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THE FOCUS OF THIS ISSUE: INTERNATIONAL DAY AGAINST TREE MONOCULTURES

The silent army of tree monocultures continues its relentless march over the territories of southern countries. Along its way it depletes water resources, impoverishes soils, expels communities, destroys plants and animals. As in previous years, this new September 21st -International Day against Tree Monocultures- is an opportunity for getting together and voicing our concerns, for carrying out actions, organizing solidarity and for building resistance to confront the green invading army.

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OUR VIEWPOINT

International Day Against Tree Monocultures

As in previous years, this September 21 will be observed around the world as the International Day Against Tree Monocultures. The day is aimed at raising awareness and strengthening opposition to the expansion of these “green deserts” of trees by highlighting the impacts of this production model on the millions of people affected by them.

The specific tree species chosen for these monoculture plantations varies, depending on the objectives of the companies that promote and establish them. Pine and eucalyptus plantations are aimed at supplying raw material for the pulp and paper industry; teak, pine and gmelina are grown for the timber industry; oil palm plantations feed the agrofuel industry; rubber tree plantations are geared towards supplying the automotive industry; and

various species (especially eucalyptus and pine) are used for plantations marketed as carbon "sinks" in the carbon trade business.

The social and environmental impacts of monoculture tree plantations are many and pose serious threats to the soils, water, flora and fauna. But the most dramatic impact of these plantations stems from their occupation of the territories of indigenous, traditional and peasant farming communities. Stripping these communities of their ancestral lands means stripping them of the vital resources and means of survival these lands formerly provided them with.

The plantation companies' occupation of these territories is in many ways similar to a military invasion. As in the case of conventional invasions, the company owners and national government leaders responsible for the invasion do not carry it out themselves. The invasion begins with the arrival of company emissaries, who promise peace, jobs, wealth and development. They are followed by government officials, announcing that an agreement has been signed with the company that will benefit the local population enormously, and calling for their cooperation.

Once this stage is complete, the actual invasion begins. The first step is the destruction of local vegetation through the use of heavy machinery and toxic agrochemicals. And then, finally, the invading army arrives: endless columns of trees planted in rows that advance relentlessly across the local landscape.

These invasions sometimes come up against initial resistance. But even when they don't, as time passes, and all the promises are eventually shown to be lies, the resulting impacts make resistance almost inevitable.

Whether the resistance comes before or after the invasion, once it emerges, the invaders adopt the classic strategy of "divide and conquer", pitting community members against one another. If this doesn't work, they move on to the next step: repression, whether directly through their own security guards, or with the support of the repressive state apparatus (the police, the courts, the army), which is quickly set in motion to come to the aid the government's ally.

In a great many cases, the result is the violation of a wide array of human rights, which in the most serious cases can mean imprisonment, torture, and even murder.

Essentially, the establishment of these large-scale monoculture tree plantations amounts to a war on the peoples and on nature. The mighty green army invades, destroys and cracks down on local populations, whose only "crime" is defending what is rightfully theirs from the invader.

That is why, this September 21, we want to pay tribute to all the peoples who

are struggling to defend their territories, and launch a call to step up the efforts to support them in the just defence of their rights.

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TREE MONOCULTURES IN THE SOUTH

THE PLUNDER OF AFRICA CONTINUES

The history of the last 500 years on the African continent is a history of the plunder of its resources and the violent exploitation of its peoples by foreign powers (particularly European) who accumulated wealth at the cost of the suffering (and death) of millions of Africans and the destruction of their resources.

The riches discovered by the first European navigators to reach the coasts of Africa spurred the various European powers of the day (Portugal, Spain, England, France, Germany, Belgium) to invade the continent and subjugate its peoples through armed force, eventually perpetrating the ultimate theft of claiming the right of ownership over these lands, and even over the people living there, who were traded as slaves.

The modern-day borders of most of the countries of Africa are the result of struggles between those European powers and have nothing to do with the territories of the native cultures who originally populated the continent, who were torn apart and lumped together according to the interests and possibilities of the colonial powers. The colonies of the German invaders were themselves swallowed up by the powers that defeated them in the two great wars unleashed to divvy up control of the world.

Among the many ways the invaders found to appropriate the continent's resources, one of the most typical was the establishment of large plantations (of sugar cane, cacao, peanuts, tobacco, oil palm and rubber trees) initially based on slave labour and later on semi-slavery.

Large-scale monoculture tree plantations are simply the continuation of the plantation model that was established during colonization, continued through post-independence neo-colonialism, and is further expanding today as a result of globalization.

Monoculture tree plantations don't just happen

Africa's enormous geographical diversity, the different post-colonial situations in different countries, the Cold War, civil wars, repressive or democratic regimes and the interests of foreign powers have all been determining factors in the establishment of different types of plantations in different countries. To illustrate, we could mention:

-Geographical factors facilitated or hindered the development of certain species in certain environments, depending on whether soil conditions, the amount of sunlight, temperature ranges and the availability of water were suitable or not for the species in question.

- In some cases, the post-colonial situation led to the breaking of all ties with the former colonial power, while in other cases the situation remained almost unchanged. This is a factor with important implications in terms of the presence or absence of foreign companies and markets linked to different plantations.

- The so-called Cold War resulted in some cases in the breaking of ties with former colonial powers and the establishment of regimes that forged new ties with the former Soviet Union, China and/or Cuba, which also implied changes in production models in line with these new markets.

- Civil wars (often linked with the struggles between the major world powers) served as a disincentive to long-term investment.

-Repressive regimes facilitated (through repression) the appropriation of the lands of local communities for subsequent use as plantations, while more open regimes left room for resistance to this new form of plunder.

- The different raw material needs of the large powers linked to the different countries determined their support for the establishment of certain types of plantations instead of others.

An equally important role in the expansion of certain types of plantations in certain countries has been played by institutions like the World Bank, African Development Bank and International Monetary Fund, which have used loans and the imposition of economic policy measures to promote the privatization of state enterprises and a model of export-oriented large-scale plantations.

In all cases, the FAO has played a key role through the imposition of the so-called "Green Revolution" – a grave misnomer – which endorsed monocultures and the accompanying package of toxic agrochemicals as the only alternative for the development of the agricultural and forestry sectors. Monoculture tree plantations are an integral part of this model, and the FAO has also played an essential role in their promotion by defining them (or in

fact, disguising them) as "forests".

We should also stress the role of bilateral "cooperation" agencies (particularly from Europe and the United States) in the promotion of certain types of plantations in different countries on the continent.

The combination of all of these factors (environmental, political, ideological and economic) gave rise to the current map of monocultures in Africa, among which we will focus exclusively on plantations of eucalyptus, pine, oil palm and rubber trees).

Eucalyptus and pine plantations in Africa

Large-scale eucalyptus and pine plantations are concentrated in southern Africa, and particularly in South Africa, Swaziland and Zimbabwe, but they are also expanding in Mozambique. There are smaller areas in Angola, Zambia, Malawi and Tanzania as well as a large clonal eucalyptus plantation established in the Republic of Congo by Shell Petroleum in the 1990s and now owned by Canadian company MagForestry.

