



## Issue 147 - October 2009

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## OUR VIEWPOINT

### - Forests again high on the agenda – really forests?

As a result of the growing concern about climate change, forests appear to be once again high on the international agenda, particularly in relation with their role as carbon reservoirs. There is broad agreement that forests can help to either mitigate –if conserved- or worsen –if destroyed- the looming danger of climate change. However: is it all really about forests?

Perhaps the best –worst- example for responding to the above question is the World Forestry Congress, recently held in Argentina. At the meeting, forests and monoculture tree plantations were treated as synonymous. Such stance, coming from forestry experts, helps to provide support to companies involved in converting true forests into fake forests, biodiversity into monocultures, nature into profits.

A “planted forest” is a forest: that is the message that the world is receiving from the World Forestry Congress. If this message was given as a “true-false” exercise to school children, most of them would have no doubts in replying “false”. But –with some few

exceptions- the world's forestry "experts" appear to think otherwise. Therefore, a forest can be wiped out and substituted by a eucalyptus, pine, oil palm, rubber or whichever tree plantation and nothing will have changed.

To make matters even worse, part of the Congress' agenda was focused on the need to "improve" forests through the use of genetically engineered (GE) trees, in spite of the fact that GE trees could wreak havoc on the world's forests. In line with the WFC, future monoculture GE tree plantations would also be considered to be "forests", thus making the forest definition even more absurd ... and dangerous.

The same issue of defining forests as plantations came up at the Climate negotiations on REDD (Reducing Emissions from Deforestation and Degradation in Developing Countries) held a few days earlier in Bangkok. The fact that the UN Convention on Climate Change also considers that plantations are "forests", provided a good excuse to European Union delegates to block language aimed at preventing conversion of forests to plantations. This led to an abrupt end of the negotiations, because most other delegates became aware of the danger of channeling REDD funding for the replacement of tropical forests with pulp or oil palm plantations.

Also linked to climate change and to the definition of plantations as forests is the production of tree ethanol from tree plantations and agrodiesel from oil palm plantations as "green" alternatives to fossil fuels. Such fuels could result in the destruction of extensive areas of forests, that would be converted to monoculture tree plantations. As the definition of forests now stands, nothing would have changed, as long as "forest cover" is maintained.

The absurdity of all the above –and the vested interests behind- is becoming increasingly clear –and recently even to REDD negotiators. The process for excluding plantations from forests is still of course long and difficult, but a growing number of social organizations, peasant movements, indigenous peoples organizations, human rights activists, academics, foresters and the public at large are joining under the banner of "plantations are not forests". Local communities that initiated the process through their struggles against tree monocultures are no longer alone.

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## WORLD FORESTRY CONGRESS

### **- Social resistance against the World Forestry Congress**

The Thirteenth World Forestry Congress (WFC) took place in Buenos Aires, Argentina from 18 to 23 October.

The history of these congresses started in 1926 in Rome. They are meetings that take place every six years in different host countries, attended by representatives of governments, civil society, the private corporate sector and the academic world.

There is a close relationship between these Congresses and FAO insofar as it takes part in their preparation, defining the agenda, the speakers and authors to be invited and the expert advisory committee. The output of these WFC takes the shape of recommendations that can be adopted by FAO with all the weight and influence this implies.

Coinciding with the opening of the XIII WFC, hundreds of representatives of peasant and indigenous movements and social organizations from Chile, Brazil, Uruguay, Paraguay and numerous Argentine Provinces, arrived in Buenos Aires.

Received by Vía Campesina and Friends of the Earth Argentina, hundreds of women and men, sometimes with their children, took part in three days of exchange of information and training meetings in addition to demonstrations and marches.

On 16 October, Food Sovereignty Day, they marched from the Ministry of Agriculture to the Plaza de Mayo where they assembled to read a proclamation and hold a market selling native seeds. The grass-roots organizations demanded food sovereignty, the halting of deforestation and the implementation of an agrarian reform that would guarantee that the communities can live and produce on their lands. Family and peasant farming are being trapped and evicted from rural areas by agribusiness, including monoculture tree plantations.

On Sunday 18 October, the venue was Plaza Italia, around the Festival of the "People who live with the Forests." Amid music, singing and dancing, a colourful and energetic demonstration reached the doors of the nearby premises hosting the WFC. They bore banners with slogans such as "Plantations are not forests," "Stop forestation. Yes to productive diversity. No to monoculture tree plantations," "Monoculture plantations are not forests," "Resisting agribusiness," "Food sovereignty," "Land, water and justice."

The introduction of industrial monoculture tree plantations in Argentina has increased since 2006, when law 25080 subsidizing tree plantations was adopted. The commercial environment of this Congress is obvious in the formulation of the rounds of negotiations themselves and included on the official programme. Furthermore, a section is devoted to "planted forests."

Therefore the Congress may well be an ideal platform for the expansion of the industry, legitimated by the academic world and concealed under the slogan of "Forest development, a vital balance." Within the word "forestry" things as distant from each other as forest ecosystems with their immensely rich biodiversity and the barren large-scale monoculture tree plantations - the "green deserts" - are put on the same footing. For the "people who live with the forests" present at the festival and the march, no confusion exists. They are very clear about the value of forests that provide them with life and sustenance. And painfully they know the negative impacts of tree plantations: the loss of water, loss of territory, loss of biodiversity, loss of food sovereignty, loss of their knowledge and with it, their culture and identity, and the loss of life itself.

