Finnish government's justification for funding Phoenix II with a US\$91 million "pre-mixed concessional credit" was that it would help improve the environmental performance of the Phoenix mill. Part of this "improvement" included the misnamed "Project Green", through

which Phoenix, since 1994, poured its waste water onto farmers' fields. The waste water is supposed to irrigate farmers' eucalyptus trees, but villagers living nearby report that their underground water sources have become salty, fish in their ponds have died and rice harvests in fields adjacent to Project Green have failed. Hundreds of local villagers filed complaints against Phoenix in 1995 and 1996, resulting in out-of-court settlements totalling around US\$80,000. In addition to problems with "Project Green", the Ministry of Industry has repeatedly ordered the Phoenix mill closed on the grounds that it has polluted the nearby Phong river.

In August 1998, the Finnish Minister of Development Cooperation Pekka Haavisto described the loans to Phoenix as "a mistake that Finnida made."

1999 saw the end of a six-year takeover struggle for Phoenix when Lalit Mohan Thapar replaced George Davison as chairman of Phoenix. According to Davison, much of the financing for the takeover came from the Bangkok Bank of Commerce (BBC). The BBC is notorious for its role in one of Thailand's biggest ever financial scandals in which around 200 billion Baht (about US\$8 billion at the time) disappeared from the bank. A group of Thai politicians, known as the "Group of 16" used money from the BBC to fund takeovers of Thai companies, including Phoenix. Davison described the takeover as "government condoned theft."

The value of shares in Phoenix has fallen from 140 Baht (US\$5.6 at the time) in 1995 to 34 Baht (less than US\$1) in June 2000, and the company now has debts of around US\$80 million.

Located at Tha Toom in Prachinburi province, approximately 120 km from Bangkok, Advance Agro is one of Thailand's newest pulp and paper mills. Production started in 1996, and in 1998 a second mill came on line boosting capacity to around 310,000 tonnes. The mill was built by the Soon Hua Seng (SHS) Group, one of Thailand's largest companies.

Ten years ago employees of the SHS subsidiary Suan Kittii were arrested for clearing forest to make way for eucalyptus plantations.

The resulting uproar prompted then Prime Minister Chatichai Choonhaven to prohibit all commercial “reforestation” in National Reserve Forests.

The mill was originally to be the “Suan Kittii Pulp Mill”, but in order to distance itself from public criticism associated with Suan Kittii, SHS swiftly renamed the mill Advance Agro and hired the Finnish-owned Presko public relations firm for advice on minimising any further environmental criticism. CIDA, the Canadian aid agency, subsequently funded the Canadian consultants H.A. Simmons to work for SHS, and the UK Commonwealth Development Corporation (CDC) provided loans and debt finance for the mill.

The company's main shareholders are the Soon Hua Seng Group (56%), StoraEnso, Europe's largest pulp and paper producer (19%), Oji Paper, Japan's largest paper producer (5.5%) and CDC (1%). Stocks in Advance Agro have fallen from 73.48 Baht in 1997 to 17.25 Baht in July 2000, and the company has huge debts of almost US\$640 million.

At present the mill obtains its raw material supplies from 31,000 hectares of eucalyptus plantations managed by Agro Lines, a subsidiary of the SHS Group, and 57,000 hectares of eucalyptus grown by 6,000 farmers under contract to Agro Lines.

The proposed expansion of Advance Agro would require a further 40,000 hectares for plantations and another 80,000 hectares for contract farming. Plodprasop Surasawadi, Director General of the Royal Forestry Department (RFD), stated in March 2000 that his support for the project was conditional on the joint venture “negotiating” with villagers living in forest land and “paying compensation to those who agree to return the land.” Villagers would therefore be kicked off their land, paid off, and the land given to the RFD which would then lease it to Advance Agro to grow eucalyptus.

The so-called “degraded forests” which would be converted to monoculture eucalyptus are both valuable to villagers and support local wildlife. According to the Bird Conservation Society of Thailand, the lowland dry dipterocarp forests under threat from both proposed expansions provide habitat for globally threatened birds such as the

Rufus-winged Buzzard and the white-rumped Falcon. (By: Chris Lang, WRM's bulletin N° 36, July 2000).

Thailand: Eucalyptus, encroachment, deforestation and pollution linked to pulp and paper company

Advance Agro, one of Thailand's largest pulp and paper companies, markets its "Double A" brand paper as environmentally friendly. The company's advertising explains that the raw material comes from plantations and thus relieves pressure on remaining forest areas.

The reality is that Advance Agro's plantations have displaced communities and are the final stage of deforestation in east Thailand. Kasem Petchanee, the Chairperson of the NGO Coordinating Committee, Lower Northern and Upper-Central Thailand, explained how deforestation started when companies like the state-owned Forest Industry Organisation started logging operations. "Fifty years ago this area was covered in fertile forest," he said.

During its war in Indochina, the number of US troops stationed in Thailand reached a peak of almost 50,000 in 1969. To link their bases in north-east Thailand with the port of Chon Buri the US built a network of major roads. Deforestation followed the road-building. In the 1970s and 1980s, the Thai government built more roads to access the forests of Cambodia.

The World Bank has played a key role in promoting cash crops in Thailand. Among the organisations set up at the Bank's recommendation is Thailand's National Economic and Social Development Board (NESDB), which oversees all public investment planning. Since its establishment in 1959, NESDB has been a major promoter of cash crops grown for export.

Encouraged by NESDB's policies, companies started planting cash crops such as cassava and sugar cane in east Thailand. Conflicts developed over land as companies encroached on people's land and forests. Villagers were forced to grow cash crops and forced to sell their crops to a particular company.

Networks of influence, involving members of parliament, companies, army officers, and a local mafia were established and expanded. Mafia-style murders, land speculation and landlessness became common in east Thailand.

In 1982, the Soon Hua Seng Group (SHS), one of Thailand's leading rice and cassava exporters, started planting eucalyptus in east Thailand as an alternative to cassava. By 1987 SHS was planting eucalyptus on a commercial scale and set up the company Advance Agro to produce pulp and paper.

Today the SGS Group has 32,000 hectares of its own plantations as well as around 50,000 hectares of eucalyptus planted by farmers under contract. In 1996, Advance Agro opened its first pulp and paper mill in Prachinburi province and now has a total capacity of 500,000 tonnes of paper a year. Seventy per cent of Advance Agro's paper is exported, important markets being China, USA, Hong Kong and Japan.

Laemkowchan village is about 100 years old and is close to one of Advance Agro's mills. In the past, villagers grew rice, cassava and pumpkin. When SHS started to look for land to plant eucalyptus many villagers sold the land they had used for cassava planting to the company.

But villagers found that the eucalyptus plantations started to affect their rice fields as well. Suwan Kaewchan, a member of the Administration Council in Laemkowchan village, explained to researcher Noel Rajesh: "When the company came and started planting eucalyptus near the rice fields, the water began to dry up and people found they couldn't grow rice. One by one they began to sell their land and leave. They went to work as hired labour in other areas or with the company."

Besides, waste water from Advance Agro's mill is poured onto the eucalyptus plantations. The filthy water lies in channels between the rows of the eucalyptus trees. Villagers point out that although the water is treated at the pulp mill this does not mean that the water is clean. Recently water released from the mill killed villagers' rice crops.

Villagers report that ash from factory chimneys is deposited on their houses and gardens. People have experienced skin problems such as itchy skin. The air sometimes smells and villagers are worried that the factory might be emitting sulphur as well.

The company has set up an environmental unit, and company officials tell villagers that they know about the problems. However, villagers have never received any compensation for any of the problems that the company has caused them.

Several international companies have benefited from contracts on Advance Agro's mills. Jaakko Poyry, the world's largest forestry and engineering consulting company, won contracts from Advance Agro for engineering design, project management and construction management of the Prachinburi mill. Japan's Mitsubishi Heavy Industries provided machinery for Advance Agro's paper mill.

Finance for Advance Agro's mills was organised by Barclays de Zoete Wedd. The main backers were Bangkok Bank, Thai Farmers' Bank, Krung Thai Bank and the UK's Commonwealth Development Corporation. The International Finance Corporation, the World Bank's private lending arm, lent US\$10 million and further financing came from export credits.

When Stora Enso bought a 19.9 per cent share in Advance Agro in 1998, it gained exclusive international marketing rights for Advance Agro's products and a secure market for 12,000 tonnes a year of long-fibre pulp from its European mills. Two members of Stora Enso are on the board of Advance Agro.

Advance Agro is a good illustration of how Northern and Thai companies benefit from the pulp and paper industry, while rural communities are left with the costs. (By: Chris Lang, WRM's bulletin N^o 70, May 2003).

Thailand: Assassinated village conservationist

Samnao Srisongkhram (1965-2003), who was shot in the head and killed by a hired gunman on 25 May 2003, was a village leader praised for his work defending the interests of fellow farmers in an area of

Thailand's Northeast affected by pollution from a large pulp mill. He was 38.

Samnao, of Khambongpattana village in Khon Kaen province, was President of the local Phong River Conservation Club. He had played a part in monitoring and ensuring compensation for the effects of pollution from the Phoenix Pulp and Paper Company since 1996.

A member of a committee created by the Prime Minister's Office to handle grievances against Phoenix and of a committee set up by the governor of Khon Kaen province to look into agricultural damage caused by Phoenix's waste water disposal scheme, Samnao also worked on official plans for river conservation and was active in conservation camps for young people as well as regional environmental activities. The pollution monitoring and enforcement efforts of the local organizations he helped lead are widely credited with bringing about improvements in water and air quality around the Phoenix mill.

Samnao was killed while sitting and talking quietly with his assassin at his family's rice-field hut following a villagers' meeting to consider plans for a project to develop women's leadership in his village. Samnao's infant daughter was by his side and his wife nearby. The assassin, a stranger to the area, had approached Samnao posing as an NGO activist from North Thailand seeking information.

In July, police arrested a suspect in the murder in Southern Thailand. According to police sources, the suspect fingered the headman of Samnao's own subdistrict, Khoke Soong, as the person who had hired him to carry out the killing. The headman, who has also been arrested, has longstanding ties with Phoenix, but local observers are skeptical about whether he and the gunman are the only people involved in the shooting.

Phoenix runs two kraft pulp lines producing about 200,000 tons of pulp per year from bamboo, kenaf and eucalyptus. One uses elemental chlorine to bleach its pulp, the other chlorine compounds. Although Thailand lacks the capacity to monitor dioxins, other pollutants associated with the pulp industry have been consistently found across the neighbouring area. Before 1993, the firm's effluents were released

directly into the Phong River, but, following a disastrous pollution incident, this was made illegal. Today, effluents from the two mills are treated together and then dumped in holding ponds before being released onto company eucalyptus plantations.

However, Phoenix has been hard put to find enough land to release the 25-28,000 cubic metres of effluent it needs to get rid of daily. Some waste water seeps into neighbouring farmers' fields and eventually into the Phong River, damaging soils, crops and fisheries. According to an agreement signed with the Ministry of Industry, the firm is obligated to acquire an additional tract of land to dump effluent on or have its permission to operate withdrawn by the end of this year. Phoenix has been trying to buy the new land from villagers.

Several villagers, however, especially those owning fertile bottom land at the mouth of a local tributary, had refused to sell. Backed by the Phong River Conservation Club, they also demanded proper compensation for land already spoiled by the factory's releases and gathered evidence to present to concerned government agencies. Worried about the approaching government deadline, Phoenix had been in contact with Samnao as part of its campaign to buy land and to bargain over compensation. According to locals, prior to the assassination, Samnao had received calls from Phoenix both issuing threats and offering bribes, which he refused.

Araya Nanthaphotedet, director of the government's 10th Regional Environment Office, expressed hope that all those behind the killing would be apprehended and convicted. She said Samnao had done very good work and was an admirable spokesperson for his fellow villagers.

"Just before he died, he had participated in a provincial-level meeting about solving the land problems of the factory that affected villagers," Araya said. "He was about to report back to the villagers. It's such a shame."

Samnao is remembered by friends and co-workers as a reserved and humble leader without personal or political ambitions who had no conflicts other than with Phoenix.

He is survived by his wife Mayuree and two children, a son, 7, and a daughter, 7 months. His place in the local conservation group is being taken by, among several others, Chawang Buochan, himself the survivor of a 1996 shooting whose perpetrator was never found. Contributions to the collection being made for Samnao's widow and children can be sent to an account (see References). (WRM's bulletin N° 74, September 2003).

Thailand: A pulp mill with a long history

Established in 1989, Advance Agro Public Company Limited is located in Prachinburi province. This company — whose main business is producing and selling pulp and printing and writing paper — markets its “Double A” brand paper as environmentally friendly. The company's advertising explains that the raw material comes from plantations and thus relieves pressure on remaining forest areas. But in reality, Advance Agro's plantations have displaced communities and are the final stage of deforestation in east Thailand.

Laem Khao Chan village is about 100 years old and is close to one of Advance Agro's mills. In the past, villagers grew rice, cassava and pumpkin. When SHS started to look for land to plant eucalyptus many villagers sold the land they had used for cassava planting to the company. But villagers found that the eucalyptus plantations started to affect their rice fields as well.

Suwan Kaewchan, a member of the Laem Khao Chan Tambon Administration Organization in Laem Khao Chan village, explained: “When the company came and started planting eucalyptus near the rice fields, the water began to dry up and people found they couldn't grow rice. One by one they began to sell their land and leave. They went to work as hired labour in other areas or with the company.”

Villagers who kept their land but planted eucalyptus under contract to the company faced another problem, as Kasem Pet-natee of the Khwae Rabom-Siyad Development Project pointed out: “After the first harvest, the soil is so degraded that villagers have to spend money to improve the soil. Removing the trees is difficult. Villagers have to hire expensive

machinery to remove the stumps and roots of the trees. Agricultural communities are falling into debt to banks and moneylenders. When villagers cannot pay, the banks take their land.”

Wastewater from Advance Agro's mill is poured onto the eucalyptus plantations. The filthy water lies in channels between the rows of the eucalyptus trees. Villagers point out that although the water is treated at the pulp mill, this does not mean that the water is clean. Recently water released from the mill killed villagers' rice crops. Dust from the mill also spread to the villagers' houses and brought a rash to their skin.

Several transnational corporations have benefited from contracts on Advance Agro's mills. Jaakko Poyry, the world's largest forestry and engineering consulting company of Finland, won a contract (of not more than 3 years and signed on 15 December 1993) from Advance Agro for engineering design, project and construction management for the mill. The corporation was paid US\$15,250 each week, excluding an hourly fee of US\$60 for carrying out additional orders. Another contract (signed on 5 September 1995) was made with Finland's Ahlstrom Corporation for a 10-year provision of technical services. The first-year payment was US\$350,000 and 3% of Advance Agro's net revenue had to be paid annually to Ahlstrom for the outstanding payment.

When StoraEnso bought up shares in Advance Agro in 1998, several cooperation contracts between the two companies were signed. For example, Advance Agro had to pay StoraEnso annually US\$100,000 in return for pulp and paper research and development cooperation. To obtain technical assistance from StoraEnso, Advance Agro would have to pay salaries, other benefits and technical assistance costs to StoraEnso for 12 months. StoraEnso would secure at least 12,000 tons of European long-fibre pulp a year as well as be paid in commission as Advance Agro's overseas sales representative and distributor (except in Thailand and Japan) for seven years. It was expected that the long-fibre pulp to be secured by StoraEnso would come from its mills in Europe. (WRM's bulletin N° 83, June 2004).

Vietnam: Whose trees? Vietnamese five million hectare “reforestation” programme

Vietnam has a history of tree plantation programmes dating back to 1956. According to a report by Nguyen Ngoc Lung, Director of Vietnam's Forest Development Department, between 1956 and 1992 an area of over 1 million hectares was planted with trees. However survival rates have been poor and much of the wood produced has been exported as wood chips to Japan or Taiwan.

Yet the Vietnamese government is determined to increase the area of plantations in the country. In 1992, the government introduced Programme 327, aimed at “regreening the barren hills”. The state-run Vietnam News Agency reports that between 1988 and 1994, 115,000 hectares per year were planted, a figure that increased to 193,000 hectares per year between 1995 and 1998. The cost to the state was high, and by 1998 Programme 327 had cost the government approximately US\$273 million. Three years earlier the Vietnamese government had unsuccessfully attempted to get World Bank funding for Programme 327.

In 1998, the World Bank hired forestry consultants Fortech to “describe, analyse and evaluate” Programme 327. Fortech's consultant pointed out that under the programme areas of natural forest in Vietnam had continued to decline and that fast-growing tree plantation programmes had largely failed. Among the problems listed by the consultant are a top down bureaucratic approach, land allocation that does not involve local people, poor silvicultural practices, the project was simply imposed on poor households without their input, and Vietnam has little land available for large scale tree plantations.

Perhaps as a result of this failure to secure World Bank funding the government proposed a new and bigger programme to replace Programme 327: the 5 Million Hectare Reforestation Programme.

The programme's target is to increase the area of “forest” in the country to 14 million hectares by the year 2010. The target area — five million hectares — came from French maps of 1943 which indicate that 43 per cent of Vietnam was then forested, five million hectares more than

official figures in the mid-1990s when the programme was first dreamed up. The programme is expected to cost somewhere in the region of US\$2.5 billion with around US\$1.5 billion to come from international aid agencies. Of the five million hectares the government plans to designate one million hectares to plantations for pulp production.

Six months after the government approved the project at the 10th National Assembly, bilateral aid agencies agreed to support the programme during the December 1998 Consultative Group meeting in Paris (chaired by the World Bank). A year later, on 10 December 1999, a Memorandum of Agreement was signed between Le Huy Ngo, Minister of Agriculture and Rural Development, and 15 representatives of international aid agencies.

Subsequently a "Joint Partnership Steering Committee" was established consisting of representatives of the Vietnamese government and international aid agencies. At the same time three Task Forces were established, which aim to investigate such things as forest policy, institutions, forest sector investment, assistance needs and financing strategy. The impacts of large scale tree monocultures on people and the environment will apparently not form part of the Task Forces' work.

The Swedish International Development Agency (SIDA) is one of the agencies involved in the discussions with the government about the 5 Million Hectare Reforestation Programme. Rolf Samuelsson, First Secretary at the Swedish Embassy in Hanoi, described SIDA's attitude to the project: "We think it's perhaps a rather squarishly top down plan type of programme, political agenda and so forth. But as Sweden is very much encouraging partnerships and sector-wide programme approaches we think this programme, for all its constraints, is a good starting point for a dialogue with the government on forestry issues."

SIDA has requested that the Centre for International Forestry Research (CIFOR) in Indonesia gets involved in the negotiating process, on the grounds that there is no "critical mass of experts in Hanoi to help the ministry in working out these documents" according to Samuelsson.

Other agencies involved in the Joint Partnership Steering Committee include the Netherlands, Germany, UNDP and the World Bank. Some

of these countries are already involved in funding or are planning other reforestation projects in Vietnam. For example the World Bank lists a US\$75 million project titled "Barren Hills Afforestation" on its May 2000 Monthly Operational Summary. Few details are available although the Bank has listed the project for several months. In March 1997, the Asian Development Bank approved an interest-free US\$33 million loan for a five-year Forestry Sector Project, which involves reforestation in mountainous areas in four provinces in Vietnam. Part of the project includes planting 12,000 hectares with fast-growing species. The consultant for this project is GFA (Gesellschaft für Agrarprojekte mbH) a German agriculture and forestry consulting company based in Hamburg.

While the aid agencies and the Vietnamese government discuss the future funding of projects the government has started planting. In 1999, 206,000 hectares of "forests" were planted, out of a target of 310,000 hectares. Over 5,000 hectares were planted by aerial seeding in the northwestern province of Lai Chau. The target for this year is for 403,000 hectares and a budget of approximately US\$25 million has been allocated.

The logic behind all this seems to be simply that trees are good. There appears to be little analysis about who or what the trees are for. One possibility is the pulp and paper industry, but in August 1999 Vietnam News reported that the Viet Nam National Paper Corporation had 18,000 tonnes of paper stockpiled — because of low consumption. Last year the Vietnam Paper Corporation was the biggest loss maker in the country with nine of its member companies reporting a loss for the year. A year earlier, Vietnam's wood suppliers were forced to stockpile timber because they had more wood than the country's pulp processors could handle. In December 1999, the Hanoi-based newspaper *Nhan Dan* reported that farmers were selling their products as firewood in local markets rather than to the pulp and paper industry because of the lack of transportation and the "low economic value of these long-lasting trees."