In South Africa, the largest areas are in the provinces of Mpumalanga, KwaZulu-Natal and the Eastern Cape, covering 1.5 million hectares of land. Additionally, an estimated 1.6 million hectares have been invaded by plantation species such as acacias, eucalyptus and pines.

Although the area planted in Swaziland is much smaller (100,000 hectares) it occupies a large percentage of the country's land area (9%), and is aggravated by the fact that these plantations occupy the best agricultural lands. In the case of Mozambique, major plantations are still at the initial stage, but there are plans to establish large areas of pulpwood, sawlog and agrofuel plantations.

The industry in the region is dominated by two large South African pulp and paper companies: Mondi and Sappi, with plantations and pulp mills in South Africa and Swaziland, as well as paper manufacturing operations all over the world. Plantation species have changed from mainly wattle (planted for the extraction of tannin and woodchips) and pines (for sawn timber) increasingly to eucalyptus for producing pulp for paper and cellulose products.

It is interesting to note that, despite their dramatic social and environmental impacts, the vast majority of these monoculture plantations (in South Africa and Swaziland) have been certified as "environmentally appropriate and socially beneficial" by the FSC.

Oil palm: from natural stands and traditional use to monocultures for agrodiesel

There is a long tradition in the use of the oil palm in Central and West Africa, a region where it grows naturally. Until now, a large part of the palm oil used by local communities comes from the harvesting of fruits from natural palm stands and its processing is based on manual traditional techniques. The same is applicable to soap and palm wine. It is common for women to play a central role in either the processing and/or commercialization of palm oil, while harvesting is in all cases carried out by men.

Both during the colonial period and after independence, large plantations and related industrial plants were established in many countries. While in colonial times they were mainly aimed at the export of palm fruit and palm oil, they were later oriented towards supplying the internal market with palm oil and soap.

The recent surge of agrofuels based on palm oil has resulted in a strong incentive for foreign investment in more than a dozen countries, with the aim of producing large quantities of oil for its conversion to biodiesel. What follows is a brief summary of the main investment projects identified in a study recently carried out by WRM, (1) that shows a widespread process of appropriation of enormous areas of land by foreign corporations, with the central aim of producing agrofuels for Northern consumption.

Angola

- The Atlântica Group (Portugal), through its subsidiary AfriAgro has secured access to some 5,000 hectares of land (with the possibility of accessing a total of 20,000) for biodiesel production.
- Italian company ENI (in alliance with Brazil's Petrobras) has reached an agreement with the government, for the latter to promote oil palm plantations to supply ENI with raw material for the production of biodiesel.

Cameroon

- The French Bolloré group is the main actor in the oil palm sector in this country, producing 80% of the national production of palm oil and holding some 40,000 hectares of plantations through its companies SOCAPALM, SAFACAM and Ferme Suisse. The company also has industrial plants and has recently declared its interest in the production of biodiesel.

Congo, R.

- Spanish company Aurantia announced its intention to invest in oil palm plantations for the production of biodiesel.
- Italian energy company ENI achieved access to some 70,000 hectares of land for planting oil palm.
- The also Italian energy company Fri-El Green signed an agreement for the planting of oil palm in 40,000 hectares.

Congo, R.D.

- GAP (Groupe agro-pastoral), a company owned by the Blattner Group, has 10,000 hectares of plantations.
- Canadian company TriNorth Capital announced that its subsidiary Feronia had purchased Unilever's "**Plantations et Huileries du Congo".** Within its holding of 100,000 hectares of land it would plant some 70,000 with oil palm.
- ZTE Agribusiness Company Ltd, a Chinese company, announced its intention of establishing oil palm plantations over 1 million hectares of land.

Ivory Coast

- PALMCI, a company owned jointly by the French SIFCA group and Singapore-based companies Wilmar International and Olam International, has 35,000 hectares of industrial plantations.
- Belgian company SIPEF-CI bought 12,700 hectares of industrial plantations.
- PALMAFRIQUE, owned by the financial holding "Groupe L'Aiglon" has 7,500 hectares of plantations.

Gabon

- The formerly state-owned company Agrogabon was privatized and is now controlled by Belgian company SITA. It has 6,500 hectares of plantations.
- Singapore-based Olam International would plant some 140,000 hectares with oil palms. In the framework of the same project, an additional 60,000 hectares would be planted by 3,000 local entrepreneurs.

The Gambia

- Until now only one company (the Spanish Mercatalonia) has presented an oil palm plantation project to the government and it is not clear if it will be implemented.

Ghana

- Belgian company SITA is now the main shareholder of Ghana Oil Palm Development Co., privatized in 1995.
- Unilever is the main shareholder of Oil Palm Plantation Limited, one of the main palm oil producers in Ghana.
- Wilmar International (Singapore) has recently become the owner of Benso Oil Palm Plantation Limited
- Norwegian Palm Ghana Limited (NORPALM), purchased in 2000 the National Oil Palm Limited plantations.

Liberia

- In 2009, Malaysian company Sime Darby signed a concession agreement over 220,000 hectares of land for 63 years. Some 180,000 hectares would be planted with oil palm.
- UK-based Equatorial Palm Oil Company, holds 169,000 hectares of land, of which some 10,000 have already been planted with oil palm.
- Indonesian company Golden Agri-Veroleum is finalizing a negotiation with the government for the establishment of 240,000 hectares of oil palm plantations.

Madagascar

Following a huge scandal involving a project that would have implied a concession of more that 1 million hectares of land to South Korean company Daewoo (of which 300,000 would have been assigned to oil palm plantations), the project appears to have been abandoned. However, there are two other projects in the pipeline:
- US energy company Sithe Global would have access to 60,000 hectares for the production of biodiesel from oil palm plantations.
- Cultures du Cap Est, company financed by an Indian group would have access to 9,100 hectares for the planting of oil palm.

Nigeria

- Belgian company SIAT, through its subsidiary Presco has some 10,000 hectares of plantations, with the stated aim of supplying the internal palm oil market.
- Italian company Fri-El Green Power has a concession of 11,300 hectares, with the option of extending it to 100,000.

Sao Tome and Principe

- Belgian/French company Socfinco (part of the French Bolloré group), through its subsidiary Agripalma has a concession of 5,000 hectares for planting oil palms. The aim is the production of palm oil for its further processing into biodiesel in Belgium.

Sierra Leone

- UK-based Sierra Leone Agriculture holds a concession of 41,000 hectares, 30,000 of which would be planted with oil palm.
- Portuguese Quifel group has signed agreements with local communities for the planting of oil palm, sugarcane and rice. A total of 40,000 hectares would be dedicated to the production of agrofuels for export.
- UK company Gold Tree plans to process oil palm fruits from both its plantations and those of local communites for the production of biodiesel. The project would involve some 40,000 hectares of land.