For these reasons, in a very forceful way, they told the participants at the WFC:

NO to monoculture tree plantations

At the same time, they added:

YES to the defence of life

YES to territories in the hands of indigenous peoples and peasant communities

YES to an agriculture for Food Sovereignty

YES to the traditional knowledge of our peoples

And in their proclamation they announced:

“The struggle against tree plantations is also a celebration of life, of farming based on diversity in the hands of small peasant and indigenous farming families, of peasant and indigenous forest rehabilitation and of so many other existing real solutions. This celebration of life and of resistance, on this day of struggle against tree plantations, makes us more united along our path to build a new world.

WE LIVE OFF THE FOREST, WE LIVE WITH THE FOREST, WE LIVE FOR THE FOREST...

OUR VOICES AND EARS IN OPPOSITION TO THEIR MONOCULTURE PLANTATIONS”

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### **- Argentine forestry sector in the spotlight at the World Forestry Congress**

The World Forestry Congress taking place in Buenos Aires is viewed as an excellent business opportunity by the Argentine forestry sector.

The industry’s high expectations have been reflected for several months through growing coverage in the local and national media. One example is a recent article in a publication from the province of Corrientes ([www.momarandu.com](http://www.momarandu.com)), which reports: “After the forestry exposition in Misiones, companies in Corrientes are placing their sights on the 13th World Forestry Congress, looking to reach agreements in negotiating rounds in which some 200 business representatives from 26 different countries will participate.” Local forestry companies “see the Congress as a ‘gateway to the world’ where they can demonstrate the province’s potential in raw materials and attract investment that will help the industry lift off.”

The World Forestry Congress, organized by the Argentine government in collaboration with the FAO, will include a series of tours for the participants. As could only be expected, one of them will take in the provinces of Corrientes and Misiones, where foreign business representatives will be able to see the “planted forests” of a number of different companies (Las Marías, Agro Alba, Grupo Tapebicué, Garruchos, Lipsia).

Naturally, the visiting business representatives will see what the local companies want them to see and hear what they want to tell them.

Given that Misiones is known as “the country’s main forestry province”, it will undoubtedly be held up to both the visitors and the general public as a model of forestry development.

In these circumstances, it is particularly important to disseminate the following article, based on a recent tour through the province, in which the testimonials of local inhabitants expose the harsh realities and the lies behind this so-called forestry development.

### **Argentina: Misiones – pines, pulp mills and lies**

The province of Misiones was born beautiful, with its breathtaking rainforest, but was seemingly destined to suffer in life. The history of its plunder began with the Spanish conquistadors, who crushed the native Guaraní people into subordination, stripping them of their freedom and tearing apart their way of life.

In more recent times, the plunder of Misiones has been suffered primarily by its rainforest, indiscriminately chopped down in inhumane working conditions for the logging industry. Rafts laden with precious lapachos, timbós, ybira-pitás and peteribís carried off these and many other tree species down the Paraná River to the national and international market. In a little over a century the Misiones rainforest was reduced to one third of its original size.

This deforestation was accompanied by the growth of the agricultural sector. Yerba mate (*Ilex paraguariensis*), which was originally harvested in the wild, began to be cultivated on a large scale, alongside tea, citrus fruits and tobacco. While there was a certain amount of concentration of land ownership in large plantations, there was also a government-promoted agricultural colonization programme, based on small- and medium-scale family farming on plots of land between 25 and 50 hectares, with annual crops and centralized yerba mate cultivation.

This structure led to the development of a rural population that was devoted primarily to such agricultural tasks as preparing the land for planting, sowing and harvesting crops. Farm labourers were also provided with small plots of land where they could live with their families, which provided them with a certain degree of food sovereignty.

This situation started to change in the 1940s, with the installation in Puerto Piray, a municipality in the department of Montecarlo, of a pulp and paper mill by the nationally owned company Celulosa Argentina, which gave rise to the establishment of monoculture plantations of pine trees. This pulp mill, created under the import substitution model, faced major resistance from its workers in 1968 over denunciations of hazardous working conditions.

During the years of the dictatorship and consequent repression of social movements, an economic reconversion took place. This included a project for the construction of mega pulp mills with the majority of shares held by Celulosa Argentina: the former Celulosa Puerto Piray S.A. (currently shut down) and Alto Paraná S.A.

The expansion of monoculture tree plantations was given a major boost in 1998 with the passage of Law 25080, known as the forestry promotion law, which granted a series of benefits: subsidies for planting trees, subsidies through the reimbursement of value-added tax, tax exemptions on revenues and property, and elimination of transport permit fees, with this favourable tax regime guaranteed for a period of 30 years, which can be extended to 50 by the provincial government.

All of this, on top of the deregulation of the consignee market for yerba mate (which guaranteed producers a price higher than their costs and negotiated the sale of their crops to large processing plants), signed the death warrant for the family farming system.