While these examples do not give the whole picture, they do indicate that a further one million hectares of plantations to supply the pulp industry would not necessarily benefit either the pulp and paper industry

or the farmers on whose land the trees are grown. Ambitious planting targets and the business of attracting funding are in danger of crowding out the potential of increasing the area of native forests and increasing the well-being of the rural population, for example through community forestry.

Earlier this year the Ministry for Agriculture and Rural Development indicated that the area to be planted might be reduced to three million hectares "to correspond to the existing land area suitable for afforestation and the national development plan" according to the Vietnam News Agency. Perhaps this will help free up both political and geographical space needed to involve communities in managing their forests, woodlands, fallows, grazing lands and fields. (By: Chris Lang, WRM's bulletin N° 38, September 2000).

Vietnam: Massive plantations ahead

In 2001 the Vietnam Paper Corporation (Vinapimex) announced an ambitious plan to expand the pulp and paper industry in Vietnam. With a total cost of more than US\$1 billion, the plan involves 15 new pulp and paper production projects. If they were all built, the projects would raise Vinapimex's annual paper production capacity from the current 171,000 tons to 419,000 tons.

The pulp and paper industry in Vietnam presently produces a total of approximately 360,000 tons of paper a year. Vinapimex hopes to increase this figure to more than one million tons by 2010.

One of Vinapimex's proposed projects is a new 130,000 tons a year bleached kraft pulp mill in Kontum province, in the central highlands of Vietnam. In October 2001, the government approved Vinapimex's feasibility study.

Most of the funding for the US\$240 million project has yet to be found, but Vinapimex hopes foreign governments will come to its help with "aid" loans at interest rates below those of commercial banks. The Vietnamese government has agreed to cover seven per cent of the costs by funding roads, research facilities, health clinics and schools. The government will also buy land use rights for the project and will waive land tax during the first tree cycle.

To supply raw material to the mill, Vinapimex has already started planting trees and aims to establish an area of 125,000 hectares of fast-growing tree plantations. In addition, according to the feasibility study, Vinapimex plans to use 38,000 hectares of natural forest to supply the mill.

Meanwhile, work on expanding Vietnam's largest pulp and paper mill, Bai Bang, is due to start in the next few weeks. The plant is to be expanded from a capacity of 55,000 tons of paper a year to 100,000 tons. At the same time, annual pulp capacity will be increased from 48,000 tons to 61,000 tons. This represents the first stage of a plan to increase the mill's annual paper capacity to 200,000 tons and pulp capacity to 150,000 tons.

On 30 November 2001, the Swedish Government agreed to provide a preferential credit of US\$12.5 million to fund the first phase of the expansion. In 2000, Vinapimex obtained US\$42 million in loans from three Nordic banks to fund the rebuilding of the mill. Vinapimex has signed contracts with Voith Paper and China's Sinochem to rebuild the plant. Elof Hansson and Marubeni won contracts to supply equipment. Hansson leads a group of supplier companies which includes Kvaerner Chemetics, Kvaerner Pulping, Purac, Metso Paper and AF-IPK.

In addition to Vinapimex's expansion plans, the Japanese company Nissho Iwai is planning to increase its wood chip production in Vietnam. The company is building a new, US\$1.5 million plant as a joint venture with a state-owned forest product exporting agency. The wood chips will be exported and sold to the Japanese Oji Paper Company. Nissho Iwai also plans to increase the capacity of an existing wood chip producer by 15 per cent to 150,000 tons a year. The company's target for the year 2002 is 400,000 tons, all of which is for export to Japan.

In an attempt meet the increasing demand for raw material to supply the expanding pulp and paper industry, the government has ambitious plans to plant one million hectares of industrial plantations specifically to feed the industry as part of its "5 million hectare" programme.

In a report dated February 2001, the Ministry of Agriculture and Rural Development argues that the 5 million hectare programme should lead

to “sustainable land use” and be “financially, environmentally and socially viable”. Yet, the industrial tree plantation programme currently underway in Vietnam meets none of these objectives. It is only financially viable with government subsidies and low-interest loans in the form of overseas “aid”. Monocultures of fast-growing trees which replace forests, fields and grasslands cannot be described as either environmentally viable or sustainable. And, for rural Vietnamese people, who are dependent on the land and forests which would be lost to the plantations, the social implications are potentially devastating. (By: Chris Lang, WRM's bulletin N° 54, January 2002).

Vietnam: Construction of Kontum pulp and paper mill suspended

On 24 October 2002, provincial authorities announced the suspension of construction of the new 130,000 tons a year pulp and paper mill at Dac To in Kontum province, in Vietnam's Central Highlands. The state-run Vietnam News Agency (VNA) reported that construction was stopped because of “a failure to draw up a credible master plan.”

Six months earlier, during a two-day trip to Kontum, Deputy Prime Minister Nguyen Cong Tan had demanded that the Vietnam Paper Company, Vinapimex, must publish a plan indicating where the raw materials were to come from to feed the mill.

Vinapimex had planned the Kontum mill on the assumption that more than 20,000 hectares of plantation were available to feed the mill, and that more land could be planted. However, three years later, less than 15,000 hectares of plantations existed and some of this area encroached on people's land and homes. After construction was stopped, Kontum's provincial authorities told VNA that expanding the area of tree plantations to provide more material was simply not feasible.

Jaakko Poyry, the world's biggest forestry and engineering consulting firm, was the project consultant for the proposed mill. In 1998, Poyry produced a feasibility study for Vinapimex on the mill, and prepared the bidding documents for tender in May 2002. The total cost of the mill was estimated at US\$240 million, including US\$163 million worth of equipment from Western Europe.

The suspension of construction at the Kontum mill is only one of the problems facing the state-run Vinapimex, Vietnam's largest paper producer. Vietnam has the capacity to produce 360,000 tons of paper a year or approximately 70 per cent of the paper consumed in the country each year. However, in August 2002, VNA reported that Vinapimex's warehouses were at bursting point, with 28,500 tons of stockpiled paper, including 16,000 tons from the previous year. The company accused foreign exporters of dumping cheap paper in Vietnam, but the reality is that imported paper is both cheaper and better quality. In 2002, Vietnam imported 52,000 tons of pulp and 290,000 tons of paper.

In an attempt to compete with the imports, Vinapimex reduced paper prices twice during 2002. Meanwhile, paper production costs increased in October when the government hiked the price of electricity. Vinapimex has asked the government for a reduction in electricity charges to pre-October 2002 levels and is looking to the government for other subsidies, through preferential credit loans and a reduction in value added tax.

The outlook is not good for Vinapimex. This year, under the ASEAN Free Trade Area rules, Vietnam has to reduce tariffs on imports of paper from 50 per cent down to 20 per cent.

In 2000, Dang Van Chu, Vietnam's Minister of Industry told the trade magazine *Pulp and Paper International* that Vietnam had a clear strategy for the pulp and paper industry for the next decade. "Within 10 years, we want our industry to meet 80-90 per cent of domestic demand, with an average growth rate of 10.4 per cent per year," he said. He added that the country also hopes to increase trade on the international market.

Only two years later, the plans are in tatters. In July 2002, Deputy Prime Minister Nguyen Tan Dung instructed the Ministry of Industry to adjust its development plan for the paper industry up to 2010. Dung requested that all proposed new paper mill must take into account plans for raw material supply.

Meanwhile, Vinapimex continues with its expansion plans. A 250,000 tons a year pulp mill is planned at Phu Tho, with the aim of supplying Vietnam's largest pulp and paper mill at Bai Bang.

In October 2002, the government approved Vinapimex's plans for a US\$104 million pulp and paper mill in Thanh Hoa province. The mill is to have a capacity of 50,000 tons of pulp and 60,000 tons of paper a year.

In Lam Dong province, Vinapimex plans a US\$250 million pulp mill, with a capacity between 200,000 and 400,000 tons a year. The Lam Dong People's Committee Deputy Chairman, Hoang Si Son, told the *Vietnam Economic Times*, "Vinapimex has planted an area of 10,000 hectares to add to the existing 30,000 hectares; we plan to increase the forest cover to 135,000 hectares."

Apparently, Vinapimex sees building more pulp and paper mills as the only way it can survive as an organisation. Of course the company can simply build more and bigger warehouses for the massive stockpiles of loss-making paper that it produces. Then it can turn to the government and international aid agencies for the subsidies it needs to ensure its bureaucratic survival. The impacts on Vietnam's rural communities, their forests and their livelihoods will not be so easily resolved. (By: Chris Lang, WRM's bulletin N° 66, January 2003).

Vietnam: A divided community around the Tan Mai Paper Mill

Just meters beyond the outer wall of Tan Mai Paper mill, a thriving industry exists in the shade of coconut trees. In ponds where rice fields used to lie, local villagers stand chest deep in wastewater from the factory. Young men strain to lift nets out of the ponds, filled to the brim with the catch of the day: paper fiber emitted in the mill's wastewater.

As one part of this community literally lives off wastewater, selling recovered fiber to low-grade paper makers in nearby Ho Chi Minh City, other people pay the price of damaged crops, polluted drinking water, and dead fish. Tan Mai is an example of a divided community that

both depends on the factory's pollution for income and is injured by its activities. Some community members work in the factory. Others complain of losing entire years crops with no compensation.

Although Tan Mai had been causing pollution since the 1960's, it was not until the factory increased its production in 1992 that community members organized as a group to demand recourse for dead fish and damaged crops. Between 1992 and 1996, community members wrote letters to the Department of Science, Technology and Environment (DOSTE), the media, and to the factory management. The DOSTE investigated the claims of the community, but never showed the results to community members, and never awarded compensation for lost crops or fish. Few people argue that Tan Mai does not have serious environmental impacts. The factory managers acknowledge that they need a new waste treatment system. Even the people who make their living off recovering fiber express their concern about the impacts of the factory's pollution. Local farmers cannot eat the rice they produce, instead using it only to feed to their pigs. Community members complain of nausea from air pollution, undrinkable well-water, nose, eye, and skin problems, and lower yields from their fruit trees.

However, the community around Tan Mai is both physically and emotionally divided. One group of families lives next to the factory's back wall, collecting the paper fibers, another group grows rice in fields nearby, a third group lives in company-built apartments on the urban side of the factory, and a fourth lives in fish-raising houseboats on the river into which Tan Mai discharges its wastewater. The Phuong (or ward) has a young and dynamic chairman, who is quite open about the environmental impacts of the factory on the community, and equally open about his frustration with not being able to change the situation. Through this local official, the community has submitted formal complaints to the factory and to provincial authorities. But as he explains, "The people in this area have children working in the factory. They can use electricity and water from the factory. So of course there are losses and benefits from the factory, so they don't want to complain much" (personal interview - June 6, 1997).

Tan Mai is owned and managed by central state authorities, and is at the same time under the regulation of the National Environment Agency.

Either through corruption or a concerted policy, the state has worked to block criticisms and demands for environmental improvements at factories such as Tan Mai. For instance, after complaints from the community, the DOSTE took measurements of water pollution at Tan Mai. However, these measurements were taken in a way that covered up the real pollution levels (for example, some samples were actually taken upstream from the factory, where the water was relatively clean). The DOSTE then issued a formal memo stating that the factory was in compliance with environmental standards. Everyone involved in this case recognizes that Tan Mai is nowhere near compliance with environmental standards, yet this document is now accepted as proof of Tan Mai's performance. Once Tan Mai received the DOSTE memo, neither the community nor local government authorities were able to fine or seek compensation from the factory.

Community members have thus resigned themselves to the factory's continued pollution, seemingly giving up on further complaints. Community members gave different reasons for no longer writing complaint letters, including: "they have no effect," "they only result in DOSTE coming out, measuring, and then disappearing" and "they get you noticed by the authorities." This discouragement is not uncommon. Other communities I studied also feared that complaints would be ignored or cause more trouble than they were worth. Nonetheless, other communities persevered and were sometimes successful.

The community around Tan Mai however, has been unable to overcome internal divisions and resistances. The community is in fact endowed with a reasonable level of capacities, including a mix of educated young members and industrial workers. The community even has some connections to local government representatives. Nonetheless, they have not been able to forge broader state or media linkages, and their internal divisions have weakened their ability to pressure environmental agencies to take action against a centrally managed, Ministry of Industry factory.

Tan Mai is for a number of reasons an extremely well insulated company. The government has targeted the paper industry for expansion and is aggressively promoting the three largest pulp and paper mills in the country (including Tan Mai). Promotion and protection

of Tan Mai thus wins out over other interests (including tax collection), and blocks local regulation of pollution. The firm in this case has such strong linkages with the state that virtually no amount of local pressure can motivate stricter regulation. Recognizing this, community members have given up even submitting formal complaint letters. (By: Dara O'Rourke, WRM's bulletin N° 83, June 2004).

OCEANIA

Aotearoa/New Zealand: Carter Holt Harvey the worst transnational corporation

In April, the fifth edition of the Roger Award took place. This prize is given to the worst transnational corporation operating in Aotearoa/New Zealand and is organized by the Campaign Against Foreign Control of Aotearoa (CAFCA) and GATT Watchdog, two local activist/campaign organizations.

Although run on a tiny budget, the award has attracted overseas attention from organisers in other countries who are confronting corporate power and control. It is a very concrete way of raising awareness about a global problem by concentrating on the impacts TNC's activities have on local communities and the environment.

The award is given to the transnational corporation operating in New Zealand judged to have the most negative impact in each or all of the following: unemployment, monopoly, profiteering, abuse of workers/conditions, political interference, environmental damage, cultural imperialism, impact on Maori indigenous peoples, running an ideological crusade, health and safety of workers and the public, and impact on women.

This year's winner was: Carter Holt Harvey (CHH). It was once one of New Zealand's 'own' transnational corporations, but some years ago the US-based timber titan International Paper took over it and now

has a 50.1% share. As well as in New Zealand, CHH has operations in Australia and Fiji. It is one of the southern hemisphere's largest producers of wood and paper products. Like its parent company, it is virulently anti-worker, anti union, and, in spite of its attempts at greenwashing its image it is a menace to the environment. It owns approximately 330,000 hectares of predominantly plantation radiata pine in New Zealand.

There are too many reasons of why this prize was given to this company. CHH history regarding workers rights and working conditions leaves a lot to be said. On the one hand, it has tried to casualise workers, it has also been fined for not providing safety equipment to workers. On the other hand, the Roger Award judges have found that in New Zealand the only pulp and paper mills that still use dioxin-producing chlorine bleaching processes — proved to be carcinogenic — were those owned by CHH.

During its existence as a New Zealand-owned company, Carter Holt Harvey had invested in Pinochet's Chile and, before the radical labour market deregulation that took place in 1991, its chairman, Richard Carter, argued for Chilean-style labour laws in New Zealand. Since its takeover by International Paper, the operations of CHH's Chilean subsidiary, Bosques Arauco rode roughshod over Mapuche peoples' rights.

The Roger Award report also highlighted CHH's role in a joint venture to grow genetically modified pine trees in secret locations, which it dubbed "Frankenpine."

Additionally, along with other big players in the forestry sector, CHH has been pressuring the New Zealand government not to ratify the Kyoto Protocol. In a press release of November 5 2001, its chief operating officer Jay Goodenbour claimed that recent "independent assessments" suggest that implementing the Kyoto Protocol "will hurt our ability to export, will increase costs and cost jobs."

"The only responsibility that Carter Holt Harvey has shown has been to generate, or more accurately, attempt to generate, profit for its

shareholders", wrote the judges in their statement. (WRM's bulletin N° 58, May 2002).

SOUTH AMERICA

Argentina: Forest loss and plantations in two provinces

Coinciding with the conquest of the vast territory of Argentina by the Buenos Aires centralized government, started in the second half of the 19th century in the name of modernization, forests in different regions of the country entered a period of decline which has continued until present times. The two cases mentioned below are only examples of a process happening throughout the country.

In the Province of Santa Fé, forest cover decreased in nearly 4.6 million hectares over the last 80 years. According to a report recently issued by the Secretary of Natural Resources and Sustainable Development, the total forest area of the province now reaches only 1.3 million hectares. In 1915, the Santa Fé Forest Census revealed the existence of 5.9 million hectares of forests. Between 1915 and 1970 the deforestation rate was of 52,700 hectares a year, but it jumped to 121,500 hectares per year between 1970 and 1984. Two forestry companies were directly responsible for this state of affairs. One was the British "La Forestal", which began to operate in the region in 1880 owning nearly one third of the Province's area to exploit "quebracho" (*Schinopsis balansae*) forests. It employed local people, who had to work in near slavery conditions. In the decade of 1960, when quebracho forests declined, the company closed business and left a desert behind, both in ecological and social terms. In the decade of 1930 "Celulosa Argentina" arrived to the region. To feed its pulp and paper mills this company both exploited native forests and set up eucalyptus plantations.

The Province of Misiones is also undergoing a severe process of forest loss and substitution by plantations. At the beginning of the 20th century 90% of its area was covered by a dense subtropical forest.

Nowadays there are only 1,500,000 hectares left, only one third of which is included in natural protected areas. Deforestation continues unabated. One foreign pulp and paper company alone is expected to deforest 7,000 hectares per year and no steps have been programmed to stop this destructive process. At the same time, Misiones is increasingly being covered by large-scale fast-growing pine tree plantations, and pines are invading even the few protected forests in the province.

As usual, forest loss in these two provinces has gone hand in hand with the spread of plantations. However, most foresters — supported by the FAO definition of forests — will say that in both provinces “forest cover” has increased, simply by adding the plantation area as part of that “forest cover.” Fortunately, the public is becoming increasingly aware that eucalyptus and pine monocultures are not “forests” and that in fact plantations constitute a major cause of deforestation. (WRM’s bulletin N° 38, September 2000).

Brazil: Political confrontation in Espírito Santo over eucalyptus plantations

Large-scale eucalyptus plantations in the State of Espírito Santo — and their related pulp production activities — have generated opposition since the very beginning. They were first opposed by the people more directly affected by them: the Tupinikim and Guaraní indigenous peoples, AfroBrazilian communities (quilombos) and local farmers, whose lands were appropriated to give way to the plantations. They were later joined by supportive NGOs, whose research findings on the social and environmental impacts led them to initiate campaigns to halt the further spread of plantations and to join forces with local peoples, environmental NGOs and academics to achieve that aim. This later resulted in the creation of a network called the Forum Alert Against the Green Desert, which has been campaigning very effectively during the past years.

The increasing awareness — to a large extent resulting from the above mentioned activities — about the negative impacts of plantations has

recently led the State Parliament to pass a law banning the further expansion of eucalyptus plantations until the agro-ecological mapping of the state — which would define where eucalyptus could and could not be planted — is carried out. The law was clearly aimed at Aracruz Celulose's plans for further expansion. This company is the world's largest producer of bleached eucalyptus pulp, and already owns 88,000 hectares of plantations in Espírito Santo — having further plantations in the neighbouring state of Bahia — and aims at planting 17,000 hectares more plus some additional 30,000 hectares as outgrower schemes.

Nasser Youssef, the author of the law, expressed the feelings of many local people about Aracruz when he stated that the company “does not benefit the state, does not pay taxes and treats Espírito Santo as if it were a colony. We demand to be treated with respect”, he added. It is interesting to note that Aracruz expects to invest US\$ 222 millions for its new plantations in Espírito Santo and Bahia and that about half of that amount would be provided by the National Social and Economic Development Bank (BNDES). More importantly, it is necessary to underscore that this would take place in a context where family-based agriculture does not receive any funding from the BNDES to support this alternative type for development.

According to Marcelo Calazans — member of the Forum Alert Against the Green Desert — Aracruz is one of the largest landowners in the state but only provides 1689 direct jobs, while on the other hand some 70,000 families live on small-scale agriculture, each having only some ten hectares of land. Within that context, the law banning further plantations makes absolute sense from a social point of view, where land concentration by mega-companies is necessarily made at the expense of land available for local farmers, which form the vast majority of the rural population.