Tanzania

- Belgian company FELISA has a project involving 10,000 hectares of plantations, half of which its own and the rest to be established by local small farmers.
- African Green Oil Limited has a 20,000-hectare plantation project for the production of palm oil.
- Tanzania Biodiesel Plant Ltd holds 16,000 hectares to be planted with oil palm.
- InfEnergy Co. Ltd has 5,800 hectares
- Malaysian company TM Plantations Ltd, plans to establish plantation at Kigoma.
- Sithe Global Power (USA), plans to establish 50,000 hectares of plantations and to refine the oil in the country.
- InfEnergy (UK), has 10,000 hectares for planting oil palm.
- An as yet unidentified Malaysian group is planning to plant 40,000 hectares with oil palm.

Uganda

- Oil Palm Uganda Limited, owned by Singaporean company Wilmar in association with BIDCO, holds a 10,000 hectare concession, but the government has agreed to source 30,000 more hectares on the mainland, with 20,000 hectares of nucleus estate and 10,000 for the outgrowers and smallholder farmers

Rubber plantations: another land-grabbing monoculture

In the case of rubber plantations, Africa produces some 5% of global natural rubber production, with the main producing countries being Nigeria (300,000 hectares), Liberia (100,000) and Cote d'Ivoire (70,000). At present new rubber plantation projects are being presented and promoted in many other African countries.

One major actor in Africa appears to be the French corporation Michelin, with rubber plantations in Nigeria, Cote d'Ivoire, Ghana and Benin. The Singaporian Golden Millennium Group owns 18,000 hectares of plantations in Cameroon. In the case of the Bridgestone/Firestone corporation, its plantations seem to be established only in Liberia.

The Bridgestone/Firestone plantations in Liberia serve to illustrate working conditions in rubber plantations in Africa. What follows are quotes based on a report produced in 2008 by the Liberian NGO SAMFU. (2)

"Tappers work approximately 12 hours a day without safety equipment (gloves, goggles, rain boots, rain coats and other safety gears) unless they are bought by the tappers themselves. They have to carry all the latex they

produce on their bare shoulders on a stick with two buckets weighing 70 lbs [31.7 kg] each.

This primitive means of transporting latex has not changed since 1926. With 140 lbs [63.4 kgs] yoked across their shoulders, laborers walk to weigh stations that may be up to three miles [4.8 kms] away from the grove of rubber trees. Firestone provides no alternative means of transportation. Rubber tappers doing this backbreaking work risk injury and the development of deformities the longer they are employed.

A tapper wakes at 4 o'clock every morning to get prepared for tapping up to perhaps 750 trees daily on a normal tapping day. However, only half of the daily rate of $3.38 is paid if a tapper fails to complete the full daily quota. Faced with these onerous quotas, tappers have little choice but to allow family members to assist them in completing their quota or hire a sub-contractor.

The tappers work every day of the year including national holidays, with the exception of Christmas day, producing high volumes of latex. An average tapper's monthly production can be valued at US/$2,296.80 on the ground in Liberia and US/$3,915.00 at world market prices while the tapper is paid US/ $125. Out of the monthly wage of US/$125, he may have to pay one or two sub-contractors who helped him tap.

"These people are treating us like slaves because we have nobody to talk for us and we have nowhere to find a new job. You produce more than 5 tons of latex for the company a month and they don't even pay you the price of one ton", said bitterly a tapper.

Besides latex production, tappers are required to apply chemicals (both fungicide and stimulants) on the trees for protection and to increase production. In addition they are required to under-brush the trees they tap. This workload means that many of the tappers have to hire sub-contractors to get all the work done. In the instance where the tapper's family is large and can not afford the deduction of their rice supply or salary for a sub-contractor, the wife is obliged to abandon her children to assist her husband in completing his quota."

At the end of April 2007, workers engaged in a strike. During the strike on April 27, 2007, police reportedly brutalized peaceful striking workers with batons and sticks, chased harmless workers throughout the city of Harbel – where the Firestone rubber processing plant is located-, broke into houses and beat many innocent people which resulted in dozens of injuries. Two dozen workers were injured so badly that they were forced to miss work while they underwent treatment. Subsequently, one of the injured workers died as a result of wounds suffered during the attack. In addition, tear gas

was fired into Harbel's densely populated communities without regard for children, women and the elderly. It appears that many innocent workers were not only unnecessarily arrested, but unreasonably detained."

The carbon sink land grab

The establishment of tree plantations to act as so-called "carbon sinks" is being promoted in several African countries, among which the preferred ones appear to be Kenya, Uganda and Tanzania. The projects are based on selling "carbon credits" (based on the carbon allegedly stored by the growing planted trees) to polluters (companies or governments) that can claim that through buying those credits they have "reduced" or even "neutralised" their carbon emissions.

One such case in that of the UK-based Carbon Neutral Company, that has established plantations in the Southern highlands of Tanzania. For this purpose, the company has occupied more than 10,000 hectares of land, where it has planted alien eucalyptus and pine tree species. (3)

Another case is that of Norwegian company Green Resources, operating in Mozambique, Sudan, Tanzania and Uganda. The company received strong criticism from Norwegian NGO Norwatch in 2000. (4) The company has already planted 14,000 hectares of mainly pine and eucalyptus trees. According to its web page "the company holds more than 200,000 ha of land for future planting and conservation".(5)

One of the cases that has received wider coverage –because of its severe social impacts- has been that of the Dutch FACE Foundation, which in 1994 signed an agreement with the Ugandan authorities to plant trees on 25,000 hectares inside Mount Elgon National Park in Uganda. The FACE Foundation works with the Uganda Wildlife Authority (UWA), the agency responsible for managing Uganda's national parks. The UWA-FACE project involves planting a two to three kilometre-wide strip of trees just inside the 211 kilometre boundary of the National Park.

However, the project chose to ignore the rights and needs of local peoples living in the area. As a result, and in order to keep villagers out of the national park, UWA's park rangers have maintained a brutal regime at Mount Elgon. In 1993 and 2002, villagers were violently evicted from the national park. Since the evictions, UWA's rangers have hit them, tortured them, humiliated them, shot at them, threatened them and uprooted their crops.(6)

In sum, carbon sink plantations constitute another form of monoculture resulting in the appropriation a vast expanses of land, in the violation of local peoples' territorial rights and depriving them of their means of livelihood.

The need to support local resistance

With few exceptions, the issue of tree monocultures in Africa has received scant attention, both within countries affected by them and at a regional and international level. As a result, local struggles have not been made visible and have received little or no support. The cases of resistance in South Africa against eucalyptus and pine plantations, in Cameroon against oil palm plantations, in Uganda against carbon sink plantations and in Liberia against rubber plantations are some of the exceptions that have managed to achieve international attention.