Small farmers and their crops of citrus fruits, tea, yerba mate and tobacco were displaced by the advance of monoculture plantations, mainly of slash pine (*Pinus elliottii*) – whose resin burns the leaves of yerba mate plants, which therefore cannot grow beneath them – but also loblolly pine (*Pinus taeda*) and eucalyptus trees. Small farms were bought up for the establishment of tree plantations, or in some cases used by the owners themselves to plant pine trees, under the belief that this would be a lucrative business for them, although it eventually proved not to be.

The small farmers who lost their farms moved to urbanized areas, leading to a decline in the formerly predominant system of rural employers and thus the sources of work that they provided. The result was the dismantling of the rural population. In the department of Montecarlo, for example, there were formerly settlements inhabited by over 150 families on average, and these have disappeared or suffered notable losses in population. As the rural population declined, numerous urban and suburban settlements emerged in the region.

This old system of land ownership, which provided employment but was based on the exploitation of workers, was not replaced by a more equitable system. Ownership of the land became increasingly concentrated and then passed into foreign hands. Alto Paraná was purchased in 1996 by the Chilean company Celulosa Arauco y Constitución (Celarauco), owned by the Angelini group, which later also purchased Celulosa Puerto Piray. The latter transaction has been denounced as outrageously fraudulent, because the sale was only made possible through the cancellation of the pulp mill's debts to the municipal government. Of the 10 million dollars that the mill owed to the municipality, it ended up paying 200,000 Argentine pesos (around 50,000 dollars), plus 300 hectares of land, two trucks and one Caterpillar bulldozer. The arrival of this foreign investment came at a heavy cost to the public coffers.

The installation of Alto Paraná led to a heavy concentration of land ownership in the province of Misiones. For example, in the municipality of Piray alone, the company owns 62.5% of the land, and when combined with another three companies they control 83%. Province-wide, the 233,000 hectares of land owned by Alto Paraná represent 10% of the province's total land area. (1).

This concentration of ownership and control is not limited to the land, but also extends to the raw materials it produces: small sawmills in the area have been cut off from supplies of wood and access to new technology, leading to their closure and a subsequent rise in unemployment. At the same time, the workers who have lost their jobs have not necessarily been absorbed by the new pulp mill project, since growing automation means that tasks on tree plantations that formerly generated employment, such as planting, weeding and harvesting, have gradually been taken over by machinery and toxic agrochemicals.

Today, under this new model, 53% of the region's inhabitants are unemployed, and of the 47% who do have an income, 86% earn less than the minimum wage.

Added to this is the loss of water in the province. Initially, deforestation through over-logging was the main factor behind the decline in the water supply, since the disappearance of the rainforest altered the hydrological cycle. Later, the establishment of large-scale plantations of exotic fast-growing tree species, with their highly “efficient” ability to access water through roots that reach deep into the ground, served to further exacerbate the problem.

Tree plantations have destroyed the Misiones rainforest, led to the concentration of ownership and foreign ownership of the land (leading in turn to social inequity and loss of sovereignty), displaced the family farming system, and caused countless impacts on the environment and people’s health. (2) The plantations also brought with them, in the words of a native son of Misiones, “the big lie” – “The big lie that they have made us the country’s most important forestry industry region, which came at a cost of millions of dollars, plus the destruction of the rainforest and of trade union and social organizations.”

It is important to expose the reality behind this big lie of “forestry development” in Misiones, at a time when the monoculture tree plantation industry is attempting to portray its activity as “environmentally friendly” at the World Forestry Congress. For the people of Misiones, the so-called “forestry development” promoted through tree plantations is a far cry from the “vital balance” proclaimed by the Congress’ slogan.

By Raquel Núñez (raquelnu@wrm.org.uy), based on a tour taken with Elizabeth Díaz through the northern region of the province of Misiones, with the generous accompaniment and valuable information and testimonials contributed by Ruben Ortiz, Juan Yahdjian and numerous inhabitants of the community of Piray 18 and the rest of the region.

(1) “La invasión forestal”, Darío Aranda, published 26 July 2009 in Página 12, available at [http://www.wrm.org.uy/paises/Argentina/invasion\\_forestal.html](http://www.wrm.org.uy/paises/Argentina/invasion_forestal.html)

(2) “Misiones: la selva de Quiroga convertida en pinos para celulosa”, Ricardo Carrere, July 2005, <http://www.guayubira.org.uy/celulosa/informeMisiones.html>

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## TREE PLANTATIONS AND WATER

### **- Mounting pressure against eucalyptus in Kenya, described as the “water guzzler”**

Something extremely interesting is currently happening in Kenya. On the one hand, the country’s Environment Minister, John Michuki, has ordered the uprooting of eucalyptus trees from wetlands and banned their planting along rivers and watersheds. At the same time, well known Nobel Prize winner Wangari Maathai is calling for a ban on planting alien species and particularly eucalyptus, while experts from the Kenyan-based International Centre for Research in Agroforestry (ICRAF) raise the alarm on the “thirsty” nature of eucalyptus.

### **When planting eucalyptus was good**

The above would have been unthinkable a few years ago, when the government was actively promoting eucalyptus plantations throughout the country. For instance, in 2003 the Environment News Service reported that “a new variety of genetically superior eucalyptus trees” had been introduced in Kenya, and that this “could save Kenya's forests from further depletion.” Based on the information provided by the promoters of this initiative, ENS stated that “For those in semi-arid areas the eucalyptus trees are being regarded as an opportunity to earn income from yet another source” adding that “researchers say the new genetically superior eucalyptus may be the future answer to afforestation in some of the arid Kenya zones and if well managed it could save the country's forests from further decimation.”