The law was perceived by many people throughout the world as a very positive step, which could serve as an example to be followed in other places where this type of plantations are impacting on people and the environment. Having received news about the possibility that the Governor of the state, José Ignácio Ferreira, might veto the law, many organizations sent messages in support of the law. In response a

local journalist, who declared that “Aracruz does not need me to defend it” immediately reacted in defence of Aracruz, under the argument that the messages came from countries such as Colombia, Argentina, Ecuador, Uruguay, Guatemala, Nicaragua, etc. described as “underdeveloped and wanting us to remain in extreme misery such as them, without any prospects for the future.”

Proving that Aracruz's influence is as strong as local organizations claim it is, the Governor swiftly reacted to defend the company's interests and vetoed the law, informed the public about his decision in a “solemn session.” According to a local member of parliament, this is the first time — as far as he can remember — that the state government organizes a “solemn session” to sign and publish a veto. Now the State Parliament will meet again at the end of August to either overrule the Governor's veto or to accept it and open the doors to further green deserts of eucalyptus.

In the meantime, the proponent of the law and the commission he presides in the State Parliament — the Commission for Environment and Agriculture — have organized an international seminar on the issue of monoculture eucalyptus plantations in Vitoria, the capital city of the State. (WRM's bulletin N° 48, July 2001).

Brazil: Stora Enso and Aracruz plan the world's biggest pulp mill

In a few weeks' time, shareholders in Veracel will decide whether to build a massive pulp mill in the Brazilian state of Bahia. Veracel's CEO, Erton Sanchez, described the project: “This will be the largest single line production mill in the world with a capacity to produce 900,000 tons a year. Fully bleached Elemental Chlorine Free pulp will be produced targeting the top end segment of the pulp market. Total investment will be around US\$930 million.”

Veracel is a joint venture between the Swedish-Finnish giant Stora Enso and Brazilian-Norwegian Aracruz. Aracruz is the world's largest producer of bleached eucalyptus pulp and controls 170,000 hectares of eucalyptus plantations in Bahia and Espirito Santo. To make way for the vast Aracruz plantations, Tupinikim and Guarani indigenous

peoples, afro-brazilian 'quilombolas' communities and other local communities have lost their forests and their lands.

Jukka Harmala, Stora Enso's CEO says that his vision for the company is "to be the leading forest products company in the world". Harmala told *Pulp and Paper International* in June 2001 "Our priority in Latin America is to find good fiber sources." In 1999, Björn Hagglund, deputy CEO of Stora Enso, explained to the *Financial Times* that the company's strategy was to increase its pulp operations in Brazil to secure raw material for its paper mills in China and Thailand.

A decision on whether to proceed with the pulp mill was to have been made at the end of 2002. "This project has been so complicated, and it's a big one. It's been postponed until March or April, mainly because of the economics and so forth," explained Timo Heikka of Strategy and Investments at Stora Enso.

Veracel has already planted 63,000 hectares of eucalyptus plantations on the 147,000 hectares of land that the company owns in Bahia. Another 6,000 hectares is to be planted. Regardless of whether the proposed pulp mill goes ahead, Aracruz will buy 3.5 million cubic metres of timber from Veracel's plantations between 2002 and 2004.

Stora Enso's Timo Heikka visited the project area in September last year. He said, "When it comes to the biodiversity and social issues it seems to be one of the best alternatives all in all in the Southern hemisphere." Veracel's Sanchez claims that 78,000 hectares will be set aside for "preservation and recuperation" of the mata atlantica forest. He also mentioned that Veracel owns the Veracruz Station, a 6,000 hectare forest reserve which is recognised by UNESCO as a world heritage site.

Sanchez did not mention that when Veracel arrived in Bahia in 1991, the company planned to convert 80 per cent of its land into eucalyptus plantations. It was only through the intervention of Brazilian NGOs and the union of forestry workers, that the Brazilian environment agency insisted that 6,000 hectares of forest be set aside as a protected area. Neither did Sanchez mention that Veracel has cleared forest to set up its plantations only a few kilometres from the Veracruz Station.

In October 2001, the European Investment Bank (EIB), the financing institution of the European Union, announced that it had approved a US\$30 million loan to Veracel for its plantations in Bahia. EIB's Senior Information Officer, Yvonne Berghorst said, "Reforestation with eucalyptus has a beneficial long term influence on the soil by reducing erosion, increasing the infiltration and storage of water and improving the chemical and physical properties and fertility of the soil."

Berghorst's optimism is in stark contrast to the reality faced by communities in Espirito Santo who are forced to live with Aracruz's plantations. In May 2002, in a letter to state-officials of Espirito Santo, local communities, trade unions and NGOs described how streams had dried out since Aracruz started to plant. The letter continued, "For the local communities and the environment in general, sustainability of eucalyptus plantations is very much questioned, as it is a monoculture of trees with an extremely short cycle, demanding large amounts of chemical fertilisers and agro-toxics."

Stora Enso, EIB, Aracruz and Veracel's representatives did not answer questions about how many people have been moved off the land to make way for Veracel's plantations. Erton Sanchez, Veracel's CEO, commented "The occupation index is extremely low since the population lives on land that isn't the property of the company." He added that the land to be planted has been "previously degraded by former landowners."

José Augusto Tosato from CEPEDES, a local NGO, challenges the company's argument that the land was degraded. Tosato points out that Veracel established its plantations on previously productive grassland and smallholders' properties.

Stora Enso's Environment and Social Responsibility Policy states, "Stora Enso considers an open discussion and interaction with all stakeholders, both governmental and non-governmental, as fundamental." In the case of Veracel, an open discussion is not possible, as environmental impact assessments for the plantations and the pulp mill are not available for general public scrutiny.

In response to a request for the EIA, EIB's Yvonne Berghorst said, "The EIA is a public document that can be obtained from the competent authorities of the state of Bahia, or from Veracel Cellulose S.A."

When asked for the EIA, Erton Sanchez, Veracel's CEO, replied: "The documentation is comprised of 14 volumes with around 2,800 pages. It exists only in printed form therefore it is not feasible to send an electronic copy. Nevertheless these documents are available for consulting at CRA (Environmental Resource Center), a Bahia state governmental agency based in Salvador."

If Veracel's project documents are not freely available, an open discussion is not possible. Any shareholder decision must be postponed to allow civil society in Brazil, Norway, Sweden and Finland the chance to contribute to an open discussion on Veracel. (By: Chris Lang, WRM's bulletin N° 67, February 2003).

Brazil: NGOs request wide debate on the expansion of tree plantations

In a letter sent to President Lula on 20 March 2003, numerous institutions warn on possible socio-environmental risks involved in increasing the area of tree plantations recently demanded by the sector, unless appropriate planning is established.

The Working Group on Forests of the Brazilian Forum of NGOs and Social Movements for the Environment and Development sent a letter to President Lula on 20 March, stating their concern over the proposal to extend the area of tree plantations in the country, recently submitted to the government by companies in this sector. The document was sent with copy to the Minister of the Environment, Marina Silva and to the Minister of Agriculture, Roberto Rodrigues.

Mainly composed of alien species such as pine and eucalyptus, tree plantations supply, inter alia, the paper and cellulose and building markets. The companies propose increasing the area covered by tree plantations from the present 5 million hectares, to 11 million hectares. Additionally, the sector, presently subordinated to the Ministry of the Environment, is claiming links with the Ministry of Agriculture, through the establishment of a Secretariat for Planted Forests.

In the letter sent to Lula (which is reproduced integrally here below), the NGOs request that the proposal for increasing the sector should be analysed and planned with extreme caution, and that the preparation of a policy for the sector should take into consideration the precepts of effectively sustainable development, later going on to quote the socio-environmental and economic consequences of this activity, particularly for the Mata Atlântica and the Cerrado ecosystems.

For the coordinator of the Working Group on Forests, Adriana Ramos of the Socio-Environmental Institute (ISA), it is necessary to discuss the bases for the expansion of the sector with discernment to prevent undesirable impacts occurring, such as land concentration and hydrological alterations. The Group hopes that the government will establish an agenda for discussions on the issue with the broad participation of civil society.

In a report published on 25 February 2003 in the newspaper *Valor Econômico* and reproduced in the Brazilian Association of Renewable Forests (Abracave) site, reference is made to the fact that although the companies know that the sector's proposals are supported by the Vice-President, José de Alencar and the Minister of Agriculture, they are aware that they must demolish the opposition of the Minister of the Environment, who at the beginning of the month had already defended the proposal that sectors such as paper and cellulose and the iron and steel industry will have to modify their form of producing timber from plantations, switching from the plantation of large areas to dispersed plantations, with family agriculture characteristics, guaranteeing sources of employment for small rural farmers.

On 19 March, the request by the Deputy Luis Carlos Heinze (PPB/RS) asking for a joint public audience of the Agriculture and Rural Policy and Consumer Defence, Environment and Minority Commissions of the Chamber of Deputies, was approved at a date to be defined.

Letter from the Working Group on Forests of the Brazilian Forum of NGOs and Social Movements for the Environment and Development, addressed to President Lula:

"His Excellency, Mr. Luiz Inácio Lula da Silva, President of the Federative Republic of Brazil

Brasilia, 20 March 2003

Your Excellency,

The Working Group on Forests of the Brazilian Forum of NGOs and Social Movements for the Environment and Development, gathering the country's main non-governmental institutions interested in the subject, met in Brasilia on 12 and 13 March. On this occasion, it agreed to transmit to Your Excellency its disagreement with the "Proposal for an Agenda for the Brazilian Sector of Planted Forests" submitted by the companies of this sector to Your Excellency.

The agenda presents requests that do not take into consideration the need to prepare a specific policy for the sector, linked to environmental, agrarian, credit, generation of employment and income and struggle against hunger policies.

The activities of the "planted forests" sector, fundamentally based on the plantation of alien species such as pine and eucalyptus, have serious consequences on social, economic and environmental dynamics, particularly in the region of the Mata Atlântica and the Cerrado, where most of these monocultures are concentrated in Brazil. Considering that these biomes conserve a scant 7% and 30% respectively of their original cover, the mass expansion of those plantations, from five to eleven million hectares, must be analysed and planned with extreme caution, in the framework of a government policy that is in harmony with the precepts of effectively sustainable development. There is much to be included in the equation of economic benefits and social-environmental liabilities of this activity, as shown, for example, by the many labour-related proceedings involving companies from this sector.

At a time when the Brazilian government, through its National Forestry Programme of the Ministry of the Environment, is carrying out negotiations with the World Bank on a loan for the forestry sector, it is critical to establish a process of discussion of a policy regarding tree plantations.

It would be a great risk for the country to follow up on the demands for "planted forests" without previously defining a government policy for

the sector, ensuring that the activity will be carried out in an environmentally sustainable and socially just way, effectively benefiting the local population and guaranteeing the precautionary principle. We emphasize that any policy for the expansion of “planted forests” must avoid increasing the concentration of land, the elimination of native vegetation, hydrological alterations and occupation of food-producing lands. In addition, planning of the activity must be based on technical and scientific information, proven and widely discussed with society.

We are sure that the government of Your Excellency is willing to promote the necessary debate to channel this issue in the best way possible and remain at your disposal to participate in the relevant discussion process.

Yours sincerely,

Grupo de Trabalho Florestas do Fórum Brasileiro de ONGs e Movimentos Sociais para o Meio Ambiente e o Desenvolvimento, Amigos da Terra Amazônia Brasileira, Associação de Preservação do Meio Ambiente do Vale do Itajaí (Apremavi), Central Única dos Trabalhadores (CUT/RJ), Centro de Estudos e Pesquisas para o Desenvolvimento do Extremo Sul da Bahia (Cepedes), Centro de Trabalhadores da Amazônia CTA / AC, Federação de Órgãos para a Assistência Social e Educacional (FASE), Fundação SOS Mata Atlântica, Fundo Mundial para a Natureza (WWF), Grupo Ambientalista da Bahia (GAMBÁ), Grupo de Trabalho Amazônico (GTA), Instituto de Estudos Sócio-Econômicos (INESC), Instituto de Manejo e Certificação Florestal e Agrícola (Imaflora), Instituto do Homem e do Meio Ambiente da Amazônia (Imazon), Instituto Socioambiental (ISA), Rede de ONGs da Mata Atlântica, Rede Deserto Verde, Os Verdes, Vitae Civilis-Instituto para o Desenvolvimento, Meio Ambiente e Paz.

Cc: Minister of the Environment, Marina Silva, Minister of Agriculture, Roberto Rodrigues.” (WRM's bulletin N° 68, March 2003).

Brazil: Social and environmental disaster caused by paper mill

In Minas Gerais during the last week-end in March 2003, more precisely during the night of Friday 28 a deposit for chemical products belonging

to the paper mill "Industria Cataguazes" collapsed. The mill, close to the city of Cataguazes, is located on the Pomba River, where millions of litres of caustic soda, chlorine and other toxic products used in making paper leaked out.

The Pomba River flows into the main river of the State of Rio de Janeiro, the Paraíba do Sul, which was also affected by the contamination. A large patch covered the whole river at the height of the Municipality of São João da Barra, and moved towards the ocean, contaminating on its way the beaches of Atafona, Grussaí and Iquipari. Pictures on television showed the rivers Pomba and Paraíba do Sul covered by a white foam, dead fish floating on the surface and long queues of people waiting for water which was taken to them by truck.

It is perhaps the greatest ecological disaster that has ever happened in the country and according to scientists, it will take the ecosystem some 15 years to recover. The spill, estimated at 1,200 million litres of toxic products, affected approximately one million people, and implied that over half a million residents in eight municipalities had no water supply for various days and that for 90 days fishing has been prohibited in the two contaminated rivers. To face the damage that this means to the local fisher-people, the minister of the Environment, Marina Silva, announced that they would receive a monetary compensation of one minimum wage per month during the period that this activity is suspended due to the contamination.

There is a second 700 million-litre tank of toxic material belonging to the company that is also a cause for concern as it is not considered to be safe and preventive measures are being taken.

Some environmental organisations have placed responsibility on the Government of the State of Minas Gerais, in addition to the company, for omissions in monitoring measures. The mill has been closed down and Federal Justice has decreed preventive imprisonment of the company's administrative Director, Felix Santana, and the partner manager, João Gregório do Bem, who may have to face criminal charges. Furthermore, the government announced that it will fine the company for the amount of approximately 15 million dollars. However, it is hard to believe that any figure exists that can compensate for the

serious damage, perhaps some of it irreversible, that has been caused to the ecosystem, the economy and the health of the region.

During the public audience of the Environmental Commission of the Chamber of Deputies, the Minister of the Environment, Marina Silva, spoke about the four goals the Ministry is working towards in the next few years: transversality, social monitoring, strengthening of the environmental sector and sustainable development. The Minister stated that a major effort has to be made to avoid environmental policy from being an isolated policy of the Ministry, and to make it into an integrated government action.

This is certainly a major challenge, as are all the issues that this disaster brings to the forefront, that are far from being solved and perhaps have not been sufficiently discussed: social and environmental costs, corporate responsibility, social monitoring, environmental policy, sustainability of production models, among others. What was made clear is the weakness of the argument of those who propose self-regulation by the companies in the framework of opening up markets and de-regulation.

It is not that the companies ignore environmental issues: most of them boast about their environmental concerns on their web pages. The “Industria Cataguazes de Papel” company itself declares that “environmental preservation through recycling of paper from the major urban centres such as Sao Paulo, Vitoria, Rio de Janeiro and Belo Horizonte is the Cataguazes' commitment towards society” and it even argues that “each ton of recycled paper avoids logging an average of 20 to 30 eucalyptus trees, or between 16 to 30 native trees.” What will it say now about its “commitment to society”? Sorry? At all events, what is important is to ensure strict monitoring by the State and by society as a whole of company activities so that this type of situation is not repeated. The companies may have good intentions, but they are not charities. What interests them above all is their profitability.

Society must take up these issues with rigor and without being naive, because the companies adapt to the times and carry out all the necessary marketing to continue with their business. However, “accidents” continue to take place. There have been several samples, how many more are needed? (WRM's bulletin N° 69, April 2003).

Brazil: The Alert Against the Green Desert Network demands a change in the forestry model

One hundred organizations from Espirito Santo, Bahia, Rio de Janeiro and Minas Gerais gathered on 28 and 29 June 2003 in Porto Seguro, Bahia, at the Second National Meeting of the Alert Against the Green Desert Network. These organizations prepared a letter which shall be sent to President Lula, parliamentarians and to the World Bank, demanding that greater attention be paid to the problem we describe here below.

"We the undersigned, representatives of Quilombola,* Tupinikim, Pataxo, Guarani, fisher-people and peasant communities, and tens of organizations present at the II National Meeting of the Alert Against the Green Desert Network, a movement that struggles against the expansion of monoculture eucalyptus plantations for the production of cellulose and charcoal in Espirito Santo (ES), Bahia (BA), Rio de Janeiro (RJ) and Minas Gerais (MG), denounce the serious violation of economic, cultural and socio-environmental rights committed by this exporter agro-industrial complex.

Over the past four decades, this complex has destroyed the local communities' way of life. The companies in this sector continue to invade their lands and have caused rural exodus with the consequent dispersion of many communities. In such regions, the rivers have been degraded by pollution caused by wide-spread use of pesticides and a process of desiccation, linked to large-scale plantations, compromising fishing and the quality and quantity of drinking water. The Aracruz Cellulose Company diverted the Doce River to ensure the abusive consumption of 248 thousand cubic metres of water per day, free of cost, by its three pulp mills.

With their development discourse, the companies have encouraged an enormous migration of workers seeking the promise of employment. Today, the results are thousands of former workers, many of them mutilated by unhealthy work, dismissed as a result of a violent and noxious process of automatisisation and out-sourcing. These peoples' loss of dignity is manifest through the existence of a high rate of child prostitution in the neighbourhoods where the abandoned former workers

now live. In the midst of eucalyptus tree monoculture plantations, people opposing and resisting them are losing their cultural identity and wealth and are literally suffering a process of deep isolation. Those who oppose this inhuman project are exposed to attempts at co-optation and even threatened with death.

Unfortunately, the State has been an accomplice to these companies' practices. For four decades now, it has been granting loans through the National Bank for Economic and Social Development (BNDES) and illegal permits for plantations — not respecting permanent preservation reserves — and factories, one of them built on a former indigenous village. Furthermore, the exporting companies have debts with the Social Security (INSS in Portuguese) and benefit from the Kandir Law, giving rise to dramatic situations such as that of Espírito Santo, where the government of this State owes the Aracruz Cellulose Company over 100 million reales on credit from the ICMS (Tax on the Circulation of Goods and Services). At the same time, the State has not given the local population any options, on the contrary, it is increasingly showing its complicity with company interests to the detriment of its social responsibility and in view of this vacuum, the companies have taken on some State functions, generating a perverse relationship of dependency and de-structuring the local communities' social organization.

The signatory organizations consider that the consequences of all these problems are related to the present development model funded by the central government and by international organizations whose only objective is to profit from funding in detriment to the way of life of these populations.

Attempts to revert damage caused by perverse company strategies, for example the introduction of the Forest Stewardship Council (FSC) Green Seal for sustainable management of monoculture tree plantations, have not been able to revert such negative impacts and, what is worse, have been insufficient to reorient the rationale of this agro-industrial model. We recall a recent publication, prepared by a group of Alert Against the Green Desert research workers, showing the flagrant lack of sustainability of the Plantar and V&M Florestal Company eucalyptus plantations in Minas Gerais, both of which have been certified by the FSC.

Furthermore, the Network states its opposition to the application of the Clean Development Mechanism (CDM), to the large-scale plantations of these same mining companies, because it considers that such a mechanism continues to favour the countries of the North, insofar as they would not have to reduce their release of pollutants contributing to global warming and because, by increasing the area of plantations, CDM is worsening the impoverishment of the populations of the South.

We affirm that there are contradictions between investment in this agro-industrial complex and the Central Government's Zero Hunger Plan. On the one hand, considerable investment, such as that of the factory Veracel Celulose plans to build in Bahia, continues to favour monoculture tree plantations that are mainly aimed at production for export to rich countries, creating very few jobs, legitimising large-scale land-holding, preventing agrarian reform and further increasing rural exodus and the despair of thousands of families that will be left with no land and no subsistence. On the other hand, the Government has launched a Zero Hunger Plan, attempting to encourage food production, while the best arable lands continue to be occupied by tree plantations. Macro-economic policy goals cannot be achieved by sacrificing the living conditions, health and work and the way of life of workers and communities that need water, land, fish and hunting in order to avoid becoming part of the growing contingent of the unemployed in the cities.