However, as soon as some research is carried out on the issue, numerous cases of resistance to plantations begin to unravel, all resulting from plantations' severe social and environmental impacts. Resistance may in some cases be in fact impossible because of situations of widespread and severe human rights violations. However, invisible resistance becomes visible once conditions change and make it possible. A case in Togo serves to illustrate this. After decades of having lost their lands to oil palm plantations, the affected communities demanded their lands back. Not content with the government's response, they decided to cut and set fire to the plantations. As a result, the company lost almost 2000 hectares of plantations.

Within the current framework of projects that imply the appropriation of vast areas of land for the production of anything but food (agrofuels, pulp, rubber, wood, carbon), resistance movements appear to be almost inevitable and some of them will be confronted with extremely dangerous situations. In such circumstances, external support and visibilization of those struggles will be a matter of life or death for the involved communities.

(1) http://oilpalminafrica.wordpress.com/
(2) See full report at http://www.samfu.org/do%20files/The%20Heavy%20Load_2008.pdf
(3) http://www.carbonneutral.com/project-portfolio/uchindile-mapanda-reforestation/
(4) ("Carbon Upsets. Norwegian "Carbon Plantations" in Tanzania" by Jorn Stave, NorWatch)
(5) http://www.greenresources.no/
(6) see full report at http://www.wrm.org.uy/countries/Uganda/Place_Store_Carbon.pdf

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MONOCULTURES ON THE MARCH IN SOUTHEAST

ASIA

"The crucial characteristic of monocultures is that they do not merely displace alternatives, they destroy their own basis. They are neither tolerant of other systems, nor are they able to reproduce themselves sustainably." So wrote Vandana Shiva in her classic 1993 essay "Monocultures of the Mind."

Monocultures exist to increase productivity of one product, whether that product is rubber, woodchips, timber, palm oil, cassava or sugar. But while productivity increases from the commercial perspective, productivity decreases from the perspective of local communities.

Woodchips, pulp and monocultures

Shiva wrote of the erosion of local forest knowledge by "scientific" forestry and the replacement of biodiversity by monocultures. Monocultures of eucalyptus trees are the ultimate expression of scientific forestry. Uniform rows of almost identical trees, with predictable growth rates and raw material for the pulp, biomass or timber industry as the only product.

However, as Shiva points out, "People everywhere have resisted the expansion of eucalyptus because of its destruction of water, soil and food systems." She gives the example of a World Bank-funded social forestry programme in Karnataka state, in India. In August 1983, the Raitha Sangha, the farmers' movement, marched to the forestry nursery and pulled out millions of eucalyptus seedlings. They planted tamarind and mango seeds in their place.
This resistance to the spread of monocultures turned scientific forestry on its head, which had reduced all species to one (eucalyptus). Villagers reasserted their needs, over the need to provide raw material for the pulp industry. They also reasserted their knowledge over that of the World Bank's and the government's forestry experts.

Similar protests against eucalyptus also started in the 1980s in Thailand. In a series of demonstrations, villagers have dug up eucalyptus saplings, burned down nurseries, marched, written letters, taken part in demonstrations, ordained forest trees to prevent them being cut down to make way for plantations, cut down eucalyptus trees and re-established community forests.

Such resistance has often been met with brutality. The farmers in Karnataka were arrested. In Thailand, more than a dozen environmental activists have been killed in the last decade. Sometimes the violence starts even before villagers protest. In the late 1980s, a company called Arara Abadi, part of the Indonesian pulp giant Asia Pulp and Paper (APP), started to acquire land near the village of Mandiangin in Sumatra. The company simply seized land from the indigenous Sakai and Malay people without compensation. Armed

police and military officials took part in meetings between the company and villagers. A 2003 report by Human Rights Watch documents the intimidation and violence against people living in the area of APP's plantations. One villager told Human Rights Watch, "We often heard about people being arrested or just disappearing. So when they came here wearing their guns, we just kept our mouths shut." The company imposed a monoculture of opinion as well as monocultures of fast-growing trees.

There have been several reports that APP is planning to expand its operations to Cambodia and Vietnam. In 2004, APP raised its none-too-attractive head in Cambodia, in the form of a company called Green Elite. The company planned an 18,300 hectare acacia plantation inside the Botum Sokor National Park. Green Elite was kicked out of the country, but not before it had logged several hundred hectares of melaleuca forest and started to build a wood chip mill.

In 2007, Green Elite received permission to establish 70,000 hectares of fast-growing tree plantations in Nghe An province in Vietnam. The planting is being carried out by a subsidiary of Green Elite called InnovGreen Nghe An. The plantations are going ahead, and InnovGreen plans to establish a total of 349,000 hectares of industrial tree plantations in six provinces in Vietnam.

The rubber juggernaut

A company called Golden One Company, which is reported to have links with APP, aims to establish industrial tree plantations in Laos. The company has mapped out an area of approximately 12,000 hectares in Samuoi district, Salavan province, although the exact status of the plantation concession is unknown.

In recent years, huge areas of land have been converted to rubber monocultures in China, Laos, Thailand, Vietnam, Cambodia, and Burma. According to a 2009 article in *Science* magazine, much of the expansion in China was encouraged as an alternative to swidden cultivation. Governments often see such agricultural practice as "a destructive system that leads to forest loss and degradation," and have actively encouraged the replacement of swidden cultivation with plantations. Ironically, this is often carried out in the name of "reforestation", although apart from the presence of trees the resulting monocultures have little in common with forests.

The authors of the article in *Science* magazine, Alan Ziegler of the National University of Singapore and his colleagues, estimate that 500,000 hectares of montane forest in the five countries have been converted to rubber plantations.

The authors state that the resulting rubber monocultures could have serious environmental impacts including loss of biodiversity, reduction of carbon

stocks, pollution and degradation of local water supplies. Ziegler is currently carrying out further research with local scientists in Thailand and Cambodia on the impact of rubber plantations on water and carbon fluxes.
With rubber prices and demand for rubber booming, the area of rubber monocultures is expanding. In 2009, Cambodia's rubber exports increased by 36 per cent. Vietnamese companies have plans to plant 200,000 hectares of rubber plantations in Burma.

Growing food in monocultures

Between 2006 and 2008 world food prices rocketed. There were several reasons. The rising price of oil was one. Another was the demand for food crops as biofuels. Another was that financial speculators at Goldman Sachs and other banks pulled out of dodgy sub-prime mortgages derivatives and poured the money into food derivatives thus driving up the price of food.

But there is another reason for food price increases to be found in Vietnam's rice fields. Vietnam is the world's third largest exporter of rice. An epidemic of disease and pests struck the rice crop in Vietnam cutting world rice supplies.

Monocultures are the problem, once again. Less intensive farming is far less vulnerable to pests and diseases than monoculture farming. Vandana Shiva warned about the problems of pests in monocultures in 1993: "Having destroyed nature's mechanisms for controlling pests through the destruction of diversity, the 'miracle' seeds of the Green Revolution became mechanisms for breeding new pests and creating new diseases."

"Sustainable" monocultures?