The above assumptions were supported by a number of expert bodies and donors involved in the promotion of eucalyptus trees in arid and semi-arid areas in the country.

In the first place, the production of the “superior” trees was “spearheaded by the National Agriculture and Livestock Extension Program - an extension initiative funded by the Swedish International Development Agency.” Additionally, the planting of the “genetically superior eucalyptus” was part of a National Agroforestry Research Project, a collaborative project jointly implemented by the Kenya Agricultural Research Institute (KARI), the Kenya Forestry Research Institute (KEFRI) and the International Centre for Research in Agroforestry (ICRAF).

A similar initiative “to provide superior clonal material to rural Maasai communities” was launched through the Kajiado project - a partnership biotechnology transfer project between the Forest Department of the Ministry of Environment and Natural Resources in collaboration with the Kenya Forestry Research Institute and Mondi Forests (a South African plantation and pulp corporation). The Gatsby Charitable Foundation of United Kingdom funded this project, while the International Service for the Acquisition of Agri-biotech Applications –which includes Monsanto, Bayer Crop Science and CropLife International among its donors- facilitated the undertaking.

### **Following expert advice**

Local people were made to believe that planting those “superior eucalyptus” would “contribute to the national goal of alleviating poverty among the resource-poor farming communities”, as expressed by Gabriel Ndungu, a National Agriculture and Livestock Extension Program (NALEP) officer in Kiambu.

The government took a very active role in their promotion and eucalyptus tree seedlings and clones were distributed by the Kenya Forestry Research Institute at Karura Forest near the city of Nairobi. The role of NALEP in the initiative was “to rally farmers groups to realize the potential of planting the genetically superior trees in their own farm plots”.

Farmers were told that they would be able to commercially exploit the trees after about six years but within two years the trees would be available for firewood and fencing uses. They were also informed that the trees had “superior grains that reduce splitting of sawn timber and grow uniformly thus reducing logging costs”.

How could local farmers not believe in the advice of all those expert bodies? How could rural women not be supportive to the initiative, when over the years they have

experienced fuelwood scarcity for their domestic use and the solution of planting eucalyptus appeared to be reasonable for small farmers and particularly for women?

What none of these people were told was that though these trees could enable them to earn money, they would at the same time deplete the local water resources, thereby dividing the community between those negatively impacted by eucalyptus and those profiting from the sale of their wood.

### **Three years later: fast growing trees identified as problematic**

In August 2006, a different picture began to be unveiled at the World Water Week meeting in Stockholm. At that meeting, researchers warned that although planting the right species in the right areas could improve water efficiency, other species –such as pines and eucalyptus- could make the problem much worse.

The warning came from the International Centre for Research in Agroforestry (ICRAF) which announced its findings on water use by trees, based on 20 years of research in Kenya. As a result, ICRAF scientists advised against planting fast-growing evergreen trees such as eucalyptus and pines because of their high water consumption.

A video -“Thirsty Trees: And the Search for Better Alternatives”- was presented at a side event organized by ICRAF. (<http://giip.org/content/view/104/37/>) The video shows that both government officials and local people agree that eucalyptus are impacting on water resources. A local person explains that the level of what used to be “a very big river” has “gone down” as a result of the eucalyptus trees planted along its margins. The video explains that, as usual in such cases, “women and children are the most affected by the reduction of water”, because they are “the providers of water for their families and it means more time fetching water from streams and lakes”.

The video provides figures on water usage, stating that one single 3-year old eucalyptus “drinks” 20 litres of water per day. During the following years, consumption exponentially increases and at age 20 the tree will “drink” 200 litres per day!

### **The myth about the lack of scientific evidence**

Perhaps one of the most interesting conclusions from ICRAF’s findings is that it counters one of the main arguments used by promoters of fast-wood plantations, which says that there is “no scientific evidence” proving that such plantations deplete water resources.

After nearly two decades of research at its Machakos Research Station, ICRAF provides ample evidence on the issue and concludes that:

“Fast-growing evergreen species can quickly draw significant quantities of water from below-ground, raising serious concerns about their impact on landscapes. Tree species with water requirements that exceed available rainfall (as they draw upon other water sources), can produce large negative trade-offs for other local water uses and for downstream water users. This is an especially important finding for fledgling carbon sequestration programmes that tend to favour fast-growers such as Eucalyptus that can have severe impacts on river flow”.

Many species characterized by high water demand are favoured for their economic

value, and are thus harvested and replaced on a rotational basis. These plantations of 'thirsty' species will only be viable in areas of high rainfall and run off, where water collects and where ground water is more readily available.

Average rainfall in East African catchments is between 1200-1800mm. Eucalyptus alone can consume most of this water. Therefore in watersheds with average rainfall below 1600mm, it is prudent not to plant evergreen species such as Eucalyptus or pines."

Not only does ICRAF provide the evidence, but it has also invented a simple tool for measuring any tree's water consumption, thus making scientific evidence easily available in any debate on plantations' water consumption.