It is not enough to come up with provisional ways out of the present economic model. The route taken by a model revolving around capital accumulation and unrestrained consumption must be radically changed. Another development rationale must be built, in which the central aspect is the human being — men and women — as a whole, and the way in which the planet's natural resources are being used is changed. Aware of the lack of sustainability of the present model, the movements and communities members of the Alert Against the Green Desert Network have discussed and implemented new production experiences that value biodiversity and local knowledge and therefore, build up a different relationship with the environment.

In view of the dramatic and unsustainable socio-environmental picture we have drawn and which directly affects many thousands of people,

we, the communities and organizations signing here below consider the proposal made by the sector to increase plantations from 5 million hectares to 11 million hectares over the next 10 years to be unacceptable. Furthermore, we consider that it is an imperious and urgent necessity that the preparation of the new Pluri-Annual Plan (PAP) and the government's industrial policy should contemplate the suspension of the expansion of fast-growing monoculture tree plantations in Brazil. Porto Seguro, 29 June 2003 (signatures follow)". (By: Rede Alerta Contra o Deserto Verde, WRM's bulletin N° 72, July 2003).

* From the word "Quilombo": a refuge for slaves running away from their masters. (Translator's note)

Brazil: Highway is blocked against expansion of eucalyptus plantations

On 8 March 2004, a major mobilization took place on Route BR-101 North in the Brazilian State of Espírito Santo, in the locality of São Mateus. Coinciding with International Women's Day, and with numerous women participants, close on 600 Tupinikim and Guarani indigenous people, representatives of the Quilombos (Afro-Brazilian communities) and members of the Landless Rural Workers Movement (the well-known MST) and of the Small Farmers' Movement (MPA, a member of the Via Campesina), occupied the highway and halted traffic.

The choice of this highway was not random. Every hour some 39 lorries pass along it, transporting eucalyptus logs to the Aracruz Cellulose company factories, as well as pulp from the Bahia Sul company.

The demonstrators are members of the Alert against the Green Desert Movement, struggling against large-scale monoculture tree plantations in the country. The main objective of this demonstration was to protest against the Federal Government's National Forestry Plan, which shortly intends to extend the area of tree plantations by 2 million more hectares (from the present 5 to 7 million hectares).

One of the companies benefiting from this extension will be Aracruz Cellulose. This company, which was established with Federal Government resources during the military dictatorship, presently has 220,000 hectares of eucalyptus plantations in the State of Espírito Santo. A large part of these lands belonged to the Quilombo and Indigenous communities and were taken by force by the company, or purchased at prices much below their value. Evicted from their lands, the Afro-descendant and Indigenous peoples joined the belt around the city of San Mateus, and it is calculated that 60 of its surrounding neighbourhoods are basically formed by people evicted from their lands by Aracruz Cellulose. It was also denounced that in the municipality of Conceição da Barra, 47% of the land is devoted to monoculture eucalyptus plantations.

Vast amounts of agro-toxic chemicals are used in eucalyptus plantations that destroy biodiversity and contaminate people, water and soil. It is thus that good agricultural land is lost and not used to produce food but pulp to be exported to Europe and the United States, where it is mainly turned into toilet paper. Those benefiting from this model are a small sector in Brazil and in particular, European industry producing the machinery and technology for the pulp and paper sector.

Last year the company's environmental crimes were denounced before the Federal Government, but so far no measures have been adopted to halt the abuse. For this reason, with the highway demonstration, the participants expressed their protest against the Federal Government and the State Government's omission regarding the complaints, in addition to seeking community support in their struggle for land.

Tens of placards made it clear that the demonstrators want an agrarian reform, the production of healthy food and the devolution of Indigenous and Quilombo lands, today occupied by the mega-company Aracruz Cellulose. Some of the slogans read: "Aracruz Cellulose: invader of Indigenous and Quilombo lands," "MST and MPA are taking action against eucalyptus trees and sugar cane monoculture plantations."

The demonstrators announced that if their claims are not addressed, there will be further demonstrations. They consider that this struggle should be the priority of a people's government and that it is

unacceptable that President Lula's government is giving privileges to the small sector of large-scale eucalyptus plantations and production of pulp for export, with a production chain consuming vast sums of public money but generating very few jobs. For example the construction of Veracel Cellulose's new pulp mill in the State of Bahia, will cost over 1,000 million dollars and will only generate some 400 permanent jobs. Those who suffer most from this type of "development" are women, who lose their lands and with them, their means of survival. (WRM's bulletin N° 80, March 2004).

Brazil: A categorical demonstration against the green desert and in favour of life

With the presence of a delegate from the Brazilian Ministry of the Environment, the third Meeting convened by the Alert Against the Green Desert Network took place in the city of Belo Horizonte on 6 and 7 May. This Network, comprising over 100 member organizations, gathered many representatives of the Landless People's Movement, peasants, indigenous peoples, Afro-Brazilian communities, small farmers and social movements from the States of Minas Gerais, Espirito Santo, Bahia and Rio de Janeiro.

The panel session at the start of the meeting comprised a national delegate from the Landless People's Movement, a delegate from the Afro-Brazilian communities, a geographer from Minas Gerais, a member of the Secretariat of the World Rainforest Movement (WRM) and a representative of the Ministry of the Environment. Except for the latter, all the other panelists expressed their solidarity with those affected by the plantations and explained the reasons for their opposition to large-scale monoculture tree plantations.

The presentation by Mr. Nelson Barbosa, representative of the Minister of the Environment, Marina Silva, gave rise to great commotion among the participants. He spoke of the need to plant trees to obtain timber, adding that statistics show that a 65-year old person has already 'consumed' 367 trees. Therefore, he affirmed that reforestation plans should be promoted, together with the creation of jobs to reach the Government's Zero Hunger goal, proposing to reach some kind of an agreement with those present at the meeting.

For over two hours, the participants made the official representative aware of his fallacious argument, showing their indignation over what they had just heard, but remaining respectful and providing forceful examples. Here below are just some of the examples of their many testimonies.

A representative of the Indigenous peoples clearly let the governmental delegate know that the people were not against the government, stating “The government is ours” and adding “we are against the expansion of these companies to the detriment of our survival.”

A 20-year old woman from a community in Nova Venecia in the State of Espirito Santo noted that large-scale monoculture tree plantations are not intended to provide the communities with timber but to provide the large companies with cheap raw material for their pulp mills or charcoal for iron and steel-works. She found it ridiculous that the communities should be blamed for deforestation and ironically suggested that Mr. Barbosa should obtain an invitation from Aracruz Cellulose, one of the largest pulp producing companies in the world, in order to see for himself the impact of monoculture tree plantations on the neighbouring communities.

A representative of the Federation of Rural and Agricultural Workers of the Municipality of Macuri in the State of Bahia, underscored the fact that one could not speak about reforestation when what was really being promoted were large-scale monoculture plantations: plantations should not be confused with forests. While forests are “a gift of nature, monoculture is a crime,” he emphasized.

“The word sustainability is linked to durability, and there is nothing as durable as Indigenous agriculture,” stated another participant “The Indigenous peoples have demonstrated that they are able to maintain forests because they have done so for thousands of years. The 50 years of the Green Revolution have only caused devastation,” he ended by stating.

A member of MPA (the Small Farmers Movement) affirmed that there have been many more jobs lost than generated with the plantations and the installation of pulp mills. He gave details of investments made

and what they could have meant in the generation of jobs if, instead of supporting the large multinational paper corporations, they had supported small farmers. According to the figures given by the government regarding investment, each job generated in the plantation/pulp industry has implied an investment of some US\$330,000.

With sorrow and pain, a representative of the Hip-Hop movement, a young man from the “favelas” (the shantytowns of Brazil), stated that one cannot speak of “zero hunger” while promoting policies making hunger more critical.

Concisely, seriously and briefly, a member of the NGO FASE questioned Barbosa about the nature of the figures he had submitted. “If you want to talk about numbers, it would be good to know how many small farmers have lost their land, how many wells have dried up, how many rivers have been contaminated, how many people have died of hunger each year and how much money the large plantation companies installed in Brazil have made” she said.

Another participant emphasized that it is impossible to reach an agreement with the communities while the government has agreements with the companies and benefits them, while it violates the communities’ rights and does not even consider them as human beings. “We answered the call made by the President and worked hard and voluntarily in the preparation of a plan for the government to take measures favouring the communities. Where are these documents and plans? When will they start carrying them out?” asked an indignant representative of the Bahia-based organization CEPEDS.

Before leaving, the Government representative promised to bring to the Minister’s attention the serious complaints he had heard and assured the participants that he personally would always defend small farmers as for many years he himself had been a small farmer.

Following the panel session presentations, the participants split up into discussion groups and examined the negative impacts of large-scale monoculture tree plantations on the local population and on labour relations in industry. They also discussed the relationship of industrial monoculture tree plantations with land problems, biodiversity, the energy model, human rights and violence.

As a result a document was prepared and, together with a letter, was personally delivered by some 200 participants to IBAMA (the Brazilian Environmental Institute) and to the National Planning Secretariat. In a tour that lasted almost four hours along the central streets of the city of Belo Horizonte, the participants handed out hundreds of flyers bearing a clear slogan: Enough of eucalyptus! We want Agrarian Reform! If rural areas are not sown, the cities will not eat!

In the letter (see References) addressed to the Government of the State of Minas Gerais, redress is demanded of a series of economic, social, cultural and environmental rights, directly violated by large-scale industrial tree plantations, both for pulp and for iron and steel works. Furthermore, guidelines for urgent measures that must be taken are provided, such as giving back to the communities 280,000 hectares of public lands (that were rented out to private companies), accompanied by an agroextractivist restructuring program.

In their "Statement against the green desert and in favour of life" (see References), the communities take a stand over the socio-environmental disaster caused over the past 35 years by monoculture eucalyptus and pine plantations to supply iron and steel works and pulp mills, damaging diverse ecosystems and populations on their territory, their biological, social and cultural diversity, causing expropriation, unemployment, migration and hunger.

For this reason, the Network reaffirmed the concept that **PLANTATIONS ARE NOT FORESTS!**

The impacted populations asked the Government to establish public policies enabling them to restore this disastrous social and environmental liability, and to take action to strengthen biological, cultural and agro-ecological diversity.

Perhaps the most important thing that happened at the Meeting and the most difficult one to transmit in this article is the strength of conviction and the joy in the expressions of all the participants. The strength of the conviction that a true social change will not be possible without the elimination of large-scale monoculture tree plantations,

and the joy of knowing that communities from Brazil and from many other parts of the world are working towards this aim. (WRM's bulletin Nº 82, May 2004).

Brazil: More pulp for export means more exclusion

A new cycle in the increasing of production of eucalyptus pulp for export began in northern Espirito Santo, the southern region of Bahia and north-eastern Minas Gerais, with the opening in 2002 of the new Aracruz Celulose mill. This company increased its annual pulp production from 1.2 to 2.0 million tons, and expects to reach 2.4 million tons. Veracel Celulose, jointly owned by Aracruz and the Swedish-Finnish Stora Enso, is building its first eucalyptus pulp mill, the biggest in the world, with an annual production capacity of 900 thousand tons. Bahia Sul Celulose, owned by Suzano Papel e Celulose, will triple its annual pulp production and aims to reach 1.7 million tons. Cenibra, belonging to the Japanese group Japan Brazil Paper and Pulp, will double its annual production to 1.7 million tons.

The region, which already was the biggest producer in Brazil of eucalyptus pulp for export, will thus increase its annual production from 2.7 million tons to 6.7 million tons of pulp.

The pulp mills appear in the region as symbols of development and progress, and their openings are honoured by the attendance of the country's President. However, there are many remarkable aspects, such as:

- The gigantic amount of public investment in the construction of a pulp mill. The new Aracruz mill used up about a thousand million reales (US\$ 310 million) from the National Bank of Economic and Social Development (BNDES). The BNDES also lent approximately one thousand five hundred million reales (US\$ 470 million) to enable Veracel to build its new mill.
- It generates little direct employment, in comparison with the volume of investment. In the new Aracruz mill, extremely automated, only 173 jobs were created in a country with high unemployment rates.

- The promise of jobs in the construction of a pulp mill attracts a great number of workers into the region. Many of them, even jobless, end up staying. Due to the lack of other work options and local infrastructure, social problems such as hunger, violence, drug taking and trafficking, and child prostitution usually increase in communities living in the vicinity of pulp mills.
- The main technologies and machines used in the processes of pulp manufacture and eucalyptus cutting are imported from Norway, Finland, Sweden, Switzerland and Germany, from companies such as Andritz-Ahlstrom, Kvaerner, Metso, Jaakko Poyry, ABB, Siemens and Voith Paper. Therefore, it is not surprising that the European Investment Bank (EIB) and the Nordic Investment Bank (NIB) have funded, for example, the construction of the Veracel mill, respectively with US\$ 80 million (EIB) and US\$ 70 million (NIB). It is worth pointing out that about 95% of the pulp that is produced is exported back to the Northern countries, mainly in Europe, and used mostly for disposable paper production.
- Water consumption is very high; for example, the three Aracruz mills consume 248,000 m³ per day. This amounts to approximately the water consumption of a 2.5 million inhabitants city, at an average consumption of 100 litres per capita per day. To obtain it, the company rerouted three rivers in the region and built, in breach of environmental laws, a canal that brings water from an interstate river. And all that without paying a penny for the water.
- In spite of the introduction of environmentally less harmful technologies, in 2002 Aracruz Celulose still produced 203.8 thousand tons of pulp using elemental chlorine to bleach the product, resulting in the production of extremely toxic organic chlorine compounds such as dioxins.
- As pulp exporters, the companies are exempted of the main tax, the ICMS (tax on movement of goods and services), which leads, for example, to a contradictory and worrying situation in Espirito Santo, where the state government owes Aracruz 266 million reales (US\$ 84 million).

- A new expansion cycle of the eucalyptus plantations in the region was also launched, in order to provide the new mills with raw material. Thus, the monoculture tree plantation prevailed over the so necessary reforestation with native species. Hundreds of rural producers lost their livelihood and employment, because the companies bought the lands where they used to work and live. The land reform was seriously hampered in a region where over 7000 landless families live in encampments and wait for land.

These and other factors show how the large-scale pulp production mainly benefits the eucalyptus plantation companies and a small group of permanent workers, besides European companies, banks and consultants. Local communities are those that suffer the biggest direct and indirect damages. This led to the creation, five years ago, of the Alert Against the Green Desert Network, a movement coordinating local communities, rural movements and aid organizations in their struggle against this new expansion cycle that strengthens the unequal and excluding logic of a development model imposed on the population. (By: Winfried Overbeek, WRM's bulletin N° 83, June 2004).

Brazil: The “development” brought by a pulp mill

In 1972 the Norwegian group Borregaard set up a pulp mill in the State of Rio Grande do Sul, a few kilometres away from the City of Porto Alegre, (municipality of Guaíba), on the banks of the river Guaíba. This mill was to close down in 1975 as a result of public pressure against the contamination it was causing. That same year it was purchased by the Klabin Company, and reopened under the name of Riocell.

The mill used elemental chlorine to bleach the pulp, generating considerable contamination of the Guaíba River that supplied drinking water to the city of Porto Alegre. However, the State was obliged to carry out works to decontaminate the river basin with public funds obtained through an IDB loan of 170 million dollars.

In 2002, the company changed the method used to bleach the pulp and started using the Elemental Chlorine Free (ECF) process. The following year, 2003, Riocell was purchased by Aracruz Celulose S.A.

The mill produces bleached pulp for export and is supplied with raw material from the 40 thousand hectare plantations of eucalyptus it possesses in a range of 85 kilometres round the installations, which Aracruz also acquired when it purchased the mill.

Aracruz Celulose S.A. is also the owner, in the State of Espírito Santo, of the largest bleached eucalyptus pulp mill in the world, with a capacity to produce 2 million tons annually. The enterprise was established encroaching on the rights of the local Tupinikim and Guarani indigenous peoples as it occupies the ancestral lands of these communities. Since then they have been waging a long struggle against the company.

In 2004, the company made major investments in Rio Grande do Sul in the Unidad Guaiba (ex Riocell) mill to revamp it. While opening new and large facilities at the end of July, the company launched a forestry programme in the State of Rio Grande do Sul to step up the eucalyptus plantations. Presently the mill is able to produce 400,000 tons of bleached pulp per year.

In the framework of the World Social Forum, the World Rainforest Movement (WRM) organized a visit to the mill in order to investigate on site the impacts it has had at the local level.

A group of 27 representatives of various organizations from some ten countries from all over the world took part in this experience, deploying themselves in the area surrounding the mill, where they talked to the neighbours and visited the location to check conditions. At the end, the participants shared both the testimonies they received and their own impressions. The unanimous opinion was that the situation around the mill — formerly a picturesque resort known as “Alegria” (Joy) — is now deplorable: the general impression is certainly not that of a village of outstanding prosperity, the surroundings of the mill are dusty and the coast is an oily and abandoned mire bordering murky waters which, near the mill, are hot. According to the neighbours, dead fish may be seen floating in the waters.

From the interviews with the neighbours it appears that they are obliged to live in the midst of persistent noise 24 hours a day from the constant traffic of trucks that alters their sleeping habits and in

some cases, ends in nervous disorders. They must also put up with a strong bad smell that has even damaged their social relationship with people from other areas who are not used to it. The high rate of allergies — especially among children — mainly affecting the respiratory system was also pointed out.

Regarding employment, they stated that when the mill was built and also when some extension works were carried out, employment rose. However most of the labour was brought in from the Brazilian northeast and once the building was finished, direct jobs ceased and outsourced jobs dropped. The mill is only good for those who have jobs there, they say, and these are not many. The social differences are big. Furthermore, artisan fishing — an important source of local labour — has been seriously damaged as the fish started to taste bad and people stopped buying it. The fisher-people now have to go much further away, near the sea, to seek their prey.

Another of the effects they reported was a permanent fall of a white powder that mainly damages vehicles.

Obviously the presence of visitors was noticed by the company, which is surrounded by a high wire-netting fence. Very soon a van with security guards started to circulate very slowly, stopping from time to time to stare at the visitors directly and inquisitively, who were spread out in groups, talking here and there with the people of the neighbourhood.

Some neighbours remembered enjoying the place when it was a beautiful resort with clear water visited by small boats full of people from the neighbouring city of Porto Alegre. Later, with the paper mill, “development” disembarked. Empty promises were made, leaving them full of smoke, powder, noise and smell. Scant jobs. Certainly there will be many people who now have “saudades” (nostalgia) for the old Alegria (Joy). (By: Raquel Núñez, WRM's bulletin N° 91, January 2005).

Chile: Wine production threatened by pulp mill project

For decades small and medium scale peasants of the Itata Valley have developed economic activities based on wine production. Wines

produced in the area have recently obtained a high quality export product certification. As a result of their hard work during years, the population of the region has been able to generate an activity having enormous economic and social potential.

In January 2000 the Regional Commission for the Environment (COREMA) of the VIII Region rejected the application for the project "Industrial Forestry Complex Itata", to be located in the area. The project comprises several activities related to the forestry sector, including the setting up of a pulp mill at the Itata Valley. The reason for the denial of the authorization was that such project would generate negative environmental impacts. The proponent company — Celulosa Arauco y Constitución S.A. — belongs to the Angelini Group, one of the most powerful economic holdings in the country.

Celulosa Arauco appealed to the National Commission for the Environment (CONAMA). According to the Chilean Basic Environmental Law, whenever such situation occurs, the body in charge of making a final decision on the viability of the questioned project is the Cabinet Meeting. The Cabinet is advised by a Consultative Council which — in theory — is formed by representatives of different sectors, such as NGOs, scientists, independent academic centres, workers, companies and the government. However, their delegates are not democratically elected by the organizations, but directly nominated by the country's President.

In a surprising move, a few days ago the Consultative Council decided to recommend to the Cabinet Meeting that the environmental permit for the project be granted. How can this be explained? Several public services, as well as an Expert Panel of the Catholic University of Chile especially contracted to study the project, had concluded that the establishment of the pulp mill in the Itata Valley is incompatible with the current economic activity prevailing in the area: grape and wine production. The implementation of the project would result in a conflict between two incompatible economic activities: the current wine-tourism activity versus industrial forestry.