Much of the response to monocultures from the environmental movement has been to demand something called "sustainability". For example, earlier this year, WWF set up a "New Generation Plantations Project", through which it will work with pulp and paper companies to promote monocultures that are "well-managed and appropriately located" and which "can contribute positively to sustainable development." WWF will help one of the companies involved, Stora Enso, to expand its controversial plantations in China by 160,000 hectares. Stora Enso's existing plantations in China have resulted in a series of land disputes and violence against a lawyer representing local farmers.

This strange word, "sustainability", has devoured a large part of the environmental movement, swallowing up activists and spitting out the stuffed suits that traipse from one business-friendly shindig to the next.

We have the World Business Council for Sustainable Development, whose chairman works for Shell and which includes among its 200 member companies such paragons of environmental virtue as Sappi, Mondi, Stora

Enso, Weyerhaeuser, MeadWestvaco, Veracel and Fibria (as Aracruz Celulose is called these days). The WBCSD has a "Sustainable Forest Products Industry" project the "driving force" of which "is to find ways to sustainably manage forests to meet the needs of six billion people now – nine billion by 2050 – for wood and paper products, renewable and greenhouse neutral energy, ecosystem services and healthy livelihoods." Here we see what sustainable development means: more production from (and therefore destruction of) the world's forests. And more industrial tree plantations.

The myth of "sustainable" oil palm

Then we have the Roundtable on Sustainable Palm Oil, which was set up by WWF and several palm oil companies. A promotional video on the RSPO website asks, "What sustainability practices is RSPO encouraging?" The answers are revealing. Planting high yielding varieties of the crop. Use of buffaloes to transport harvested fruit bunches, "reducing fossil fuel energy usage". Management of waste at the milling stage. Integrated pest control. Leguminous crop cultivation to add nitrogen to the soil. Zero burn replanting. Energy efficient extraction process, including converting waste to biofuel and biogas. Advocating safety at work and providing adequate health care. Promoting the protection of biodiversity. Sustaining local communities and the education of children.

These are all things that the palm oil industry should do anyway. But the hypocrisy of the last two is breath-taking. The industry most responsible for destroying the forests of Malaysia and Indonesia and the livelihoods of thousands of local people and indigenous peoples now claims to be promoting the protection of biodiversity and sustaining local communities. It would be nice if it were true. It's not.

Back to the video. As the camera pans through a palm oil monoculture, the presenter calmly tells us that

"While other agricultural industries seek superficial green solutions it is clear to many that sustainable palm oil could be a path breaking and historic effort that is the beacon of hope and inspiration."

Several NGOs (not the stuffed suit variety, I hasten to add) have worked hard to ensure that the RSPO set high standards. There is a Certification Protocol, a Code of Conduct and Principles and Criteria that include indigenous peoples rights and the right to free, prior and informed consent.

But abuses continue. In June 2010, hundreds of oil palm small holders protested in Riau, Sumatra, at the way PT Tri Bakti Sarimas, a member of the RSPO, had broken its promises to return the land to the farmers. During the protest, a Mobile Brigade Police officer shot dead a woman protester.

Several other protesters were injured or arrested.

Perhaps the biggest failing of the RSPO is that it does not address the industry's constant expansion. The NGO SawitWatch has estimated that the industry plans to expand its plantations by a total of 26.7 million hectares in Indonesia.

There is an unavoidable contradiction in describing as "sustainable" any product that is grown in vast monocultures. But with oil palm in southeast Asia, there is no other way, as Marcus Colchester of the Forest Peoples Programme explains in a recent report titled, "Palm oil and indigenous peoples in South East Asia":

"Maximum production from the least amount of land favours regularly spaced palms planted in monocultures. Because oil in the very heavy, mature, fresh-fruit bunches rapidly loses its quality, producers have to be able to get fruits to a mill, where the oil can be extracted and stabilised, within 48 hours, meaning that farmers need ready access to roads, which in their turn require maintenance."

Whether the plantation is company-owned or managed as small-holder schemes, large areas of monocultures are needed to keep the palm oil mill operating – somewhere between four and five thousand hectares per mill, Colchester estimates.

The vast monocultures have destroyed habitat for elephants, tigers, orangutans and many other species. They have also led to serious human rights abuses that have been documented in a series of NGO reports in the past six years. "Acquisition of lands for estates and smallholder schemes violates the rights of indigenous peoples to their property," Colchester writes. "Their lands are being taken off them without due payment and without remedy." The Indonesian National Land Bureau states that there are about 3,500 land disputes in the country.

Carbon: The new monoculture?

In May 2010, the Indonesian and Norwegian governments signed a Letter of Intent for a US$1 billion avoided deforestation deal. As part of this deal, the Indonesian government announced a two year moratorium on new concessions in forests or peat swamps. There are mixed messages from the Indonesian government about what the moratorium actually means. Some government officials say it will apply to at least some of the 26.7 million hectares on which the palm oil industry plans to expand its plantations. Agus Purnomo, head of Indonesia's National Climate Change Council, told Reuters that at least some of Norway's money would go on compensating oil palm companies whose concessions will be revoked. "When you revoke licences, when you cancel things, it involves money," he said. Other officials

state that the moratorium will not apply to existing concessions. If the latter is true, the moratorium will have little or no impact on deforestation in Indonesia, even for the miserly two years that it is in place.

The international negotiations on reduced emissions from deforestation and forest degradation (REDD) might even end up encouraging more clearing of forests, draining swamps and conversion to monocultures in Indonesia. In August 2010, Reuters reported Wandojo Siswanto, a special adviser to the forestry minister, as saying that "If there is agreement on REDD, we could put palm oil plantations to be eligible for that." He added, "I think it would be good if we just say that palm oil plantations could also mitigate climate change through carbon sequestration through the nature of the trees." He said that existing and proposed plantations developed on degraded land could be eligible for carbon credits.

The problem, as World Rainforest Movement and others have pointed out over and over again, stems from the United Nations' failure to recognise that **plantations are not forests**. Currently, in the bizarre world of the UN climate change negotiations, the UN's definition of forests fails to differentiate between native forest and industrial monoculture plantations.

But even if REDD functions as it is supposed to, avoiding deforestation rather than encouraging the expansion of monocultures, there are still risks. With REDD schemes locking up the carbon in forests, a new form of "scientific" forestry is emerging where experts tell local communities how to manage the forests as carbon stores. Local communities' knowledge of the forest and their management of the forest has to be adapted to the new carbon economy. Forests could become carbon monocultures – existing to produce one product: carbon credits to bail out the north's failure to reduce its greenhouse gas emissions. Like other monocultures, productivity (of carbon credits) may increase, but productivity from the perspective of local communities could decrease.

Of course, indigenous peoples and local communities are not taking this lying down. Many are demanding that their rights be fully incorporated into any international agreement on REDD. Their message is clear: "No Rights, No REDD."