The equipment developed at ICRAF can measure sap flow using the heat pulse method to determine the velocity of water movement in tree trunks. From these simple measurements, it is possible to estimate a tree's total water use on an hourly basis. (see at <http://www.icinternational.com.au/hrm30.htm>)

### **The result in 2009: "Thirsty eucalyptus trees get the chop in Kenya"**

An article published on 30 September 2009 informs that "farmers in central Kenya are cutting down water-hungry eucalyptus tree species growing near water sources as a government directive aiming to save water takes effect. Environment minister, John Michuki, issued the directive in an attempt to lessen the impact of the drought that is ravaging the country.

Eucalyptus has been popular with farmers because it grows fast and provides ample stocks of timber and firewood. But it is also a danger to water supplies.

Now, eucalyptus trees growing less than 30 metres from rivers, streams, wells and other water sources are being cut down. Already, farmers in central Kenya have felled virtually all trees growing near water sources.

"We agree that eucalyptus growing near water sources has contributed to water sources drying up and that is why we are removing the trees," says Joseck Gatitu, a farmer in the Kamune area of central Kenya, who has cut down 15 trees near a stream that has nearly dried up.

James Gitonga, a senior officer at the Kenya Forest Service, says that although eucalyptus trees were a source of income to farmers, the recent rapid planting of *Eucalyptus grandis* and *Eucalyptus camaldulensis*, two fast growing species introduced to Kenya from South Africa seven years ago, was a threat to the environment.

"The trees have been planted in great numbers, including near rivers, swamps and other catchments, and being huge water consumers they have greatly contributed to depletion of water, particularly during the current drought," he said.

### **A Nobel Prize laureate steps into the debate**

Nobel Peace Prize winner and renowned Kenyan environmental campaigner Wangari Maathai is actively opposing "the aggressive push for exotic tree species", "over-promoted for commercial reasons", and calling "to focus on planting indigenous trees",

which are “best suited to regions where they are supposed to be.”

Professor Maathai has called for a ban on commercial eucalyptus tree plantations in the country. She says the tree is contributing to the depletion of water through its high rate of demand.

Maathai adds that apart from the negative impact on water systems, the eucalyptus, which is called the water drinker or guzzler (“munyua mai”) in her native Kikuyu, is also hostile to other species and almost the entire local biodiversity.

“When you go into these monoculture plantations, they look like dead forests because it’s only them. You don’t see birds, butterflies, other trees, animals —anything other than them because they don’t allow any other growth.”

During her key note speech at the 2nd World Agro Forestry Congress, held in Nairobi, Kenya in August, Maathai told the audience -“with respect to the Australians present”- that there are no kangaroos in Africa, and that, “we do not need eucalyptus.”

### ¿Eucalyptus under the shamba system?

It would be wrong to assume that the Kenyan government agrees with Maathai. The fact that the minister has banned eucalyptus trees in certain areas does not mean that commercial eucalyptus tree plantations have also been banned. In this respect, Maathai raises the alarm against “the idea of re-introducing the very destructive shamba system into our gazetted forests. This system, notwithstanding claims that it is coming back in an improved format, is a system that destroys biodiversity and reduces the capacity of forests to harvest rain water, retain it and releases it gradually through rivers and streams”. She stresses that “it is suicidal to succumb to pressure from pulp and building industries and re-introduce a system that was largely responsible for the destruction of forests in the past. It is extremely unwise to use watershed areas as farmlands for commercial trees to keep private or unviable public companies in operation.”

Kenya’s “shamba” system implies that farmers are encouraged to cultivate primary crops (maize, bananas, beans and cassava) on previously clear cut public forest land on the condition that they replant trees. Since the mid 19th century, Kenya adopted this system to establish tree plantations by means of cheap or totally free labour, in order to meet the demand for timber.

Besides being open to abuse, the system results in the replacement of indigenous forests with exotic tree monocultures. The most common exotic species planted in public forests include pines and cypress. Those plantations established under a monoculture regime interfere with the forest dwindling its biodiversity, and reducing its water catchment qualities. ¿What would happen if eucalyptus were to be planted under the shamba system?

### The FAO to the rescue

In the face of all the evidence about the impacts of fast growing tree species, the eucalyptus lobby is trying to downplay and to confuse the issue.

As could be expected, the Food and Agricultural Organization (FAO) has come to the

rescue of its beloved tree. In a recent FAO report quoted in the Kenyan media, the organization has said that despite the controversy, because of its fast growing nature, eucalyptus could remain a viable alternative, especially in developing countries where population growth is matched with the demand for wood for fuel, shelter and other needs.

What the FAO does not say, is that most of the world's fast-wood plantations are not aimed at providing "wood for fuel" or "shelter" and that the "other needs" are usually those of industrialized countries and/or their transnational corporations, unrelated with "population growth" but directly related to overconsumption growth in the North.

The FAO insists in equating native forests with plantations. In its report, the FAO estimates that in the tropics, only one hectare is planted for every 10 hectares of natural forests cleared and that to cope with this situation, the choice is to plant fast growing, adaptable and exotic species like eucalyptus that have a multiplicity of uses. Which means that for the FAO a hectare of eucalyptus monoculture is the same as a hectare of native forest!