Additionally, from the very beginning the project has been strongly opposed by the five communities living nearby the projected site of

the Itata Complex (Ranquil, Coelemu, Trehuaco, Quillón and Portezuelo). Far from being groundless, their opposition is based on the fact that the installation of a pulp mill would produce high levels of pollution. The industrial production of cellulose implies the use of chemicals containing chlorine which are highly toxic. Additionally, dioxines are emitted to the air. These substances have proved mutagenic and carcinogenic. This means that not only the environment would be negatively affected, but also severe damages would impact on the health and life quality of the people living in this valley.

An argument frequently used to promote this type of investments is that of job generation, which currently constitutes a severe problem in Chile. Nonetheless, also in this regard the recommendation of the Consultative Council is not appropriate, since at present grape and wine production provides 3,000 permanent jobs, while the Itata Forestry Complex would generate only a total of 1,200 jobs.

Many questions remain unanswered. What is really being evaluated? Is it the lobbying ability and the power of one of the major economic groups in the country or the environmental impacts of the project? Are community interests and local economies really taken into account when deciding what is best for them?

All the responsibility lies in the hands of the Cabinet Meeting. Its decision will in fact reveal what the real environmental and economic policy of the Chilean government is. (WRM's bulletin N° 40, November 2000).

Chile: Tree plantations and pulp production generate poverty and destitution

Throughout the world, tree plantations and the installation of pulp mills are promoted by governments using, among others, the argument that these activities generate employment. However the true situation shows how false this argument is.

At the beginning of 2002, we have received a report on research carried out by the economist Consuelo Espinosa, a research worker at the TERRAM Foundation in Chile. The title of this work is "Evaluation of

the impacts of pulp production.” We believe it of interest to share some of the conclusions she arrived at in this study. We will refer to some social impacts in the plantation and pulp sector in Chile, mentioned in the study (see References).

The study provides information making it possible to conclude that the installation of pulp mills in the country has not contributed to lessen poverty nor to improving the standards of living in those regions, or even in the communes where they are settled. Therefore the growth of this industry in the country is not inserted in the principles of sustainable development.

Although tree plantation employment in the VII, VIII, IX and X regions is more important than in other regions in the country, it does not mean that the forestry industry has generated an increased number of jobs. Specifically in the pulp industry, continuous capitalisation is to be noted, that is to say, an increasing substitution of the labour factor by capital. This implies that for each additional unit of manufactured product, increasingly less human resources are being used. That is to say, the industry generates fewer and fewer jobs.

Furthermore, the study mentions that, on analysing poverty levels in the plantation regions, specifically where the pulp mills are established and where the greatest extensions of plantations exist, it may be seen that these regions have the highest poverty indexes in the country.

Again, on analysing poverty levels on communal level, it may be observed that in those places where pulp mills are located and for which information is available, the poverty rate (poor and destitute people), between 1994 and 1998, increased on an average by over 29%.

The highest growth in this respect has been observed in the Commune of Constitución, where the poverty rate increased 20 points, from 29.6% to 49.9%. In the Commune of Nacimiento, it increased a little over 26% with the poverty level reaching 43.9% of the population. In both communes, the poverty rate is twice the national rate.

It is important to note that in the two communes mentioned above (Constitución and Nacimiento) large pulp mills are established, such

as Celulosa Arauco and Constitución S.A. in the Commune of Constitución, belonging to the Angelini group, and in the Commune of Nacimiento, the CMPC consortium, belonging to the Matte Group.

This enables us to see that the operation of pulp mills has not contributed to improve the socio-economic level of the communes where they are installed. Worse still, it has not contributed to minimise the existing levels of poverty in the various zones.

Chile has approximately 2 million hectares of tree plantations and is shown to the world as the “forestry model” to be followed. In the light of the above-mentioned data, it is clear that that forestry model does not solve existing problems but makes them worse. Both the Chilean government and the many others that continue to promote this activity should know that they cannot continue lying to people about the so-called “benefits” of this forestry model which, although generating enormous wealth for some major economic groups, only generates greater poverty and destitution for local populations. (WRM’s bulletin N° 52, November 2001).

Chile: There’s something stinking in the South

Twenty-two months after the beginning of its construction and almost five years behind schedule, the Valdivia mill started operating in the Lakes Region. The announcement was made on 30th January by Alejandro Pérez, General Manager of Celco (Celulosa Arauco y Constitución, forestry subsidiary of the Angelini group), who called this project a “historical investment”. The delay was due to the resistance of citizens’ organizations, environmental activists, indigenous peoples, peasant women and especially the residents of the coastal town Mehuin, who for over three years successfully campaigned to prevent Celco from dumping its effluents into Maiquillahue bay.

Less than a month later, the nearby communities began complaining about the unbearable smell from the mill: San José de la Mariquina in the west (about 10 km away), Lanco and Lancoche in the north (almost 30 km away) and Valdivia in the south (60 km away) were, according to the winds, alternatively aggressed by Arauco’s fetid monster.

The original project was to build and operate an industrial plant for the production of 550,000 tons per year of bleached kraft pulp. This will require 2.24 million m³ of radiata pine and 563,000 m³ of eucalyptus, that is to say about 5,000 hectares per year. The bleaching is to be made by applying the ECF process (Elemental Chlorine Free), misleadingly promoted in order to make believe there is no chlorine implied, and not the TCF process (Totally Chlorine Free). The project will have a productive life of more than 20 years, and an estimate investment of 1,045 million dollars.

The Environmental Impacts Assessment's results, based on information provided by the company itself, shows the level of the impacts. Air emissions will release daily into the atmosphere 2.4 tons of particulates, 3.04 tons of sulphur dioxide (SO₂), 4.69 tons of oxides of nitrogen (NO_x) and 0.25 tons of total reduced sulphur compounds (TRS), the malodorous gases typically found during the pulp processing. Liquid effluents include 900 litres per second of industrial liquid wastes (RILES in Spanish) and 250 litres of cooling water, which means a total of 1,145 litres/sec discharged into the River Cruces. Additionally, there are 1,450 m³ per month of sludge from the treatment of liquid wastes and 40,100 m³ per year of other solid waste.

Bad smells are not the only problem. What started with claims about nauseating odours ended in a number of irregularities. Faced with repeated complaints, environmental and health authorities began to set up inquiries, though slowly and rather late. They found categorical evidences establishing that the company had no system for emissions abatement, control and monitoring; besides, it began to operate last February without completing the required municipal procedures, payments and sanitary certificates, obviously in breach of the project's environmental licence.

Furthermore, additional pipes, not included in the EIA and discharging industrial liquid effluents were discovered in the plant. It is worth mentioning that the mill's industrial effluents flow into the River Cruces, the main water reserve of the Nature Sanctuary of Río Cruces, a site included in the RAMSAR convention to be protected by Chile's government.

The company keeps on selling illusions. The following are some of Arauco's environmental promises in the face of the continuous opposition led since 1995 by citizens' organizations: "The mill will use the latest technology to produce bleached pulp", or "The selected technology resolves the problems of liquid effluents, solid wastes and gas emissions". Other passages are more specific: "the effluent will have no perceptible colour", "[this will be] a mill without any smell problems", "TRS emissions will be undetectable to human smell in communities neighbouring the project site" (Environmental Impacts Assessment, Valdivia Pulp project, August 1997). "The Valdivia project will apply the latest and best environmental technology available, thus becoming one of the three major pulp mills in the world" (Mario Urrutia, Engineering Manager, *Diario Estrategia*, 1996).

Five months after beginning to operate, facts belie the company's promises and credibility. Two inquiries opened by the Health Department led to a penalty with a 1,000 UTM fine (about US\$ 48,000) for infractions of the Sanitary Code, while the Regional Environment Commission (COREMA) fined the company twice, with 500 UTM (US\$ 24,000) and 400 UTM (about US\$ 19,000) for nonobservance of the Environmental Resolution. Furthermore, the municipal authority of San José de la Mariquina, the community where the mill is located, closed the plant because the company had not the required documentation allowing it to operate in this territory. The closure lasted only a week. Besides, individuals and civil organizations lodged an appeal requesting the cessation of the mill's activities until the appellants and residents of Valdivia province are given guarantee that the company will comply with the mitigation and monitoring measures against environmental pollution included in the Environmental Impact Resolution. To date the verdict is still pending.

Some conclusions may be drawn from the above:

- Celco goes on lying: what the authorities initially evaluated and accepted was a 550,000 tons per year project, but in starting its operations the company announces a 700,000 tons per year mill, without any changes to the environmental assessment.
- The only way this kind of projects can be legitimated in political and social terms is by means of disinformation and misleading promises about their environmental and social impacts.

- Companies such as Celco are so powerful that they act with complete impunity. They are able to set in motion an investment of more than one billion dollars without having the necessary permits nor respecting environmental engagements and standards. Fines are so derisory that they merge into running costs. In addition, the State allows and facilitates such huge investments but lacks the necessary technical capacity and political will to keep them under control.
- The economic and political factors around these projects make it impossible, once they are established, to mitigate the environmental and social impacts inherent to the business in question.
- This kind of experiences shows that, in Chile, the huge investment projects put the environment, people's health and sustainability in danger. As for people, they do not trust any more these initiatives whose effects are corroborated as soon as they start operating. The growing opposition manifests itself through the successive conflicts over environmental issues, where economical interests, environmentally unscrupulous, are confronted to communities who refuse to be the victims of environmental injustice. (By: Lucio Cuenca Berger, WRM's bulletin N° 83, June 2004).

Chile: Contamination from a pulp mill causes death in the wetlands

The Nature Sanctuary Carlos Anwandter at Rio Cruces is the Site that Chile incorporated as Wetland of International Importance when it adhered to the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat, in 1981. It is home to a wide diversity of species of flora and fauna, particularly black-necked swans (*Cygnus melancoryphus*), an endangered migratory bird. The Sanctuary and its swans are part of the identity and image of the inhabitants of the nearby city of Valdivia, closely linked to the riparian landscape.

At the end of October, public alarm was alerted with the appearance of dozens of dead or undernourished and blind black-necked swans, with evident neurological alterations that made it impossible for them to fly. The reason for this was identified as being the fact that they feed on a type of algae (*Egeria densa*) which is apparently being affected by contaminants. This disaster is also affecting the taguas (a local

bird), coypu (a vegetarian rodent), and various types of fish that have also been found dead.

Although there has not been a conclusive answer to the causes of this disaster, the sole relevant event that has taken place on the Cruces River over the past year and that could explain such a drastic change in the ecosystem is the entry into operation of the Valdivia Pulp Mill, belonging to the Celulosa Arauco Company (CELCO). This pulp mill started operating in February 2004, 15 km upriver from the protected wetland.

Located in the commune of San José de la Mariquina, Province of Valdivia, with an initial investment of one billion dollars, this mill has an annual production of 850,000 tons of Kraft pulp and was presented to the country as a model enterprise. It was the first one to be submitted to an Environmental Impact Assessment System (EIAS), set out in Law 19,300 on general environmental bases and, according to its executives, one of the few in the world to have a tertiary treatment system for the evacuation of effluents. The environmental resolution approving it assured that the emissions of total reduced sulphide (TRS) — the characteristic “rotten egg” smell of pulp mills — would not be detected by the human sense of smell. At the most it would be projected at a range of 500 metres.

However, since 1996, various ecological and citizen organizations had opposed the installation of CELCO. They warned about the project’s impacts and in particular the consequences of the evacuation of industrial effluents. The political authorities did not listen to them, seduced by the possibility of opening a great company.

Today, less than a year after it was launched, negative impacts on the environment have overshadowed any benefit that it might have given to regional economy. What started in the first months of the year with complaints and protests by the community of Valdivia, affected by the nauseous smell blown in by the wind, continued in August with an environmental emergency in the Eighth Region following the turpentine sulphate spill that affected, among others, the inhabitants of Lota, located at 30 km from the pulp mill, where schools had to close down because the pupils were nauseous with headaches and vomiting.

Following the launching of the pulp mill, in other nearby villages, such as Lanco, Mafil and San Jose de la Mariquina, people started consulting the doctor because of headaches, nausea and irritated eyes.

The pervading emanating smell widely surpasses 50 kilometres, and even reaches as far as the city of Valdivia. CELCO has already been sanctioned by the Valdivia Health Service, by the Municipality of San Jose de la Mariquina and by CONAMA (the National Environmental Commission) of the Tenth Region.

The environmental authorities have detected serious irregularities in the construction and operation of the Mill and in the liquid and gaseous waste effluents and emissions showing that the volumes established by the Environmental Impact Assessment approved by the Chilean authorities, have not been respected. Among other things, a clandestine duct and direct discharge into the Cruces River of stagnant water from the ponds of untreated liquid industrial waste and of 50 litres per second of refrigeration waters at a high temperature through the rainwater collector, were identified..

To this now is added the death of the black-necked swans. Shocked by the ecological disaster that is affecting the wetlands of the Cruces River and disappointed by the slow reaction of the authorities to this event, on 14 November the inhabitants of the region organized a march and an original river caravan in which over 1,500 people took part and on 16 November they held a Citizen Assembly with the participation of 500 people. The demand was unanimous: to apply the preventive principle set out in environmental legislation and while their possible responsibility for the deaths in the Sanctuary is not discarded, to halt operations at the paper mill so as to eliminate contaminating effluents that are suspected of causing the loss of the ecological heritage of the Cruces River,.

The mass death of swans and the impacts on the ecosystem of the Nature Sanctuary were avoidable. (WRM's bulletin N° 89, December 2004).

Colombia: The unsustainable model of Smurfit

In 1998, the author Joe Broderick finished his research on the Smurfit Carton de Colombia company, publishing his book “El imperio de cartón: impacto de una multinacional papelerera en Colombia” (*The Cardboard empire: the impact of a multinational paper company in Colombia*). In this book he provides details of the serious social and environmental impacts caused by the activities of a branch of the Irish transnational company, Jefferson Smurfit in that country.

The activity of this company in Colombia started in 1957, when Celulosa y Papel de Colombia S.A. (Pulpapel) was created. It was integrated by the Instituto de Fomento Industrial (IFI), Cartón de Colombia and Container Corporation of America, a subsidiary of Mobil. Later on, Container sold its shares to Cartón de Colombia and the company adopted the name Smurfit Cartón de Colombia. The firm is part of the multinational Jefferson Smurfit Group plc, with headquarters in Ireland, which is one of the biggest producers of paper-based packaging in the world, with operations in twenty countries.

Smurfit Cartón de Colombia is responsible for the environmental damages provoked by the felling of the forests of the Biogeographic Chocó Region, the pollution of the River Cauca and air pollution in the city of Yumbo, where it's main industrial plant is located. To this we have to add the social and environmental impacts of the large scale tree plantations to supply with abundant and cheap raw material the Yumbo pulp mill.

In November this year, WRM was invited by Colombian organizations to visit the region affected by Smurfit's pine and eucalyptus plantations, to observe the problems and listen to the opinions of the local inhabitants in person. The visit not only fully confirmed the information provided by Broderick, but also showed that the company has not changed one iota of its policies regarding people and the environment and that their relationship with the local society continues to be as problematic as it was when the book was first published.

None of this should astonish us, as the impacts of a branch of the same company had been recorded by WRM in the neighbouring

Venezuela, following a similar visit carried out in December 1998 to the plantations of Smurfit Carton de Venezuela Company. In an article written after this visit we concluded that “the ‘development’ model implemented by Smurfit in Portuguesa is unsustainable, regarding both social and environmental impacts.

Something similar could be said of the impacts in Colombia, where the company has been involved in deforestation processes, where there have been severe impacts on water, fauna and flora and where it has been a key factor in the eviction of the rural population in the zones where it has established itself. All this, and much more, became evident from the interviews WRM held last month with the local population.

The local people told us that “the plantations have finished off the water,” that “spraying has finished with everything there was in the soil,” that “there is hardly any fauna left,” that there used to be “clouds of birds” and that now “only in the summer does some bird appear, but not in winter time,” and that “there are no fish left either.”

Regarding employment, they reported “all the work is seasonal” (it is outsourced) and that “the contract implies working for two and earning for one.” Like in the jungle, only the fittest survive: “if you don’t reach production, they remove you, you can’t be over 40 and we all have to be strong to reach that production.” Regarding worker organization, not only is there no trade union, but “he who grumbles is out” and “here no comments are made.”

Additionally, there are several legal benefits that favour Smurfit, some of them almost ridiculous. For instance, the so called Forestry Incentive Certificates (Certificados de Incentivo Forestal — CIF), approved in 1993 as a “recognition of the Colombian State to the positive externalities of reforestation resulting from its environmental and social benefits”, plantation projects using exotic species are granted the same benefits as those using native species, whenever “it is shown by scientific studies and applied research that the used species has exceptional qualities to create a forest cover and for the conservation and regulation of waters”. Taking into account the proven negative effects of fast-growth tree monocultures on water dynamics in

watersheds, the above is difficult to imagine. Nevertheless, the company is able to achieve such “scientific proofs” and benefits from the CIF.

Smurfit also benefits from different kinds of tax breaks for promoting what the legislation erroneously calls “reforestation”. For example: a discount of 20% in rent taxes on new plantations, an 80% deduction in the value of the taxable products from the harvest, tax exemptions on technical services related to tree plantations, established by the 1995 Budget Bill.

Colombia's forestry policy has taken an alarming course. On the one hand, there is no effective protection of the huge forest diversity existing in the vast territory of the country — also affected by illegal crops and by the measures to combat them — and on the other hand, tree monocultures are promoted, even though they constitute a direct cause of deforestation and forest degradation in Colombia and worldwide. Additionally, laws are passed “tailor-made” for Smurfit and large-scale “reforesters”, while farmers — especially small ones — are left on their own at the mercy of market and atmospheric conditions.

All this takes place with the only goal of producing more and more carton for packing. (WRM's bulletins N° 43, February 2001 and N° 77, December 2003).

Uruguay: Will IDB-funded private port include a pulp mill?

The Department of Rio Negro, located in the western side of Uruguay, presently has 70,510 hectares of plantations (mainly eucalyptus) which makes it one of the Departments having more tree monocultures in the country.

A few months ago, the launching of a new project related to afforestation in this Department was announced. It consists of the installation of a port and industrial complex (“M'Bopucúa”) located on the Uruguay River, some 8 kilometres upriver from the city of Fray Bentos. The aim of this project is to build a private port (in a country where until now ports have been state-owned) with wood chipping facilities in its premises.

The woodchips would be exported by sea to pulp mills abroad, while the port would also serve for channelling to export markets the wood and wood products from plantations in Uruguay's central, western and northern regions, as an alternative to the port of Montevideo, which is currently the main port for wood exports.

The complex will be built by a private company — “M’Bopicuá Logistic Terminal” (TLM) — formed by some of the most important forestry companies operating in the country. Among them, mention can be made of Eufores and las Pléyades (belonging to the Spanish paper company ENCE), La Forestal Oriental (a joint venture of the Royal Dutch Shell Group and UPM-Kymmene) and Paso Alto, a national forestry investment fund. The Spanish company Unión Fenosa, which has expanded its international investments, is also part of the consortium. Thus, this undertaking will be mainly carried out by multinational companies (with the exception of Paso Alto) with headquarters in Spain, the United Kingdom, The Netherlands and Finland.

The Inter American Development Bank (IDB), which will contribute 23.1 million dollars, will be the project's main funder. According to the Environmental and Social Impact Brief available in the Bank's web page, the project aims at the development of an industrial estate focused on the export of wood and non wood products, ("or timber industrialisation, but for purposes other than the production of paper")

The last sentence ("but for purposes other than the production of paper") is extremely suspicious. In fact, according to information published in the local press, the Spanish pulp and paper company ENCE is considering installing a pulp mill in this location. The information about the installation of a pulp mill has also been corroborated to the press by the associated company Unión Fenosa. Given the well known environmental impact of this type of activity, its inclusion in the project would certainly imply the requirement by the IDB of a full environmental impact assessment, with the corresponding need to open up the subject to consultation and public participation. Can the IDB ensure that once the Terminal is finished a pulp mill will never be constructed there by one of the owners, in this case ENCE? We doubt this very much.

In 1997, as a result of a previous project to build a pulp and paper mill in Fray Bentos, local organizations organized themselves in the MOVITDES Group (Movement for Life, Work and Sustainable Development). This group is radically opposed to the installation of this type of industry because of its highly contaminating potential.