In April 2009, more than 400 indigenous peoples met in Anchorage Alaska for the Indigenous Peoples' Global Summit on Climate Change. They produced the Anchorage Declaration, specifically rejecting carbon trading and forest offsets as false solutions to climate change. On REDD, the declaration states that

"All initiatives under Reducing Emissions from Deforestation and Degradation (REDD) must secure the recognition and implementation of the

human rights of Indigenous Peoples, including security of land tenure, ownership, recognition of land title according to traditional ways, uses and customary laws and the multiple benefits of forests for climate, ecosystems, and Peoples before taking any action."

Others are opposing REDD completely. Via Campesina, an international movement of peasants and small-scale farmers with about 300 million members, states that "The REDD+ initiative should be rejected." Indigenous peoples meeting at the World People's Conference on Climate Change and the Rights of Mother Earth in Bolivia in April 2010 stated, "We condemn the mechanisms of the neoliberal market, such as the REDD mechanism and its versions REDD+ and REDD++, which are violating the sovereignty of our Peoples and their rights to free, prior and informed consent and self determination." In August 2010, the Social Forum of the Americas rejected REDD:

"We denounce Northern geopolitical countries governments rather than confront serious climate change impacts they are seeking to evade responsibility and to develop new carbon market mechanisms to make more profit, such as 'Reducing Emissions from Deforestation and Degradation' (REDD), which promotes forests commercialization and privatization and loss of sovereignty over territories. We reject such arrangements."

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MONOCULTURE TREE PLANTATIONS IN LATIN AMERICA – HOW, WHY, FOR WHOM

The territories that make up what is known today as Latin America have two main features in the eyes of big corporations and business conglomerates: they encompass vast areas of land, and they are a source of highly coveted commodities: wood, palm oil, commercial crops, meat, wool, raw materials for agrofuels, genetic resources, land, water. As such, they are a magnet for big capital.

These sprawling expanses of richly biodiverse ecosystems – jungles, forests, grasslands, mountains, highland plains, savannahs – have served as the physical foundation for the proliferation of the diverse cultural and productive practices of the region's communities. What big business views as commodities have been the basic elements of centuries-old agricultural traditions developed by many different peoples; the vestiges of these traditions attest to the advanced levels attained by this local knowledge.

Today, just like over 500 years ago, colonialism is alive and well, although it adopts different forms and takes different names. The ships that used to sail off from the ports of Latin America loaded down with silver, gold, cacao and rubber are now enormous freighters that carry off our water and our land in the form of logs, wood chips, pulp and palm oil. And through sophisticated new schemes, they can even appropriate our air and sell it on the carbon market. Essentially, they take away with them the future of the coming generations, to be sold at market prices.

The current model of globalized markets is based on a structure of subordination: the subordination of the countries of the South to those of the North; of those who sell their labour to those who control the capital; of ethnic minorities to hegemonic social groups; of the female gender to the male gender. This subordination has enabled the accumulation of surplus capital by the dominant groups, at the cost of intrinsic inequalities and hardships for the subordinate groups.

In the framework of the expansion of this accumulated capital, globalization is the ideal platform for the growing appropriation and commodification of nature by increasingly concentrated business groups. Forms of production take on increasingly larger scales and increasingly uniform characteristics, to supply increasingly larger and conveniently uniform markets. Consumption becomes the basis and the driving force of the economy, and social policies often serve to introduce the necessary improvements to allow for the maintenance of the system and add even more consumers to the markets.

As part of this expansion, large-scale monoculture plantations of alien tree species arrived on the continent in the 1950s, through a process of land and water grabbing and at the expense of local ecosystems and communities. These plantations were not an isolated undertaking, but rather form part of the "Green Revolution" model promoted by the FAO, which consolidated the industrialization of agriculture. Others then joined in, including the World Bank, IMF, IDB, United Nations forest-related initiatives (IPF, IFF, UNFF), bilateral "cooperation" agencies like GTZ and JICA, and consulting firms like Jaakko Poyry. Through mechanisms like loans, subsidies, outreach, training and propaganda, these agencies succeeded in finding support for their arguments in scientific and academic circles and influencing the state policies of numerous countries, which applied largely similar models to promote export-oriented tree plantations throughout Latin America.

According to the FAO, between 2000 and 2005 the land area occupied by tree plantations grew by roughly 2.8 million hectares annually (1), and 2009 figures indicate that there are 12.5 million hectares of monoculture tree plantations – not including oil palm plantations – in Latin America and the Caribbean. By 2020 tree plantations are expected to expand to cover 17.3 million hectares in the region.

This is how the region has become positioned as a "world leader in high-yield tree plantations", with Argentina, Brazil, Chile and Uruguay standing out particularly, since 78% of plantations of this kind in Latin America are found in these four countries. In this case, "high-yield" refers particularly to the tree species chosen to achieve rapid rates of growth. The most popular are eucalyptus (used in 65% of the plantations in Brazil and 80% in Uruguay) and pine (49% of plantations in Argentina, 78% in Chile). While these four countries play a predominant role in the sector, there are large areas of tree plantations throughout almost all of the rest of the region as well.

Wood for pulp

Until now, most of the plantations of fast-growing varieties of eucalyptus and pine trees have been geared towards the production of pulp for paper-making, a highly polluting industrial activity that requires enormous amounts of water and energy (pulp production is the fifth highest energy-consuming industry worldwide). Of course, no one can deny the benefits to humanity of industrial paper production, which dramatically lowered the cost of paper and enabled the spread of reading and writing in the mid-1800s. Today, however, paper production vastly exceeds the need for paper for educational purposes, despite the way this is used as a powerful symbol to reinforce the supposed need to produce more and more paper. In fact, far more paper is used for packaging than for the purposes of education, information and communications, along with many other articles and products inherent to the age of disposable consumption.

This demonstrates the falseness of the premise that higher paper consumption goes hand in hand with higher educational levels. To debunk this myth, one need only compare national rates of paper and paperboard consumption with rates of formal schooling. This would lead to the finding, for example, that Cuba, which has a much lower rate of paper consumption than the United States, Finland or Chile, nevertheless has rates of access to tertiary education that are higher than Chile and the United States. (2)

Paper and paperboard consumption per person per year (2005)
Europe: 132.39 kg (Finland 324.97 kg)
United States: 297.05 kg
South America, Central America and the Caribbean: 84.85 kg (Chile 64.57 kg; Cuba 8.63 kg)

Education: tertiary school gross enrolment ratio (2006)
Finland: 93%
United States: 82%
Chile: 48%
Cuba: 88%

These inequalities in consumption coincide with the intrinsic inequalities of the current economic model, dominated by business interests. In any event, they demonstrate that excessive consumption is not necessary to meet the needs of human development.

Meanwhile, at the starting point of the pulp and paper chain, monoculture tree plantations arrived and have continued to spread in Latin American countries under the premise that they "contribute to development." However, in the highly emblematic case of Chile, where tree plantations have been and continue to be strongly promoted by the state to the detriment of native forests, an article published by the National Committee for the Defence of Native Flora and Fauna (CODEFF) (3) reveals that population censuses prove that "the municipalities with larger areas of land covered by plantations are the ones where a larger percentage of peasant farmers have been displaced towards urban areas, generating significant levels of poverty."