The FAO of course forgets to mention that ICRAF has identified a number of native species that could be planted in Kenya instead of eucalyptus and that these trees have positive social, environmental and economic effects -while eucalyptus are impacting on the country's biodiversity and scarce water resources.

More importantly, to say that one hectare of monoculture eucalyptus can compensate for the loss of one hectare of biodiverse tropical forest is an environmental absurdity, that plays to the hands of plantation companies eager to "green" their image and disguise their impacts.

### **Support from mainstream foresters**

Dr. Robert Brook, of the School of Agricultural and Forest Sciences of the University of Wales in the UK, is a typical example of mainstream foresters' reaction to the mounting evidence about the impacts of eucalyptus. According to a Kenyan press report, he "wonders why the spotlight is on the eucalyptus when there are so many other trees that extract large amounts of water from the soil."

"I think the criticism has been overdone," he says. "From my personal observation, teak, an exotic tree, extracts more water."

Although the above statement is questionable, does that mean –in case that it were true– that because teak is worse, eucalyptus is good?

Dr. Brook even goes as far as to acknowledge impacts: "I've seen it planted in solid blocs in India. Nothing grows underneath, and when the heavy monsoon rain comes, the soil is washed off, and that leads to the silting of dams."

In spite of the above, he does his best to defend eucalyptus, saying that "When planted in singles, twos, threes, or in rows, it should not be a problem."

Of course no-one is arguing against the planting of a few trees –and he surely knows it– but with the above argument Dr. Brook aims at providing whatever support possible to

the embattled eucalyptus.

In a less open manner, even the Director General of ICRAF (Dr. Dennis Garrity), appears to downplay the findings of his own organization. He admits that eucalyptus can have destructive effects on the environment because of its high water needs, and says that its widespread adoption across Africa had reduced the water table. But he argued that eucalyptus trees have been widely adopted across Africa for their unique characteristics as fast growers and a good source of timber and fuel.

Does that mean that he supports or that he opposes further eucalyptus plantations in Africa?

An anonymous "tree specialist" from an unnamed "Kenyan non-governmental organization" exemplifies the more radical pro-eucalyptus lobby. According to the media, he "disagrees vehemently with Professor Maathai's call, and says the benefits of the tree far outweigh its detrimental aspects. He says it poses no threat to the environment if planted in the right place.

His argument is that "It's all about site matching, because different species are suited to different places", and he actually advocates the planting of more eucalyptus in the country.

He of course does not provide any guidance about which eucalyptus should be planted in which sites in Kenya to prevent their "detrimental aspects". He does say however, that "there are only 100,000 hectares of eucalyptus" in Kenya and that "we need more trees".

Apparently, the only "tree" that he considers worthy of such name is eucalyptus.

### **The case for native tree species**

However, the fact is that there are of course native trees in Kenya that conserve -instead of "guzzling"- water and that can provide multiple benefits -including fuelwood- to people and the economy. In this respect, ICRAF scientists recommend planting deciduous trees in integrated "tree-crop" systems, in which agriculture and forestry are practised on a single piece of land.

Such trees shed their leaves for up to six months of the year, nearly halving the amount of water they need. This enables them to cope with long dry spells and also means they won't compete with crops for water.

ICRAF recommends tree species for specific regions. They say that a relative of mahogany called *Melia volkensii*, which produces high-value timber, would benefit semi-arid areas such as those in East Africa, for example.

Water-catchment areas in Central and West Africa, meanwhile, would suit *Cordia africana*, which is at the same time useful for small-scale honey producers because its flowers are highly attractive to honey bees.

Another interesting species is bamboo. According to Dr Chin Ong, a plant physiologist at ICRAF, "Kenya's water catchments were once covered in bamboo" but, "most of these forests have since been cleared." *Arundinaria alpina*, a species of bamboo native

to Kenya, can yield as many as 20 000 culms per hectare per year, with each culm growing to a height of 12 metres. This scale of production could mean big business for Kenya. In 2002, the global trade in bamboo reached USD 2 billion. Bamboo is posed to make a major come back in Kenya, much to the excitement of local communities who look forward to the twin benefits of this environmentally-friendly cash crop.

ICRAF is trying to encourage policymakers and communities who continue to plant evergreen trees — as sources of pine resin or pulp for paper production, for example — to change their practices.

In line with the above, Wangari Maathai says that “We have especially learnt to recognize and respect rural livelihood priorities and focus on providing not just a scientific solution but a stream of benefits, one of which is Agroforestry tree planting. This especially with fertilizer trees, which improve the soil, provide fruits, medicines, fodder, timber, shade and beauty, not to mention the benefit to the ecosystem, pollination, biodiversity, and protection of watersheds, rivers and wetlands.”

She stresses the need to “expand existing proven and integrated tree-based practices such as combining conservation agriculture with agro forestry — what we might call “evergreen agriculture”. This would make it possible to achieve environmental benefits and sustainable food security and livelihoods. To achieve this will need sound decision support mechanisms from researchers — supported by policymakers for effective implementation — that builds on knowledge, partnerships and capacity.”