It should be noted that some 20 kilometres down river from the zone where ENCE wants to install the pulp mill, is a tourist resort called “Las Cañas” that enables many families in the area to earn their subsistence. Additionally, the drinking water intake for the city of Fray Bentos is only 8 kilometres away from the projected port and industrial estate. It is evident that both the tourist activity and the quality of drinking water in the city will be seriously affected by a pulp mill located a few kilometres upriver.

Furthermore, the local organisations point out that, in addition to the contamination the pulp mill would generate, it will be a further encouragement to the continuation of “planting monocultures and thus they will leave our country without land.” The increasing opposition at local level to eucalyptus plantations in the area is due to the impacts that are already being perceived. In particular, in the zone of Cerro Alegre (in the neighbouring Department of Soriano, where the subsidiary company of the ENCE Group, EUFORES has one of its plantations) the local farmers have complained about the depletion of the sources of water on which they depend, which took place a few years after the installation of the large monoculture tree plantations in the area.

The situation is a matter of concern, especially taking into account that two of the companies leading the project (EUFORES and Las Pléyades) are subsidiaries of the Spanish pulp and paper company ENCE, which has been accused several times for the serious atmospheric and water pollution it has caused throughout its history. The accusations have resulted in a judicial trial, where the local organization Defensa da Ría is asking for sentences of two years imprisonment for six of nine of ENCE’s directors implicated in the case. Additionally, the plaintiffs also request strong fines for the environmental crime resulting from emissions and effluents discharged in the Ría of Pontevedra. With such background in its own country, it is scarcely believable that it will behave in a more responsible manner

in Uruguay, thereby increasing the reasons for concern of the population of Fray Bentos.

A few years ago, the MOVITDES Group led a strong and successful popular mobilisation against the installation of a pulp and paper mill in the city of Fray Bentos, supported by other environmental groups in the country. They are now mobilising again to face these powerful multinational companies that also have the financial support of IDB and the political support of the national and departmental governments. Success will not come easily and much depends on the support they can receive from national and international civil society. For this reason MOVITDES is calling on all the organisations in the countries where these companies have their headquarters, to join them in their struggle. (WRM's bulletin N° 54, January 2002).

Uruguay-Argentina: Joint struggle against a pulp-mill

Like so many other countries in the South, Uruguay has been convinced (by FAO, the World Bank and the Japanese International Cooperation Agency, among others) that it should promote large-scale tree plantations. From the start, it was very clear that the objective was to produce sufficient raw material for pulp production and for this reason, fundamentally, the plantation of eucalyptus was promoted.

The abundant direct and indirect subsidies that were channelled to the plantation sector (estimated at over 400 million dollars), had the expected result: over 600,000 hectares were planted. Now the time has come to start harvesting the wood and the country has no plan for the development of the timber sector. It is in this context that the Spanish National Cellulose Company (Empresa Nacional de Celulosa de España - ENCE) arrived with a project for a pulp-mill to be installed on the River Uruguay and the Government has received it with open arms.

ENCE is not a new actor on the Uruguayan stage. The company installed itself in 1990 in Uruguay, purchasing land and planting 50,000 hectares of eucalyptus to supply their pulp-mills in Spain, where in turn they have 100,000 hectares of eucalyptus. Their history is shady,

both in Uruguay where it is registered as Eufores, and in its country of origin.

In Spain it was taken to court for crimes against the environment after decades of contaminating the Ria de Pontevedra. After many years, it was finally condemned and its executives sentenced to fines and prison sentences. However, its environmental “legacy” is still being suffered by those who live near its three pulp-mills. It is interesting to highlight that in Pontevedra (where there was and still is, greatest opposition to ENCE) it now produces TCF (totally chlorine free) cellulose, while in Huelva and Navia it applies the ECF process (using chlorine-dioxide). Of course, the process it intends using in Uruguay is not the cleanest, but the one using chlorine-dioxide.

In Uruguay, Eufores (ENCE) has never been fined or sentenced, not because of insufficient merit, but due to the lack of controls, in particular regarding compliance with labour regulations. Those who work or who have worked for Eufores tell terrible stories about the working conditions in force among the outsourcing companies that work for the company.

With this background, it is not surprising that a movement has arisen to resist the installation of the pulp-mill, to be located on the River Uruguay, up-river from the city of Fray Bentos, in the Department of Rio Negro. What is a novelty is that the resistance movement is not limited to Uruguay, but also includes environmentalists from Argentina, a country sharing the River Uruguay and that might therefore be affected by contamination from the mill.

On 4 October, environmentalists from both countries carried out a joint action, originally to take place in the middle of the international bridge joining both countries near Fray Bentos. The Uruguayan citizens were prevented from crossing the bridge by the security forces, while on the Argentine side, only a small delegation was authorized to cross (headed by the mayor of the neighbouring city of Gualaguaychú, Emilio Martinez Garbino), preventing more than 800 people who had congregated there from taking part in the demonstration.

Once they had crossed the bridge, they joined the Uruguayan activists and all marched to Fray Bentos, where mayor Martinez Garbino gave

the mayor of Rio Negro, Francisco Centurion, the “Gualedguaychu Declaration,” prepared by a citizen assembly of bodies from that city, stating their opposition to the installation of the pulp-mill.

The action became so notorious that the main Uruguayan governmental actors (from the Vice-President to the Minister of Foreign Affairs) found themselves obliged to forestall criticism by appealing to the traditional “defence of sovereignty” and “non-interference in internal affairs,” that are never applied when dealing with the United States ambassador or the representatives of the International Monetary Fund. On the Argentine side, President Nestor Kirchner entrusted his Minister of Foreign Affairs, Rafael Bielsa, with formally stating his concern to the Uruguayan government over the possible contamination of a shared watercourse, which he did a few days later at a meeting with the Uruguayan President, Jorge Batlle.

The commotion caused by the “crusade” opened up doors that hitherto had been closed to the Uruguayan environmentalist movement. For the first time, radios, newspapers and even television newsreels gave citizens the opportunity to be informed by the mass media of the reasons of those who oppose large-scale monoculture tree plantations (and the associated pulp-mills) and who struggle for an environmentally healthy and socially just country. The official schizophrenia caused by the “crusade” of a group of citizens from a sister country had the opposite result from that sought: the mass media opened up on this so far silenced issue.

The crusade was a success and the struggle goes on. Environmentalists from both countries, grouped in the Socio-Environmental Network since 2001 are now considering the implementation of further joint actions to prevent the installation of the ENCE plant. While the governments talk about integration, the people have effectively started to integrate. (WRM's bulletin N° 75, October 2003).

Uruguay: Either with the people or with pulp mills and tree plantations

Uruguay has been one of the countries in the region that has best and fastest fulfilled the duties others have dictated.

Already in 1951, a joint FAO-World Bank mission made a series of recommendations regarding the country's forestry development, which was the basis for the forestry laws adopted in 1968 and 1987. Their vision implied the promotion of suitable species for the timber industry in the framework of an export model, in which forest management is just another business or manufacturing activity.

In 1985, the Japanese International Cooperation Agency (JICA) came to this country to study the economic and financial feasibility of establishing a Kraft pulp mill. Its influence was so great that the National Forestry Plan adopted by the Government in July 1988 is explicitly based on the "Master plan study for the establishment of tree plantations and use of planted wood [sic] in the Oriental Republic of Uruguay", published by JICA in March of that same year, promoting the mass plantation of pine and eucalyptus trees.

Later, in 1989, the World Bank provided resources to enable the forestry export model of eucalyptus logs for pulp to take root. This injection of money made it possible to grant a series of benefits to the forestry sector: tax exemptions, partial refund of plantation costs, long-term soft loans, duty cuts on the import of machinery and vehicles, construction of roads and bridges, equal benefits for foreign investors. Investment in the sector soared, at the expense of subsidies paid by the rest of society (today estimated at over 400 million dollars) and the destruction of grazing lands and the few remaining areas of indigenous forest in the hilly areas. Another consequence was the concentration of landholding, in particular by foreigners, added to increased rural migration.

The "green desert" model of tree plantations was installed in Uruguay and the promises of employment were never fulfilled. According to official data from the Agricultural and Livestock Census, it generated fewer permanent jobs than extensive cattle-raising, so far considered to be the least efficient regarding jobs generated per hectare. Furthermore, the few jobs that were created were done so at the expense of those lost in activities that were substituted, and with the same or worse quality working conditions and remuneration.

With this background and in this context, two projects were submitted in 2003 — one by the Spanish company Ence and the

other by the Finnish company Botnia working in association with UPM-Kymmene — for the installation of pulp mills on the Uruguay river, on the border with Argentina, at 5 km from the city of Fray Bentos and a little further from the “Las Cañas” tourist centre.

The Ence proposal has been resisted by Uruguayan and Argentine environmentalists on both sides of the Uruguay River. Botnia, with “white gloves” and an offer to invest 1 billion dollars that, in the devalued and impoverished Uruguay has made more than one mouth water, also proposes to install an ECF pulp mill. In its favour, it has a “cleaner” image, a result of the strict environmental regulations in its own country and a more intelligent approach, with participative trends, that has won it some support. However, conscious of the problems it may have to face, it concerned itself with achieving the adoption by Uruguayan Parliament of an “Agreement with the Government of Finland regarding the promotion and protection of investment”, which is in fact an agreement with Botnia. By means of this agreement, the company ensures the constant support and protection of the Uruguayan Government for its investments, even foreseeing the restitution of possible losses due, among other things, to “demonstrations.”

This is a way of taking shelter before the rain, and this is not in vain. In view of the fear expressed over the possible pollution of the Uruguay River and of the neighbouring area, the company has insisted that the projected pulp mill will be totally innocuous, but it is undeniable that these mega-projects involve major risks. More so in these regions where it is well known that the environmental monitoring by a dismantled State — such as the Uruguayan State — is weak.

The strong point of the companies and those that support them is the promise of creating jobs in a region with a very high level of unemployment. However, the accounting is incomplete, as it does not consider the local sources of jobs that will be lost due to the possible impact of the pulp mills — ranging from the characteristic “rotten egg” smell to the pollution of the river — in the tourist line, fishing, organic horticulture, beekeeping. Furthermore, as stated by the Botnia Company itself, out of the promised 300 jobs, 292 will be held by very qualified personnel, and therefore for most of the population the situation will remain unchanged.

In the meanwhile, local, national and regional society has made its dissenting voice heard. The integration of Uruguayans and Argentines concerned over the possibility of installing one (or two) pulp mills, polluting the water and air in the Uruguay River basin, shared by both countries, has taken shape in the form of a Socio-Environmental Network.

In turn, a group of Uruguayan organizations, both local and national, are pledged to prevent the installation of these pulp mills and are carrying out various activities with this aim, seeking to generate awareness regarding the impacts they imply. They are also pointing out that this enterprise would help to consolidate and strengthen the present model of monoculture tree plantations that has been so socially and economically harmful to the country and to its people.

In this context, the environmentalists have also established international links with organizations and individuals in Spain, Finland and Sweden, with the aim of exchanging information, obtaining support and coordinating action in the countries where the companies involved have their headquarters.

At the same time, the organizations opposing the pulp mills have suggested alternatives to the 600,000 hectares of monoculture tree plantations resulting from the promotion of plantations by the State. In this respect, they have set out the need for preparing a national plan for the development of the timber industry (ranging from wood products to the construction of wooden houses), generating stable workstations to provide the people who today most need it with work and better living conditions. Which is precisely what these pulp mega-projects cannot offer. (WRM's bulletin N° 83, June 2004).

Uruguay: To continue celebrating without pulp mills

Consumerism and poverty are the two extremes of the current world paper market. Manipulation of markets, cartel agreements, establishment of prices and other similar practices give a group of companies the necessary power to control it. In between are pollution of air, water and soil, land accumulation and appropriation by foreign companies, scale increases and strengthening of a form of production

requiring fewer and fewer workers. A chain of unsustainable actions in this line — a replication of others — that sets aside any sensitivity and prudence towards nature and the present and coming generations. Social equity is not in the sights of these enterprises.

Since 1989 the Uruguayan State has become indebted with the World Bank to support a forestry model exporting eucalyptus logs for pulp. It did so with the concession of tax exemptions, partial refund of plantation costs, soft credits, construction of highway facilities, equal benefits for foreign investment, among others. As a result, Uruguayan society made a contribution of approximately 400 million dollars to the plantation sector.

However, tree plantations did not bring with them the promised jobs. They contributed to rural emigration insofar as they generated fewer permanent jobs than extensive cattle-raising, while doing so at the cost of jobs lost in the activities they substituted, with equal or less quality of working conditions and lower salaries.

Nevertheless, all these considerations do not appear in the companies' book-keeping or in the book-keeping of the international financial institutions or of the governments responding to their instructions. They only discuss in the language of orthodox economy and "global demand" and not in the language of small rural farmers, of workers or of politics. The result was that tree planting went on.

In addition to destroying prairies and the few remnants of indigenous forests in the hilly area, large scale tree plantations increased concentration of land tenure and foreign ownership of land. In the 1960s, there was a strong public demand for agrarian reform. At that time, the greatest landholdings in private hands were of about 30,000 hectares. Today, the US based forestry company Weyerhaeuser concentrates some 150,000 hectares of land. There are also Canadian and Chilean capitals that have purchased thousands of hectares for tree plantations. EUFORES, belonging to the Spanish ENCE group has some 50,000 hectares planted with eucalyptus aimed at pulp production. The Forestal Oriental Company (FOSA), belonging to the Finnish capitals of Botnia and UPM-Kymmene, owns some 100,000 hectares, of which 60,000 are declared as intended for tree plantations.

In 2003 the two latter companies submitted projects for the installation of two mills to produce bleached pulp from eucalyptus, a few kilometres away from the city of Fray Bentos and the “Las Cañas” tourist resort. ENCE plans to install a mill with the capacity to produce 500,000 tons per year and Botnia a mill with the capacity to produce one million tons per year.

Resistance to these mega-enterprises has been increasing involving not only Uruguay but also the neighbouring Argentine province of Entre Rios, which would be affected by the impacts of both mills.

Members of Guayubira — one of the Uruguayan groups that has strongly questioned the installation of the pulp mills — attending the Fifth World Social Forum in Puerto Alegre, Brazil, took the initiative of addressing an open letter to Dr. Tabaré Vázquez, the incoming President of Uruguay, who will take up office on 1 March, to express their concern over the possible installation of these two pulp mills.

This letter sets out that:

“The World Social Forum is a space giving a voice to the hopes for change in humanity. It states that ‘Another World is Possible’ because the present one, where exploitation, social exclusion and environmental destruction predominate, has shown itself to be unsustainable.

The present model of large-scale monoculture tree plantations that has been imposed in the country has only made a few people rich with everybody’s money. It has deepened social exclusion, concentration and foreign ownership of land and environmental degradation.

And now, to complete this neo-liberal project, the out-going government has promoted the installation of two gigantic pulp mills close to the city of Fray Bentos on the Uruguay River.

The installation of the mills would not only consolidate the existing forestry model but would also increase the area planted to supply them, thus exacerbating already existing impacts.

Pulp mills not only cause environmental pollution but also displace local sources of labour in the agriculture and cattle-raising, tourism and fishing sectors, and would also have impacts on the health of the local Uruguayan and Argentine population.

The outgoing government has already authorized the installation of one of the mills and we see with concern that they are establishing all the conditions to hurriedly approve the second mill.

From Porto Alegre, Uruguayans and Argentines — many of them representatives of social organizations — present at the World Social Forum earnestly appeal to you, before taking a resolution on the pulp mills, to make a comprehensive analysis of the serious impacts they involve.

We consider that it would be advisable, making use of your authority as incoming president, for you appeal to the out-going government to halt any decision authorizing the installation of the second mill.

Those who voted for you did so with the conviction that another Uruguay IS possible and we are convinced that if these mills are installed, they will only enhance the previous model.”

This open letter, containing words pronounced by Vazquez when his electoral triumph was confirmed (“Celebrate Uruguayan women, celebrate Uruguayan men”) ends by saying: “For this reason we ask you to allow the Uruguayans who endorsed the change to continue celebrating.”

Hundreds of Uruguayans and Argentines present at the WSF, many of them representatives of social, trade-union, environmental, political and religious organizations signed the letter which was endorsed by outstanding figures, such as the Uruguayan writer, Eduardo Galeano, the Argentine Nobel Peace Prize winner, Adolfo Perez Esquivel and the fighter for Human Rights and member of the Association of Mothers of the Plaza de Mayo, Hebe Bonafini, among others.

Participants of other nationalities also adhered to the letter, “moved by the shared vision that another world is possible,” expressing that

“We trust that (Dr. Tabaré Vázquez) will honour the expectations that Uruguayan men and women have built over various years of struggles and that have now been deposited in you.”

The complete text of the letter and the list of signatures and adhesions can be viewed at the Grupo Guayubira’s website: <http://www.chasque.net/guayubira/celulosa/carta.html> where those who wish to adhere to the letter are invited to do so by filling in the form that is attached there. (By: Raquel Núñez, WRM's bulletin N° 91, February 2005).

Venezuela: Smurfit Carton, plantations in discord

"The Venezuelan Smurfit Carton group is linked to the communities in each region where its companies operate. Through social, educational and cultural programmes it comes closer to the milieu, to achieve total integration with the community" ⁽¹⁾

If the above is an attempt to describe the situation in the State of Portuguesa, it is enough to talk for five minutes with the inhabitants of the communities surrounding the Smurfit plantations to affirm that it is a false statement. In the event that it is a declaration of intent, the only conclusion to be reached is that so far it has been a resounding failure.

A discouraging past

In 1986, the Jefferson Smurfit Group acquired the North American Container Corporation, and one of the results of this merger was that it became the main shareholder of Carton de Venezuela, changing its name to the present one of Smurfit Carton de Venezuela.

What is the Jefferson Smurfit Group and what is its background? It is an enormous trans-national company, with headquarters in Ireland, which recently merged with the North American Stone Container (thus becoming the greatest producer in the world of paper and cardboard

⁽¹⁾ Asociación Civil Escuela Técnica Agropecuaria Smurfit Cartón de Venezuela, s.f. (School of Forestry created and financed by Smurfit).

packaging). The company has investments in twenty countries, and among the most outstanding are the United States, Mexico, Colombia and Venezuela (these last three countries are where it obtains the greatest profits). In our region it continues to expand, in particular in Argentina and in the future possibly in Brazil.

Its background regarding social and environmental matters leaves a lot to be desired. In the United States, the company's inflexible policy led to long strikes and frequently its directors have resorted to lock-outs. At the time of acquiring the Container Corporation, it immediately made some one thousand employees redundant, responding to its now traditional policy in this respect. In the States of Ohio and Oregon it has been investigated and fined for environmental crimes. In Colombia it has deforested areas and generated serious environmental impacts, while maintaining conflicts with local communities, leading to questioning in Ireland itself. A book was published recently — "The cardboard empire: the impact of a multinational paper company in Colombia" by Joe Broderick, 1998 - *El imperio de cartón: impacto de una multinacional papelera en Colombia* — describing in detail the scenario in Colombia, almost identical to that seen in the State of Portuguesa.

The invasion of the "latifundio" system

In 1986 the Company started acquiring land and planting it with eucalyptus (basically the *urophylla* and *grandis species*) and gmelina (*Gmelina arborea*). Presently it owns fifteen estates, with a total of some 27,000 hectares in the State of Portuguesa and another 7,000 in the States of Lara and Cojedes. At least half of these lands have been classified as agricultural priority lands. According to Venezuelan legislation, such lands should not have been planted with trees. On the one hand, because this is in violation of the State Land Planning System, by occupying lands that have agricultural potential, different from those that are explicitly designated for the plantation of trees. On the other hand, because the Venezuelan Constitution explicitly prohibits (in its article 105) latifundio (large landed estates) and this set of properties clearly fits into the definition of "latifundio." In spite of this, the company has managed to acquire all these estates and cover them with enormous eucalyptus, pine and gmelina plantations.

Generation of employment

The generation of employment by a company is usually one of the reasons for local communities to accept and value it. However, working conditions in the jobs generated by Smurfit in Portuguesa have been bad and accompanied by trade union repression. Additionally, after an initial stage that implied some job generation, a drastic reduction of staff took place and presently it is only a handful of people who have permanent work in each of the properties. It employs many women in its nurseries but there the working conditions are appalling, with long and exhausting work days, without any transport to and from their homes, without any social benefits, without suitable clothing and with exposure to chemical products affecting the skin. Various miscarriages and malformations are suspected to be due to these chemicals, use in cloning eucalyptus. Work is mostly of a temporary nature and job instability is the rule.