The indiscriminate clearing of native tree species in order to plant alien species like eucalyptus has not only led to the disappearance of endemic animal and plant species, but has also caused alterations in the hydrologic system. According to the president of CODEFF, Bernardo Zentilli, this has led to a situation where flooding in the winter alternates with dried-out stream beds in the summer, which has limited the available amount of arable land.

For its part, the Chilean Association of Foresters for Native Forests (AIFBN) is quoted in the same article as stating that "between 1978 and 1987 some 50,000 hectares of native forest disappeared in two of the most highly forested regions in the country (VII and VIII), and almost a third of the forests on the coast of region VIII were replaced with pine plantations. The updated Registry of Native Plant Resources in the Region of Los Ríos indicates that over the last decade, more than 20,000 hectares of native forest have been replaced by plantations of alien tree species."

The fruit of discord – oil palm

The oil palm tree originally comes from Africa, and has long been used as a source of oil. In recent times, palm oil production has been largely geared to industrial uses, and even more recently, oil palm cultivation has undergone a major boom as a result of the climate crisis, because of its potential as a supposedly "ecological" alternative source of fuel that can continue feeding the current unsustainable model of production and consumption that is at the root of the crisis and yet remains unchallenged.

In Latin America, oil palm cultivation followed the model of large-scale monoculture plantations established through the forced displacement of autochthonous populations, combined with cases in which local peasant

farmers provide their labour and in many cases their own land. New oil palm plantations tend to be established in tropical rainforest areas, which are clear-cut, drained, fertilized, planted with oil palm seedlings and subsequently sprayed continually with powerful herbicides which, combined with the chemical fertilizers, leach into the soil and contaminate water sources. These practices make it impossible to plant other crops, which has a critical impact on the food sovereignty of local communities. In addition, to maximize the amount of oil produced per fruit and per tree, the land is dried out with drainage channels that also dry up nearby lagoons, streams and wetlands, thus affecting local flora and fauna. (4)

Oil palm cultivation is rapidly expanding in suitable tropical rainforest areas throughout Latin America. In Mexico, plantations are being forcibly established in the Lacandon rainforest. in Peru, inhabitants of the Amazon region have risen up against the Romero palm oil group, declaring "The rainforest cannot be sold! The rainforest must be defended!" In Guatemala, the spread of oil palm plantations is enabled through the eviction of local populations and forced purchase of land from impoverished communities who are obliged to migrate to other areas. In Honduras, peasant farmers and members of the Unified Peasant Farmers Movement of Aguán (MUCA) were the victims of a brutal crackdown by army troops and police acting in support of Miguel Facussé Barjum, a large landholder and palm oil producer known as "oil palm grower of death". In Nicaragua, oil palm plantations are the latest business venture of United Brands, formerly United Fruit, a name linked with a long record of political and social manipulation. In Costa Rica, oil palm cultivation has also gained a solid foothold.

Colombia is an emblematic case of the oil palm industry. There are more than 360,000 hectares of oil palm plantations, and former president Alvaro Uribe once announced that these plantations would eventually reach a total of six million hectares. Their creation, financed primarily by the World Bank, has been based on the plundering of land collectively owned by local communities. Murder, destruction of homes and property, large-scale displacement, economic blockades, continuous harassment, threats and ongoing abuse by the national army and paramilitary forces working on behalf of the plantation companies are the underlying foundation of this "progress", as denounced by the Inter-Ecclesiastic Commission for Justice and Peace. In the case of Bajo Atrato, the expansion of oil palm cultivation was achieved through the misappropriation of 15 villages on over 25,000 hectares of land in Curvaradó and another four villages and 20,000 hectares of land in Cacarica, for which collective property titles had been granted by previous governments. (5)

The oil palm plantation workers are subjected to slave labour working conditions. Constant surveillance by armed guards during the work day and payment in scrip that can be exchanged for food in the company store,

instead of cash salaries that workers can freely spend as they choose, are the hidden face of the supposed "clean energy" offered by agrofuel produced from palm oil.

Indupalma is one of the leading companies in the Colombian palm oil industry. One of the strategies it used to expand its operations, copied from the Malaysian model, was the forging of partnerships with peasant farmers for the cultivation of oil palm on small farms, which nonetheless remained firmly linked with big capital. When Indupalma approached the Sintrainudpalma trade union in 1995 to propose an alliance, the union declined. Paramilitary forces murdered four of its leaders and "disappeared" another. (6)

Greenwashing the plantation industry

The expansion of palm oil plantations has sparked heavy criticism in light of their serious environmental and socioeconomic impacts and human rights violations. In response, the sector found a way to "greenwash" its image through the creation of the Roundtable on Sustainable Palm Oil (RSPO), a strategy aimed primarily at appeasing European and North American consumers.

In a similar vein, Colombia has promoted a "peasant oil palm" programme aimed at the incorporation of oil palm cultivation within the system of agriculture for food production. The Colombian non-governmental organization Grupo Semillas has challenged the long-term sustainability of this programme, because "we should evaluate not only if this crop is viable and profitable for farmers, but also who is ultimately in control of the entire process." (7)

In the Chocó bioregion, Afro-Colombian and indigenous organizations participating in a meeting called by the conservationist organization WWF to promote "sustainable palm oil" firmly stated their opposition to becoming involved not only in the industrial production of palm oil but also in the "sustainable palm oil" initiative, given the serious consequences of this involvement, namely the violation of their rights, and in particular their ancestral rights to their land, the loss of their autonomy and their traditional farming practices, and the loss of their culture and diversity. (8)

For their part, eucalyptus plantations also have their own mechanisms for greenwashing their image. The FSC is the leading certification scheme in this area, and has granted its seal of approval to highly destructive monoculture tree plantations in the region. In the state of Bahia, Brazil, the pulp company Veracel (jointly owned by the Swedish-Finnish company Stora Enso and Aracruz Cellulose of Brazil) owns more than 100,000 hectares of eucalyptus plantations. Veracel has stripped almost all of the Pataxó and

Tupinambá indigenous communities of their ancestral lands, uses large amounts of sulfluramid, a pesticide banned by the FSC, and has been fined for killing large numbers of indigenous trees with herbicides, clear-cutting native forests, and planting too close to national parks. And despite all of this, it has obtained the FSC label.

All of these strategies are aimed at giving the plantation business a better reputation. But their biggest mistake is trying to demonstrate the sustainability of something that is inherently unsustainable: production obtained through large-scale monoculture plantations of alien tree species that cause serious impacts on the water, soil, native flora and fauna, forests, livelihoods and human health, and provoke the displacement of local populations and violations of human rights.