### **The tea lobby**

A very powerful actor in the promotion of eucalyptus for fuelwood in Kenya is the tea industry, that burns wood from this species to dry the tea before packaging. Fast-growing eucalyptus trees provide them with a cheap source of energy for this operation. According to a local forestry expert who has managed eucalyptus plantations for a tea company (Julius Kamau, personal communication 2009), “the current annual eucalyptus wood consumption in the tea industry is estimated to be 5 million cubic metres.”

Unilever is one of the several big corporations that own tea plantations in Kenya. In its website, the company says that it “has reviewed the way it produces and uses its fuel wood, as the growing demand for tea threatens to outstrip supply from its eucalyptus tree plantations.” In this respects, Unilever “is working in partnership with the Kenyan Forestry Research Institute” and has “also consulted experts in South Africa to establish best practice in optimising the use of fuel wood.” The company “continues to look for ways to improve efficiency further, for example by exploring new high-yield tree varieties,” that would “increase eucalyptus plantation yields by an estimated 15%.”

The above would of course result in an additional increase of the tree’s water consumption and the further depletion of local water resources.

This company, as well as others, must be therefore quite concerned about the recent government’s decision (August 2009) ordering the Nyayo Tea Zone Development Corporation (NTZDC) to stop planting eucalyptus trees in the 11,000 hectares zone. Agriculture Permanent Secretary Romano Kiome has said that the corporation had until June next year to uproot all the eucalyptus trees it had planted in a bid to conserve

water catchment areas. "We have asked them (NTZDC) not to plant eucalyptus but instead plant indigenous trees", he said.

Given the importance of the tea industry in Kenya –which produces and exports the famous Lipton tea- it is clear that it will need to find an adequate alternative to eucalyptus as fuel. The impacts of this species on water are now so obvious that the industry will either need to identify native tree candidates for producing fuelwood or switch to other less damaging energy sources.

### **To ignore or to acknowledge facts: that is the question**

In Kenya there is more than sufficient evidence proving that eucalyptus plantations, even on a relatively small scale, impact heavily on water resources. Based on such evidence, the government of Kenya has imposed a ban on planting this species in wetlands and water catchment areas. The next step should be to follow Wangari Maathai's call for entirely banning alien trees and to resort to native species in the country's reforestation plans.

The above implies that other countries facing water scarcity problems should take stock from the Kenyan findings and must cease to promote the plantation of eucalyptus or other fast-growing alien species and switch to the planting of native trees. Given that climate change may result in more prolonged droughts in Africa and other continents, such switch in plantation species should be urgently implemented.

In spite of all the evidence, organizations such as the FAO and some mainstream foresters appear to be more eager to protect the interests of corporations than to acknowledge that the environmental impacts of fast-growing species –particularly eucalyptus- far outweigh their economic advantages.

The only thing that the plantation lobby can do is to try to downplay the evidence, but they can no longer say that it does not exist. Fast-growing species impact on water and this is a well proven fact.

Within such context, local communities and civil society organizations have a major role to play in generating awareness on the impacts of plantations of those species and in putting pressure on governments for introducing changes in their reforestation plans. These should be based on native species -naturally adapted to the local environment- able to improve water harvesting and soil conservation, as well as in bringing back biodiversity. The species selected for plantation should provide local people with useful goods and services including food, medicines, firewood, fibers, etc.

If successful, such civil society pressure will not only serve Kenya's environment and its peoples, but can also assist many other peoples around the world struggling against the expansion of the same type of destructive alien tree monocultures that are being curtailed in Kenya.

By Ricardo Carrere, WRM International Coordinator

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## **- Testimonies of tree plantations and depletion of water resources**

In every case where large scale fast-growth tree monocultures are established water resources either diminish substantially or disappear entirely, mainly due to the high water intake of fast-growth alien tree species. Wells, wetlands, streams and even rivers dry up. The local affected communities give testimony of that.

WRM has produced a power point presentation -“Tree plantations and depletion of water resources” [[http://www.wrm.org.uy/plantations/Tree\\_plantations\\_and\\_water.pdf](http://www.wrm.org.uy/plantations/Tree_plantations_and_water.pdf)] - which is a compilation of testimonies from people all around the world, providing more than sufficient evidence about the direct relationship between plantation expansion and depletion of water resources.

For us, they are the true experts from whom we can all learn.

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## TRANSBOUNDARY PROBLEMS

### - Posco: Destroying forests in India and establishing carbon sink plantations in Uruguay

Uruguay and the Republic of Korea have recently signed an Agreement for Investment Promotion and Protection which, according to Uruguayan government authorities establishes a framework for Korean investment in Uruguay. From past experience in Uruguay, the establishment of a framework for investment in this country may mean reducing or eliminating all taxation, granting of foreign trade zone permits and all kinds of support to the company's enterprises.

One of the first investments to be announced by the Koreans in Uruguay is a "Forestry Carbon Sequestration Project" by the POSCO Company. Regardless of the numerous negative impacts of monoculture tree plantations that have already been verified and documented, the POSCO project involves a 1,139 hectare eucalyptus plantation. Under the slogan of "Save the Earth with plantations" the company simply does not consider the innumerable voices of hundreds of social movements all over the world opposing them. The hub of this project is that, by establishing monoculture tree plantations in a country, POSCO can "compensate" for its emissions of gases causing climate change in its country of origin or in other countries.