The seizure of "La Productora"

Independently from what the company understands to be "coming closer to the milieu, to achieve total integration with the community," what happened was all to the contrary. Already in 1997 the relation between Smurfit and the local peasant communities was at a critical level because of the company spraying weed-killer by plane and destroying 190 hectares of the peasants' crops and causing the intoxication of school children in the town of Tierra Buena. Suddenly the situation exploded. That year, Smurfit had acquired a large estate of 2,700 hectares ("La Productora"), which up to that time had been carrying out commercial agricultural production and cattle-raising. The peasants from two neighbouring communities (Morador and Tierra Buena) had been waiting for the allocation of land from this property in the framework of the Government's agrarian reform programme. Smurfit totally changed the situation, not only by planting trees on this land that the peasants needed for their crops, but also because it modified the relationship that the peasants had had with the previous owner, who allowed them free access to the property, including fishing, hunting and recreational activities. In that context, Smurfit fenced in the whole area with barbed wire fencing and hired guards to prevent people from entering its property.

On 14 July 1997, the peasants peaceably occupied “La Productora” with the aim of having a dialogue with the Government to get it to allocate them part of this land. As part of their strategy to prevent these agricultural lands from being planted with trees, the peasants damaged some 150 hectares recently planted with eucalyptus, driving over them with a tractor and a harrow.

In response, the Government sent the National Guard. Repression was brutal, and hundreds of men, women and children were brutally beaten, gassed, shot at, kicked and arrested. The stories of those who went through this experience are terrible. They talk of being peppered with small shot, teargas bombs made to explode in peoples’ faces, a young man shot at, with his intestines hanging out, thrown into the Guard’s pickup, with a soldier’s boot pressing on his neck and shouting at him that he was going to be killed, a 60 year-old man kicked by 6-8 young soldiers and who had a detached kidney as a result, pregnant women brutally beaten and kicked and a young woman raped.

Permanent harassment

Many of those who took part in occupying “La Productora” still suffer from the physical damage inflicted on them at that time and those suspected of having led the operation have their movements restricted and have to report to the authorities regularly. In spite of the overwhelming evidence of the torture undergone by the people (including photos and written testimonials), the responsible parties have not been condemned and live in impunity. On the contrary, repression continues in the area and terror is the basic tool to try to keep the people away from the company’s property. Specially trained dogs (and their keepers) have been brought from Colombia, machine guns are fired during the night, the area is patrolled by hooded guards on horseback, houses are searched without warrants, people are shot at in front of their own homes, others have been detained on the highway and they are beaten if they are found with a box of matches in their pockets (something considered by the company as synonymous to attempted arson).

Another measure adopted has been the dismissal of all those workers who took part, or are suspected of having taken part in the seizure.

But the company does not forgive. Even after the dismissals, they continue to harass the former workers with a mean vengeance: the company does not fill in the forms for the social security, and eventually when it does fill them in, they are incorrect so the formality never ends and the workers have still not been able to collect what is their right.

However, it is important to stress that the issue is not restricted to the “La Productora” property. In Chigüire, a village near another Smurfit property (El Toco) the National Guard confiscated and spilt the kerosene that the inhabitants use for domestic purposes, alleging that it was an arm to cause fires in the plantations. And the same goes on in the other properties.

Let us see another pearl in this necklace of complaints: Melvis Molina, President of the Morador Ecological Group was arrested in December 1998 (a few days after the visit of the author of this article to that State, where he was able to gather most of the information summarized here). The Ecological Group denounced that the judge’s decision was the result of pressure by the Smurfit company proxies and accused him of “responding with legal terrorism to the visit of Ricardo Carrere of the World Rainforest Movement, who will take up the ecological and social disaster caused by this company at international fora.” Simultaneously it is believed that this arrest is a vengeance against the Molina family because of their persistent criticism in the local press of the social and environmental impacts of the Smurfit Group’s plantations. Thanks to the active participation of the lawyer of the Land Committee (Comité de Tierras) Dr. Rafael Gonzalez, Melvis Molina was finally freed, after having been held for various days.

The art of making “friends”

It seems clear that this company has been very skilful at making enemies. However, it has also known how to make friends, in particular in powerful spheres. For some strange reason, the local police force and the National Guard, together with the Ministry of the Environment and even the governor seem to be their friends. It is said — people are bad and they murmur — that the National Guard lieutenant colonel who personally directed the operation to evict people from “La Productora” received a Toyota pickup as a reward for his efforts. It is

known that the officials of the National Guard assigned to defend the company's properties are given board and lodging at company expense. It is also surprising to see how easily the Ministry of the Environment grants permits to fell the forest, and to witness the blindness of the police who "do not see" the trucks circulating with tropical timber along the highways. It is said — again by those bad people — that the sons of the director of the Environment of Portuguesa work for the company. Regarding trade union issues, the matter was resolved in the classical nineteenth century style, dismissing those who tried to set up a union and inventing one with people who are addicted to the company.

Talking about the environment

"The Carton de Venezuela Group and its Associated Companies engage themselves to make environmental preservation a priority in their existing operations and also in their new investments (...) and their objective is to ensure that we live and work in an environmentally friendly world. ⁽²⁾ The company sponsors a daily radio programme (admittedly a very poor one), called "Let us talk about the environment." Well then, let us talk, but seriously, of what the company is doing to the environment.

Deforestation is part of the company's policy. In spite of having vast plantations, so far, its pulp mill has basically been fed with tropical timber, extracted from its own properties and from those of third parties. Although such an activity is illegal, the company has managed to "legalize" it with the help of some public officials. There is ample evidence that the company has carried out deforestation in many of its properties and one of the first complaints in this respect goes back to 1993, when considerable deforestation at the headwaters of the Quebrada de Tacamajaca. was observed. In the case of "La Productora", it obtained a permit from the Government to deforest 600 hectares of highly diverse tropical forest. In other properties, felling the forest has taken place illegally.

⁽²⁾ Smurfit Cartón de Venezuela, S.A., Forestry Division, Acarigua, Estado Portuguesa.

Furthermore, anyone can see trucks loaded with “fire wood” (a generic designation to avoid the control of species legally protected from felling), travelling along the highways at night towards the Mocartel pulp mill (belonging to Smurfit) in the State of Yaracuy. Simultaneously, the company has managed to “legalize” forest felling belonging to third parties through a simple mechanism: it sends emissaries to private farms where the existence of suitable forests has been identified, but where the owners cannot cut down the trees because it is impossible for them to obtain the corresponding permit. The emissary only needs the owner to agree to sell him the timber and the rest of the task is up to him, obtaining the permit from the Ministry of the Environment, felling, removing, loading and taking the timber away. Although the price paid to the owner is very low, it is to his advantage because on the one hand he obtains some money (which otherwise he would not have been able to obtain from the forest) and on the other because it enables him to increase — legally — the area assigned to crops or cattle-raising. For the company it is good business because it obtains the raw material it requires at such a low price that it is more advantageous than cutting down its own plantations, thus explaining the mystery of the predominance of “fire wood” trucks.

The local inhabitants have witnessed important impacts on water a few months after the establishment of the Smurfit plantations. As in the rest of the world, these impacts are the result of high water consumption by fast-growing plantations. But in this case is added the deliberate destruction of water-courses with bulldozers, which level the land to be able to plant more trees (the companies policy seems to be that each centimetre of land has to be planted.) and the destruction of gallery forests that protect and regulate watersheds. The result (obviously denied by the “experts” that the company periodically brings in to demonstrate what cannot be demonstrated) is that the streams are drying up and the volume of water in the wells is constantly decreasing.

Local animals, fish and plants, which provided much of the food resources to the local people are also rapidly disappearing, while their natural habitats are being substituted by green tree deserts and while more forests are being felled to feed the pulp mill. “I have never seen a bird perched on one of those trees,” say some people. They add that

previously, rabbits were abundant and now they only find them far away from the plantations; before they used to hunt armadillos, deer and eat the fish from the streams, but now, because of the plantations, they have almost disappeared.

An unsustainable model

All the above leads to a single conclusion: the “development” model being implemented by Smurfit in Portuguesa is unsustainable, both from a social and environmental standpoint. In spite of its policy of harassment and repression, the company does not seem to have been very successful in bending people’s determination to oppose their activities and a large question mark appears regarding how long its plantations can survive (even protected by barbed wire, dogs and armed men), while simultaneously being surrounded by hundreds of people who hate those trees and the company that they represent. If monoculture tree plantations are unsustainable in general, these appear to be more unsustainable than ever. (By: Ricardo Carrere, *Revista del Sur* No.87/88, January/February 1999).

Venezuela: Report on Smurfit Plantations

For several years now, the peasants of Morador and Tierra Buena have been struggling to recover the agricultural land occupied by the pine, eucalyptus and gmelina plantations belonging to the Smurfit, Carton de Venezuela, C.A. Company at the “La Productora” Hacienda and other properties in the neighbourhood between Ospino and Guanare, State of Portuguesa, in Venezuela. The most emblematic action for these peasants was the peaceable occupation of the “La Productora” Hacienda (close on 2,000 hectares) on 14 July 1997, in an endeavour to attract the attention of the government authorities and establish a dialogue to enable the communities to have part of these lands assigned to them so that they may cultivate them. As a form of pressure and to avoid pine, eucalyptus and gmelina being planted on those agricultural lands, the peasants damaged hundreds of recently planted hectares. The response of the Venezuelan Government at that time — President Rafael Caldera and Governor of the State of Portuguesa, Ivan Colmenares (candidate again to the Government of Portuguesa at the 31/10/04 elections) — did not take

long. The Governor sent the National Guard. Repression was brutal! Hundreds of men, women and children were beaten, kicked and arrested. Today they still suffer from the consequences of this aggression.

The struggle in the present political context

As from the change in government in 1998, we find ourselves with a new political scenario, a constitutive process that resulted in 1999 in a new Constitution. This Constitution of the Bolivarian Republic of Venezuela, under Article 306 provides that "The State shall promote conditions for comprehensive rural development, with the aim of generating employment and guaranteeing the peasant population an appropriate level of welfare and their incorporation into national development. Equally, it shall foster agricultural activities and best use of land through the provision of major works, inputs, credits, training services and technical assistance." Similarly, the new Land and Agrarian Development Law establishes, for example in its Article 8, that the peasant sector shall be guaranteed incorporation into the productive process and for such purpose the structuring of funds through acquisition of land is promoted. In Article 12 it recognizes the right to allocate lands to any person who is fit for agrarian work. Furthermore, the food security of the country is a priority expressed by the present Government and therefore, agricultural lands are also a priority.

Many of those who participated and supported the peasant struggle in 1997 are now occupying political positions with the Government of President Hugo Chavez. However, the peasants of Morador and Tierra Buena have not yet seen their aspirations fulfilled.

The peasants tell how they have been given support by the Mayor's Office in the Municipality of Ospino to improve, among other things, the organization of the Peasant Movement and to generate proposals and actions that will facilitate achievement of the goals that they have set themselves. In 2002, the peasants of Tierra Buena, Morador, Río Caro, El Chigüire, Las Mesitas, El Mangal and la Parreña, (Portuguesa), organized themselves in the "Movimiento de Campesinos Sin Tierra 14 de julio" (14 July Movement of Landless Peasants). On 4 July 2004 the peasants of Morador and Tierra Buena agreed to set up

a Civil Association Organization under the name of “Comité de Tierras 14 de Julio” (14 July Land Committee).

In July 2002, the Movimiento de Campesinos Sin Tierra 14 de Julio, prepared a document on “General proposals for the acquisition and development of the “La Productora” property”. In this document, the Peasant Movement points out that the agriculture they wish to practice (...) “will be governed by criteria of conservation and non-contamination of human beings and their environment, thanks to the use of some low cost inputs that are easily applicable and will obtain ecologically high quality products.” They stress “the need for a good organisation of work” and therefore, have thought that cooperative associations would be a very important option. The above mentioned document concludes with an Action Plan and a Scheme of General Strategies, that includes, among others, the need to continue with a Study for expropriation or negotiation of “La Productora,” in addition to a project for the selection of items adapted to the agro-ecology of the location, the training of technicians and farmers, the need to obtain credit, support to marketing and in the establishment of the necessary infrastructure.

In spite of the fact that the peasants stated that they find themselves to be in a favourable context and in spite of the major efforts at organization that they have made, the peasants have NOT seen their expectations fulfilled.

Smurfit company strategies

Smurfit maintains the power provided by the lucrative activity it carries out in the zone and the vast tracts of land it possesses. Some peasants whose lands are surrounded by the Smurfit plantations have to ask the Company for permission to access their small plots of land to grow their crops. However, the peasants perceive that the company has lost power with the arrival of the new local government and the new Land Law. The peasants allege that for these reasons and due to the constant complaints they make to the Company and the continuous fires in the plantations, Smurfit has seen itself obliged to establish a dialogue with the peasants. From these conversations the Company has made known that it is willing to sell the “La Productora” property — from the 27,000 ha of their property in the State — to solve the

conflict. However the company maintains and intensifies its national campaign as a trans-national company dedicated to the plantation business.

- Response by the Communities to the Smurfit proposal

The peasants of Morador and Tierra Buena, put forward that they cannot carry out on their own this delicate negotiation with the Smurfit Company. They need a high-level Government negotiator with experience in order to reach an agreement with Smurfit. The peasants are not in agreement that the purchase should go ahead without first clearly determining: 1) How many hectares of the “La Productora” property are private and how many belong to the National Agrarian Institute (IAN), now the National Land Institute (Instituto Nacional de Tierras - INTI) and are therefore property of the Venezuelan State? 2) What and how many are the environmental and social liabilities that Smurfit’s activity has generated in the zone? According to the peasants, these should be deducted from the price Smurfit wants for the property.

At all events, the peasants do not want to be accomplices in a negotiation in which the Smurfit Company will benefit from the Nation’s money and not pay the damages that have taken place over all these years. They resolved to be vigilant in the event that the negotiations progress. They even told us that they are willing to buy the lands of the Venezuelan State, through credits or other modalities. They told us that they are even willing to purchase the land of the Venezuelan State, through credits or any other modality that the State considers pertinent, as they are sure that the profit obtained from cultivating these agricultural lands will be sufficient to cover any commitments taken on.

Environmental and social impacts seen during the visit

In order to verify the impacts being caused by Smurfit, Amigransa requested the Government of the State of Portuguesa to carry out an official visit to “La Productora.” On 8 September 2004, we made the trip, accompanied by a Natural Resources Engineer designated officially by the Environmental Office of the State Government to accompany us in order to support the peasant’s complaints. It was

with surprise that we found that the guard at the door of the plantation refused entry to this Commission, presided by an official representing the Environmental Office (that is to say, not even the Government of the State of Portuguesa can make an inspection of the plantations at “La Productora” without the permission and authorization of the heads of Smurfit, and without an appointment.

Although we were unable to have access to the plantations, from the main Guard Box we were able to observe some neighbouring areas which we visited — accompanied by peasant guides from the sector — that:

1. The company does not respect the zone protecting the rivers. The plantations reach the right banks of the Morador River, and the gallery forest that should have been protecting the zone has been eliminated. The gallery forest, with its deep roots resists erosion on the river banks more easily, not so the plantations with more superficial roots that allow a process of soil loss to take place with the consequent decrease in agricultural lands and great sediment input to the river.

2. Spraying was being done on newly planted trees located very near the channels that flow into the Manires stream. These waters are used by the Terra Buena Community for consumption. The peasants are worried by the contamination of this water and of the fish that they eat.

Physical and moral damages

The settlements of Tierra Buena and Morador are still resisting the physical and psychological damage caused during the open fight against the establishment of Smurfit in the lands that they affirm have belonged to their communities for over 50 years and that are classified as the best land for agriculture — type A1 and A2 — in the State of Portuguesa, Venezuela.

It was very moving to see during our visit to Morador and Tierra Buena, how 7 years after the violent events at the Smurfit property (La Productora) many teenagers who were children in 1997 could recount exactly how their parents, grandparents and neighbours and even

themselves, were attacked and how this anguishing situation that took place years ago is still reflected in their families. These events form part of the most important history experienced by these peasants in the locality: it is the story most recounted to small children and visitors.

The peasants continue to be part of the “problem” for the company, which maintains its system of surveillance over the settlement dwellers. They are watched as suspects on being in the neighbourhood of “their rivers” that are adjacent to the lands purchased by Smurfit, on going for walks by the fenced in lands or when they go to fish or simply walk in the neighbourhood of that private property.

This situation, in our opinion, creates a feeling in the peasants’ souls of exclusion, of being foreigners in their own land of origin, of birth, where their grandparents grew up or came to from other neighbouring States over 40 years ago. .

Situation of employment

The inhabitants of Morador and Tierra Buena, for obvious reasons, in general do NOT work in the few jobs offered by Smurfit. However we were able to talk to some young people from other nearby settlements and they told us that they were “temporarily hired” and that the salaries are low, that they do not have any social security and that they are paid for the days work — if it rains they are not paid. They only work during the time for felling or planting through outsourcing and the rest of the year they receive no benefit.

The communities’ resistance to the plantations

The change in economic activity that has taken place in the area on substituting agricultural production and cattle-raising by forestry production (plantations) has not been accepted in the Communities. This is what the inhabitants of Morador and Tierra Buena say. Not only because Smurfit’s activity causes environmental damage and does not provide economic benefits to the community, but also because it seriously affects the zone’s food security. “Those trees can’t be eaten and not even the animals benefit from the plantations.” Furthermore, it is a foreign model that does not harmonize with the

roots and customs of these inhabitants, who used to admire the savannahs, the bands of cattle, the crops and plots of land, wildlife, their native forests, the trees they knew and under whose shade they used to rest. This landscape was a source of inspiration for their folk songs. For all these reasons they cannot and never will, accept this uniform army of pine, eucalyptus and gmelina that does not awaken their creativity and on the contrary, causes rage, to the point that "They will NOT rest until these plantations have disappeared from their sight." (By: AMIGRANSA-Sociedad Amigos en Defensa de la Gran Sabana, 2004).