The criminalization of social protest

In many Latin American countries, grassroots organizations and movements that fight back against the loss of their land, water, forests and livelihoods as a result of the spread of plantations –eucalyptus, pine, oil palm, rubber trees, etc.- must contend with what has become known as the "criminalization" of resistance. This is a strategy aimed at categorizing acts of resistance as crimes, thus moving an intrinsically social conflict into the sphere of legal proceedings and criminal charges. As a result, plantation companies are able to use the punitive power of the state as a means of neutralizing protest.

Respected and recognized community leaders, people who are legitimately defending their cultural identity, ways of life and means of production, end up being arrested, imprisoned, prosecuted and sometimes even killed. Outright repression is combined with the formal use of the legal system to punish activists opposed to policies and models of production which, in the pursuit of profit, ultimately conspire against the very survival of the planet.

The prisons in Chile hold dozens of indigenous Mapuche political prisoners who have attempted to defend their territory from the advance of monoculture eucalyptus and pine plantations. The majority are tried under anti-terrorist laws left over from the Pinochet dictatorship. In spite of this, they continue their resistance from within the prison walls, through hunger strikes and fasts, while outside, the repression extends to their families. In the Chocó bioregion of Colombia, Afro-Colombian communities and human rights organizations like the Commission for Justice and Peace face threats and violence from military and paramilitary forces for their opposition to the establishment of industrial oil palm plantations and the expansion of cattle ranches. In Honduras, the struggle of the peasants of Bajo Aguán to defend their right to the land stolen from them for large-scale oil palm cultivation left a tragic toll of injuries and deaths, added to the general escalation in repression in Honduras since the June 2009 coup.

The gender dimension

The expansion of monoculture tree plantations, like all anti-social megaprojects, has a gender dimension in terms of specific impacts on women. As illustrated by a women's declaration on the impacts of monoculture exotic tree plantations on grassland ecosystems, issued in 2009 during the World Forestry Congress held in Argentina, "the expansion of monoculture eucalyptus plantations has sowed fear, violence and sexual harassment. Many women report that they are afraid to walk alone near the plantations, because of the large numbers of workers from outside their community. This means that women's right to free movement is curtailed, bringing about changes in their habits and routines. In addition, many have been the victims of sexual harassment by these workers. This has undoubtedly meant a step back for women's independence and autonomy, which contributes to greater disempowerment of women."

The declaration also refers to other potential impacts, such as the breakdown of social and family structures, a rise in prostitution, the proliferation of sexually transmitted diseases, illicit drug use, and changes in eating habits, "which typically occur in different places following the arrival of large-scale projects like these. Unfortunately, these impacts are neither studied nor quantified by public agencies."

The women conclude by saying "we will keep up our resistance and our struggle for as long as necessary, not only against the expansion of monoculture exotic tree plantations and pulp and paper industry megaprojects, but against all processes that entail the commodification of living beings and the disempowerment of women. We, the women, have the power to bring about something new, and we are doing it." (9)

In Brazil, every March 8, International Women's Day, women from peasant farmer, indigenous and Afro-Brazilian organizations, the Landless Workers Movement and Via Campesina join in protest against the expansion of eucalyptus plantations owned by pulp companies like Stora Enso, Votorantin/Fibria, Suzano and Veracel. The women denounce the hunger brought by these cloned armies of eucalyptus trees, which take over the lands of indigenous peoples, local communities and peasant family farmers, stripping them of their identity, their knowledge, their ability to grow and eat healthy food in sufficient quantities and in accordance with their cultures. Their struggle is aimed against agribusiness and in defence of food sovereignty.

At the same time, however, they stress that the oppression suffered by all is aggravated by gender differences that place women in a situation of inequality by making them almost exclusively responsible for raising children; that result in their earning less pay for doing the same work as men; that

frequently make them the targets of sexual harassment; and that sadly, on occasion, make them victims of physical violence, sometimes at the hands of men in their own families.

The business of climate change

Nothing is spared from the zealous pursuit of profits. The climate crisis has become a business opportunity in which the false solutions promoted by international agencies like the World Bank and the Kyoto Protocol itself serve as a platform for the further expansion of monoculture tree plantations. Through carbon sinks established under the Clean Development Mechanism, or the REDD+ (Reducing Emissions from Deforestation and Forest Degradation) programme, in which large-scale tree plantations could be viewed as a means of "enhancement of forest carbon stocks" and thus be eligible for financing, plantation companies are finding new "markets", and plantations disguised as forests slip through the cracks and onto the carbon market.

In Colombia, the 1995 Framework Convention on Cooperation for Cleaner Development authorized oil palm plantation companies to participate in the international carbon sink business created in the framework of the Kyoto Protocol. The incentives and tax exemptions granted by the government for the development of technologies to capture methane gas from the environment allowed company owners to obtain additional profits from a new market niche: the carbon market. (10)

Ecuador is also promoting the establishment of one million hectares of monoculture tree plantations for the sale of carbon reduction certificates on the world carbon market, through the Proforestal programme's national afforestation and reforestation plan.

The plantation-as-carbon-sink business is even attracting companies from outside the sector: Nestlé Waters France plans to offset the equivalent of the annual carbon emissions from its Vittel mineral water production in France and Belgium through "forestation" projects. As a result, it will fund the planting of 350,000 trees in an existing plantation in the Bolivian Amazon and a new project in the rainforest of Peru, with plans to renew the same number of trees every year. (11)

In Brazil, Plantar S.A. Reflorestamentos, a pig iron and plantation company, has large-scale eucalyptus plantations in the state of Minas Gerais. Despite the fact that these trees are used as fuel for its production of iron ingots, that the company's operations are highly polluting, and have had serious impacts on water, soil, and the rich natural biodiversity of the Cerrado biome, the company has repeatedly applied for funding under the Clean Development Mechanism to finance its eucalyptus plantations. It argues that using

eucalyptus charcoal to power its plant is less polluting than using coal. Nevertheless, this is clearly a ploy to grab money from any source possible, since the company has never used coal in its operations.

Towards another model

The large-scale monoculture tree plantation model is incompatible with the natural diversity of life. It is artificial, it is destructive, it is polluting.

The peoples of the countries of Latin America have forged social networks to denounce the impacts of monoculture tree plantations. One example is the Latin American Network Against Monoculture Tree Plantations (RECOMA), a decentralized network of Latin American organizations that coordinates actions, fosters support of local struggles, promotes alternative models that are socially and environmentally suited to different realities, and organizes horizontal exchanges between countries.

There are many other initiatives that point in the same direction. For instance, quilombola communities – descendants of escaped African slaves – in Espírito Santo, Brazil, living in the midst of vast eucalyptus plantations, have found new ways to survive and struggle to reconquer their natural resources and genetic heritage. These communities are reviving traditional agricultural practices, adapting management techniques, opening up new channels of access to local and regional markets, and promoting the ongoing exchange of seeds and agricultural practices between communities.

The search for an alternative path in production, marketing and consumption that will lead us away from the current process of extermination has become an imperative need, and the communities standing up in resistance are the agents of change who could lead us there, creating local sovereignty, building food sovereignty. We must all continue working to achieve the necessary change in direction.

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