REFERENCES

Biotechnology: The dangerous paradigm of modern industrial forestry

- Article based on information from: Sampson, Viola and Lohmann, Larry, "Genetic Dialectic: The Biological Politics of Genetically Modified Trees". The Cornerhouse, Briefings 21, 2000. The full version of this study is available at:
<http://www.wrm.org.uy/subjects/trees.html>

The Paper Tread: From Need to Greed

- Article based on information from: "Guide to Tree-Free, Recycled and Certified Papers",
<http://www.watershedmedia.org/paper/paper-aconcise.html>
- "Towards Zero-Effluent Pulp and Paper Production: The Pivotal Role of Totally Chlorine Free Bleaching", [http://archive.greenpeace.org/toxics/reports/tcf/tcf.html#BIOLOGICAL IMPACTS](http://archive.greenpeace.org/toxics/reports/tcf/tcf.html#BIOLOGICAL_IMPACTS)
- "Rethinking Paper Consumption", Nick Robins and Sarah Roberts, International Institute for Environment and Development (IIED),
<http://www.iied.org/smg/pubs/rethink3.html>
- "Paper Cuts: Recovering the Paper Landscape", Janet N. Abramovitz and Ashley T. Mattoon, World Watch Paper 149, December 1999
- "Trends in World Bleached Chemical Pulp Production: 1990-2002",
http://www.aet.org/reports/market/2002_trends.pdf
- "La sociedad de consumo", José Santamaría, World Watch,
<http://www.nodo50.org/worldwatch>,
e-mail: worldwatch@nodo50.org, sent by the author
- "The Pulp Pollution Primer", Delores Broten and Jay Ritchlin, Reach For Unbleached! Foundation, <http://www.rfu.org/PulpPrimer.pdf>
- "Paper Consumption Statistics", <http://www.njheps.org/drewpp.ppt>

The production of pulp

- Article based on information provided by: the consultant, Rune Leithe Eriksen, e-mail: rune@rle.se, Chemical Engineer Camilo Barreiro, e-mail: camilobarreiro@yahoo.com and information from: "Industria del papel y de la pasta de papel: sectores basados en recursos biológicos", Enciclopedia de Salud y Seguridad en el Trabajo, <http://www.mtas.es/insht/EncOIT/pdf/tomo3/72.pdf>

- “Compuestos Organoclorados como Contaminantes Persistentes: el caso de las dioxinas y los bifenilos policlorados”, <http://es.geocities.com/pirineosjuan/organoclorados.html>
- “The Case Against Chlorine Dioxide”, Miranda Holmes, Georgia Strait Alliance and Delores Broten, Reach for Unbleached, <http://www.bcen.bc.ca/bcerart/Vol7/thecasea.htm> , “Missing Monitoring What should be monitored but isn't”, Reach for Unbleached!, <http://www.rfu.org/MonMiss.htm>
- “Towards a Sustainable Paper Cycle”, prepared for the World Business Council for Sustainable Development by the International Institute for Environment and Development (IIED), 1996
- “Causes for Concern: Chemicals and Wildlife”; prepared for WWF by Valerie Brown, M.S., December 2003, <http://www.wwf.org.uk/filelibrary/pdf/causeforconcern01.pdf>
- “Trends in World Bleached Chemical Pulp Production: 1990-2002”, http://aet.org/reports/market/aet_trends_2002.html

Pulp Mills and Tree Plantations: A Duo in Power

- Excerpted and adapted from: “Pulp, Paper and Power: How an Industry Reshapes its Social Environment”, Larry Lohmann, 1995, The Corner House, <http://www.thecornerhouse.org.uk/document/pulp.html>
- Mercado mundial de la celulosa, http://www.papelnet.cl/celulosa/mercado_mundial.htm
- “Timber Market Trends: Global and Southern Perspectives”, Bob Abt and Fred Cabbage, <http://natural-resources.ncsu.edu/wps/wp/fps/ABTCUBBA.PDF>

How the Pulp Industry Tries to Manage Resistance

- By: Larry Lohmann, e-mail: larrylohmann@gn.apc.org , [from “Freedom to Plant: Indonesia and Thailand in a Globalizing Pulp and Paper Industry in Parnwell, Michael J. G. and Bryant, Raymond, eds., Environmental Change in South-East Asia: Rendering the Human Impact Sustainable, Routledge, London, 1996.]

Schoolbooks, Shops and Subsidies: Renegotiating Paper Consumption

- By: Larry Lohmann, e-mail: larrylohmann@gn.apc.org (excerpted from a talk on consumption given in 1998 at a meeting of People and Planet, the University of Warwick, UK)

The mythical correlation between literacy and paper consumption

- Article based on information from: World Resources Institute, Paper and paperboard consumption per capita, FAO data 2000, <http://earthtrends.wri.org/text/ENG/variables/573.htm>; UNDP, Human Development Index, Adult literacy rate, 2000, http://hdr.undp.org/reports/global/2002/en/indicator/indicator.cfm?File=indic_277_1_1.html

Genetically engineered trees: The pulp industry's dangerous "solution"

By: Chris Lang, e-mail: chrislang@t-online.de

AFRICA

Kenya: Pollution and deforestation caused by Pan African Paper Mills

- Article based on information from: Eusebius Mukhwana, 27/3/2001, e-mail: sacred@africaonline.co.ke
- "Death mill". A case study of Pan African paper Mills (EA) Limited, Webuye, Kenya by Oduor Ong'wen, May 1994.

Kenya: Pan African Paper Mills spread sickness

- Article based on information from: "Kenya Is Exploring Alternative Sources of Energy", Ooko Daniel, Hana, <http://www.hananews.org/WholeArticle.asp?artId=1747>
- "Ministry to Probe Lake Pollution", The East African Standard, <http://allafrica.com/stories/200405260745.html>
- "Wood and Wood Products and Pulp and Paper Products Industries", Ministry of Tourism, Trade and Industry, Republic of Kenya, http://www.tradeandindustry.go.ke/documents/di_sector_wood_paper.pdf
- "Exporting Africa: technology, trade and industrialization in Sub-Saharan Africa", The United Nations University, INTECH, <http://www.unu.edu/unupress/unupbooks/uu34ee/uu34ee0s.htm>
- "Kenya's legal regime is mouthful but authorities won't stop pollution", Alphayo Otieno, <http://www.google.com.uy/search?q=cache:rd4l6B3GGXIJ:www.eastandard.net/issueissue>

01092003013.htm+Kenya%E2%80%99s+legal+regime+is+
mouthful+but+authorities+won%E2%80%99t+stop+pollution&hl=es
- Environmental Defense,
<http://www.environmentaldefense.org/article.cfm?ContentID=1577&Page=2&subnav=&project=&colorback=ffffff>

South Africa: Tree plantations render corporation profits but fire, damages and death for the people

- Article based on information from: Sappi Shows Strong Growth in Region's Fertile Ground, John Fraser,
<http://allafrica.com/stories/200301030360.html>
- MBendi Information for Africa, <http://www.mbendi.co.za/cosp.htm>
- Forests in South Africa Under Threat, Timber Watch, http://www.timberwatch.org.za/forests_in_south_africa_under_threat.htm
- Forest Fires in South Africa, 12 July 2002, http://www.fire.uni-freiburg.de/current/archive/za/2002/07/za_07122002.htm

South Africa: Pulping people and places

- By: Wally Menne, Timberwatch Coalition member,
e-mail: plantnet@iafrica.com

Swaziland: Paper mill pollutes river and people

- Article based on information from: "Swaziland: Environment authority shows its teeth", IRIN,
<http://irinnews.org/report.asp?ReportID=33726> ; Swaziland Business Year Book 2003,
<http://www.swazibusiness.com/sbyb2003/index.php?f=09>

Swaziland: Timber Plantations Impacting on People and Nature

- By: Wally Menne, e-mail: plantnet@iafrica.com _ Article based on research and fieldwork carried out from November 2003 to April 2004

Swaziland: The impact of 50 years of industrial forestry

- By: Chris Lang, e-mail: chrislang@t-online.de

ASIA

UPM-Kymmene and APRIL: The Chinese-Indonesian connection

- Article based on information from: "UPM-Kymmene will become a sole owner of Changshu fine paper mill in China" UPM-Kymmene Press Release, 23/8/2000, sent by Finnish Nature League, 28/8/2000, e-mail: annina@iki.fi

The international pulp and paper industry in the Mekong Region

- The report "The Pulp Invasion: The international pulp and paper industry in the Mekong Region" is available on WRM's web site at: <http://www.wrm.org.uy/countries/Asia/mekong.html> . Individual country reports (Thailand, Laos, Cambodia and Vietnam) are available under the relevant country sections on the web-site. By: Chris Lang, e-mail: chrislang@t-online.de

China: Following the trite pattern of monoculture tree plantations

- Article based on information from: "China Saw Less Farmland But More Forest in 2002", April 5, 2003, Community Forestry E-News No. 2003.05, April 17, 2003, RECOFTC, e-mail: info@recoftc.org
- "The status quo and trend of forestry development in China", <http://www.fao.org/DOCREP/W7707E/w7707e04.htm>
- "Improved Eucalyptus may Boost China's Paper Industry", January 14, 2003, http://english.peopledaily.com.cn/200301/14/eng20030114_110094.shtml
- Stora Enso Web page, <http://search.storaenso.com/2002/default.asp?openpage=environment/plantations.asp>
- "Development of the Fast-growing and High-yielding Timber Bases", <http://www.forestry.ac.cn/zglyjs/3y.htm>
- "Promoting company-communities deals letting the private sector take the lead", http://www.iied.org/psf/pdfdocs/publicgood/PSF_China_Sec5.pdf

China: Restructuring the paper sector to suit a globalised industry

- By: Chris Lang, e-mail: chrislang@t-online.de

India: Local villagers rallied against polluter paper mill

- <http://www.narmada.org/related.issues/kali/documents/cm.complaint.20030715.html>

Indonesia: The pulp and paper sector's unsustainable growth

- Article based on information from: "Profits on Paper: Fiber, Finance, and Debt in Indonesia's Pulp and Paper Industry by Christopher Barr, CIFOR, November 2000. E-mail: C.Barr@cgiar.org

Indonesia: Paper production threatens communities and forests in Sumatra

- Article based on information from: *The Guardian*
<http://www.guardian.co.uk/paper/story/0,10581,512597,00.html>
- <http://www.asiapulp.com>

Indonesia: Pulp and paper company APRIL and forest destruction

- Article based on information from: "Paper tiger, hidden dragons 2: APRIL fools", by Ed Matthew and Jan Willem van Gelder, Friends of the Earth-UK, February 2002,
http://www.foe.co.uk/resource/reports/april_fools.pdf

Indonesia: Report on paper industry's abuses on human rights

- Excerpts from "Indonesia: Paper Industry Threatens Human Rights" press release, Human Rights Watch, sent by Liz Weiss, e-mail: WEISSE@HRW.ORG. Full release available at:
<http://www.hrw.org/press/2003/01/indo010703.htm>, and full report at: <http://www.hrw.org/reports/2003/indon0103/>

Indonesia: Reopening of Indorayon pulp mill encounters strong local opposition

- Article based on information from: "UEM against the reopening of pulp mill in Indonesia. Indorayon puts human life and environment at risk", Press Release, January 30, 2003, sent by Watch Indonesia!, e-mail: watchindonesia@snafu.de
- "Thousands protest reopening of Indorayon pulp plant", Down to Earth, Newsletter No. 56, February 2003, e-mail: dte@gn.apc.org,
<http://dte.gn.apc.org>

Indonesia: The Pulp and Paper Industry, A Growing Disaster

- By: Rivani Noor, Rully Syuamanda, Rudy Lumuru & Longgena Ginting, Document Presented at the Forest Movement Europe-Taiga Rescue Network Paper Strategy Meeting, Helsinki-Finland 22-25 April 2004.

Japan: Paper industry involved in genetic engineering of eucalyptus

- Article based on information from: "Science Frontier: Factors Converge to Spur Development Of GM Eucalyptus", The Nihon Keizai Shimbun Friday morning edition, July 27, 2001, sent by Yuri Onodera, e-mail: yurio@iea.att.ne.jp, energy@foejapan.org; and Yoichi Kuroda, e-mail: ykuroda@jca.apc.org; Oji Paper Co. Website: <http://www.ojipaper.co.jp/english/index.html>, sent by Yuriko Hayami, e-mail: eureka@jca.apc.org; "Oji Paper boosts offshore plants", *The Nation Saturday*, June 9, 2001.

Laos: EcoSecurities helps ADB provide carbon subsidies to the pulp industry

- By: Chris Lang, e-mail: chrislang@t-online.de

Malaysia: Campaign against plantation and pulp mill project in Sabah

- Article based on information from: "International alert to save Sabah Rainforests from Pulp and Paper project in Kalabakan" by Friends of the Earth Malaysia - Sahabat Alam Malaysia (SAM), October 2000. e-mail: meenaco@pd.jaring.my

Thailand: Massive eucalyptus plantations planned

- By: Chris Lang, e-mail: chrislang@t-online.de

Thailand: Eucalyptus, encroachment, deforestation and pollution linked to pulp and paper company

- By: Chris Lang, e-mail: chrislang@t-online.de

Thailand: Assassinated Village Conservationist

- Article based on information from: *Krungthep Thurakit* newspaper, 22 July 2003; *Khao Sot* newspaper, 17 July 2003; Manager Online, 17 July 2003.

- Account to the order of: Mrs. Mayuree Srisongkram for Utain Srisongkram/Bank: Krung Thai Bank/Branch: Ubonrat Branch, Khon Kaen province/Savings Account Number: 4341298616

Thailand: A pulp mill with a long history

- Article extracted from "Commercial Tree Plantations in Thailand: Flawed Science, Dubious Politics and Vested Interests", by Pornpana Kuaycharoen and Noel Rajesh

Vietnam: Whose trees? Vietnamese five million hectare "reforestation" programme

- By: Chris Lang, e-mail: chrislang@t-online.de For more detailed analysis on plantations in Vietnam, see "Globalization of the pulp and paper industry" by the same author at <http://www.wrm.org.uy/english/plantations/material/Vietnam/vietindex.htm>

Vietnam: Massive plantations ahead

- By: Chris Lang, e-mail: chrislang@t-online.de

Vietnam: Construction of Kontum pulp and paper mill suspended

- By: Chris Lang, e-mail: chrislang@t-online.de

Vietnam: A divided community around the Tan Mai Paper Mill

- By: Dara O'Rourke, Watershed 9 (3) March-June 2004. Extracted from "Community-Driven Regulation: Balancing Development and the Environment in Vietnam", *The MIT Press*, 2004.

SOUTH AMERICA

Argentina: Forest loss and plantations in two provinces

- Article based on information obtained from: Elsa Ortalda, 24/6/2000, e-mail: elgozante@punillanet.com.ar
- Centro Investigaciones Ecológicas Subtropicales, 2/8/2000; e-mail: cies@fnn.net

Brazil: Political confrontation in Espirito Santo over eucalyptus plantations

- Article based on information from: Ubervalter Coimbra, "Eucalipto: adiamento do veto pode ampliar debate sobre lei", *Século Diário*, 3/7/2001; Uchôa de Mendonça, "De volta ao passado", *Jornal A GAZETA*, 22/6/2001; "Seminário sobre eucalipto em agosto", *Jornal A GAZETA*, 5/7/2001; "Ignácio autoriza plantio de eucalipto", *Jornal A GAZETA*, 3/7/2001; CIMI-ES, e-mail: cimies@terra.com.br

Brazil: Stora Enso and Aracruz plan the world's biggest pulp mill

- By: Chris Lang, e-mail: chrislang@t-online.de

Brazil: NGOs request wide debate on the expansion of tree plantations

- Article and letter published by the Socio-Environmental Institute, 20/03/2003 <http://www.socioambiental.org/website/noticias/noticia.asp?File=Brasil\2003-03-20-18-01.html>

Brazil: Social and environmental disaster caused by paper mill

- Article based on information from: "Fish, animals and people at risk after caustic soda leak", 04 Apr 2003, Hannah Hoag, Nature.com, http://www.gristmagazine.com/forward.pl?forward_id=975
- "Brazil fights spread of toxic spill from factory", Andrei Khalip, Boston Globe, Reuters, 03 Apr 2003, http://www.gristmagazine.com/forward.pl?forward_id=976
- "Decretada prisão dos donos da empresa acusada de vazamento de produtos tóxicos em MG", [ambientebrasil.com.br](http://www.ambientebrasil.com.br), 03/04/2003, <http://www.ambientebrasil.com.br/noticias/index.php3?action=1>
- "Desastre ambiental no Brasil: poluição do Rio Pomba, EMS-SEMA, http://www.ems-sema.org/portugues/act/03_04_rio.pomba.html
- Información de "Industria Cataguazes de Papel", <http://www.cataguazesdepapel.com.br>

Brazil: The Alert Against the Green Desert Network demands a change in the forestry model

- By: Rede Alerta Contra o Deserto Verde,
e-mail: winnie.fase@terra.com.br

Brazil: Highway is blocked against expansion of eucalyptus plantations

- Article based on information from: "Índios, quilombolas, sem terra e pequenos produtores param carretas da Aracruz e Bahia Sul Celulose em protesto contra a política do Governo Federal de apoio à expansão do plantio de eucalipto", Vitória, 8 March 2004, statement by MPA, MST, FASE/ES; "Manifestação pára carretas da Aracruz Celulose na BR-101" and "Polícia Rodoviária tenta liberar carretas da Aracruz Celulose na BR-101", Ubervalter Coimbra e Apoena, seculodiario.com - 08/03/2004, material sent by FASE, e-mail: geise.fase@terra.com.br

Brazil: A categorical demonstration against the green desert and in favour of life

- The complete text of the letter can be found at:
<http://www.wrm.org.uy/countries/Brazil/claims.html> . The complete text "Statement against the green desert and in favour of life" is available at: <http://www.wrm.org.uy/countries/Brazil/manifesto.html>

Brazil: More pulp for export means more exclusion

- By: Winfried Overbeek, FASE/ES, e-mail: winnie.fase@terra.com.br

Brazil: The "development" brought by a pulp mill

- By: Raquel Núñez, World Rainforest Movement (WRM), e-mail: raquelnu@wrm.org.uy

Chile: Wine production threatened by pulp mill project

- By: Flavia Liberona, Red Nacional de Acción Ecológica (RENACE), 10/11/2000, e-mail: alerce.renace@rdc.cl

Chile: Tree plantations and pulp production generate poverty and destitution

- Article based on information from: "Evaluación de los Impactos de la producción de celulosa", Publicaciones TERRAM por Consuelo

Espinosa, e-mail: cespinosa@terram.cl

We recommend reading the complete version, available in Spanish on our web site at the following address:

<http://www.wrm.org.uy/countries/Chile.html>

Chile: There's something stinking in the South

- By: Lucio Cuenca Berger, National Coordinator of OLCA (Observatorio Latinoamericano de Conflictos Ambientales), e-mail: l.cuenca@olca.cl

Chile: Contamination from a pulp mill causes death in the wetlands

- Article based on information from: "Desastre Ecológico en el Río Cruces: Crónica de una Muerte Anunciada", distributed by RedManglar Internacional, e-mail: redmanglar@redmanglar.org, <http://www.redmanglar.org/redmanglar.php?cat=GestionAmbienta13#cisnes>
- "Celulosa Arauco no quiere someter ducto a evaluación de impacto ambiental", Carlos González Isla; "¡Vida a los cisnes!", Angara Kuns P., material sent by Lucio Cuenca, e-mail: l.cuenca@olca.cl, Observatorio Latinoamericano de Conflictos Ambientales, <http://www.olca.cl>

Colombia: The unsustainable model of Smurfit

- Article based on information from Carrere, R. "Report on a visit to regions in Colombia with Smurfit plantations, 31/10/03 - 7/11/03" (internal report), FSC web page: <http://www.fscoax.org/html/5-1-1.html>
- Broderick, J. "El imperio de cartón: impacto de una multinacional papelera en Colombia", Bogotá, Planeta, 1998
- Carrere, R. "Smurfit Cartón de Venezuela: las plantaciones de la discordia" <http://www.revistadelsur.org.uy/revista.087-088/WRM.html>

Uruguay: Will IDB-funded private port include a pulp mill?

- Article based on information from: Grupo MOVITDES, Julia Cóccharo, e-mail: movitdes@internet.com.uy ; <http://www.iadb.org/exr/doc98/pro/bur0142.pdf>

- *El Observador*, <http://www.observa.com.uy/elobservador/Ed010704/ECO/N00200.html>
- <http://www.cita.es/agua/prensa.htm>
- http://www.mercado.com.ar/mercado/vercanal_nota.asp?id=152605

Uruguay-Argentina: Joint struggle against a pulp-mill

- Further information (in Spanish) is available at:
<http://www.wrm.org.uy/guayubira/mbopicua/index.html>

Uruguay: Either with the people or with pulp mills and tree plantations

- Article based on information from: “Cronología de la lucha desarrollada por diversas organizaciones sociales contra la instalación de la planta de celulosa en Fray Bentos”, Dr. Oscar Galli, <http://www.chasque.net/guayubira/mbopicua/crono.rtf>
- “¿Qué le deja la forestación a la gente?”, Grupo Guayubira, <http://www.chasque.net/guayubira/plantaciones/trabajo.html>
- “El papel del Sur. Plantaciones forestales en la estrategia papelera internacional”, Ricardo Carrere and Larry Lohmann, 1996.

Uruguay: To continue celebrating without pulp mills

- By: Raquel Núñez, World Rainforest Movement (WRM),
e-mail: raquelnu@wrm.org.uy
The complete text of the letter and the list of signatures and adhesions can be viewed at the Grupo Guayubira’s website:
<http://www.chasque.net/guayubira/celulosa/carta.html>

Venezuela: Smurfit Carton, plantations in discord

- http://www.redtercermundo.org.uy/revista_del_sur/texto_completo.php?id=859

OCEANIA

Aotearoa/New Zealand: Carter Holt Harvey the worst transnational corporation

- Article based on information from: Aziz Choudry sent by Brad Hash, Action for Social and Ecological Justice, e-mail: gaaget@gaaget.org, <http://www.gaaget.org>
The full report can be read at: <http://canterbury.cyberplace.co.nz/community/CAFCA/publications/Roger/Roger2001.pdf>