POSCO, one of the largest producers of steel in the world, is well-known in India and, not precisely because "steel loves nature" as stated on the cover of its presentation file and still less because it loves people.

In 2005 the Korean company Posco signed an agreement with the Indian government for the establishment of a steel plant, a port and mine prospecting in the Eastern State of Orissa. Since then, thousands of people have been opposing the project because of the huge negative impact it will have on the villagers.

The area where POSCO is proposed to be allotted the mines spreads over 6000 hectares of primary forest. These forests are inhabited by a wide variety of wildlife and flora.

Furthermore, the tribal communities which form 74 per cent of the population in the surrounding area are completely dependent on these forests for fuel, fodder, fruits and medicinal plants. The water springs in the area provide water for drinking as well as irrigation. The mining would also affect the Khandadhar waterfall, a place related to the spiritual practices of the indigenous people - and also a famous tourist destination in this state. POSCO intends to mine the Khandadhar Hill range - the area where the waterfall originates.

In June 2006, even the Congress, the most important political party in India, pledged its support to the people's movement against displacement caused by the proposed Posco steel plant. The people of Dinkia, Nuagaon and Gadakujang, who face displacement are prosperous because of their agricultural activities. Congress leaders said locals who are progressive and prosperous will become beggars and landless labourers, once they are displaced from the agricultural fields.

In August 2007, a large group of people belonging to various political parties and social organisations protested at the doors of the POSCO offices, protected by a large contingent of police force. The demonstrators, that included many women, raised slogans against the Korean company and blamed the government for facilitating the Posco steel project in Jagatsinghpur district, despite the opposition of displaced villagers.

In October 2008, a resolution signed by more than 100 organizations and people, most of them academics, condemned the increasing state of repression in Orissa against the peaceful resistance of people to the anti-people POSCO steel Project. Despite the state's increasingly repressive regime, the struggle had reached a new height, with more local residents, especially women, joining in and more democratic voices from all over the world condemning the state for acting in denigration of Constitutional values and human rights, and in favour of corporate interests. The level of repression reached its highest point when the president of the anti Posco movement, Abhay Sahu was jailed.

In August 2009, more activists were arrested for opposing POSCO and false cases have been registered against them. As many as 20,000 people from 15 villages nearby fear that the construction of the plant will destroy their homes and livelihood. Regarding the proposed plans for compensation, the people say: Nothing can compensate for the displacement of thousands of people.

In the State of Orissa demonstrations against POSCO have joined the thousands of people who have been demonstrating for years against Vedanta, a British company. The thousands of people who blocked the roads in the locality of Muninguda a few days ago demanding the immediate suspension of mining permits are well aware of what displacement means: the loss of land, forests, culture, means of subsistence and identity as set out in a resolution issued on 10 October 2009. (See resolution in <http://www.wrm.org.uy/countries/India/Niyamgiri.html>)

In spite of years of struggles, in spite of prison, torture and repression, the leaders of both groups have declared that they will continue their efforts until they drive both companies out of India.

With this track record, POSCO is attempting to clean up its image in Uruguay through the plantation of what it calls "forests" (fast-growing eucalyptus plantations) to "compensate" for CO2 emissions from its industrial activities. Obviously it "forgets" to mention that in India it intends to destroy 6,000 hectares of real forests, and if so far it has been unable to achieve this, it is only because the local people have managed to prevent it.

The people and the present Uruguayan government, who know what repression, prison and torture mean in the flesh because they suffered years of military dictatorship, must align themselves with their Indian brothers and sisters and flatly reject this project. The Indian people do not deserve Uruguay serving as an excuse to grant impunity to POSCO's crimes and the Uruguayan people do not deserve such shame.

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### **- Northern paper over-consumption promoting green deserts in the South**

World demand for paper and paperboard is expected to grow by 2% to 3% annually in the long term, with significant growth potential for Asia and Eastern Europe - India, China and Russia in particular. Paper pulp exports from Latin America from lands converted into monoculture tree plantations, so called "green deserts", are expected to grow by 70% between 2000 and 2010.

Timber, pulp, sugar cane and agrofuels are all exported from the global South for consumption in Northern countries, earning vast profits for transnational companies. But the large-scale plantation industries have a host of negative social, environmental and economic impacts: they displace local people, devastate biodiversity, exhaust water resources, use a land which could potentially be used for farming, impoverish workers, farmers and communities.

Even though paper is essential for modern communication, there is a needless consumption of paper in Northern countries. The demand is unevenly distributed: 72% of the world's paper is consumed by the 22% of the world's population living in the US, Europe and Japan. What is more alarming is that this excessive consumption is not always justified.

This over-consumption is as for many other goods, due to unnecessary needs or uses, as shown by the few following examples:

- Development of disposable products such as napkins or paper cups.
- Useless printings within corporations: according to a Lexmark and Ipsos study in Europe, only half of the interviewed companies have changed their printing strategies and only 12% have made financial investments to encourage employees to better manage their printings. Hence, it is not surprising that most of European employees think they might reduce their printings up to 30%, especially when almost half of all print-outs and photocopies are binned before the end of the day (see <http://www.shrinkpaper.org>). Even if the number of prints decreased in the last two years, each European employee still prints an equivalent of 35kg per year.
- Packaging and over-packaging: today packaging accounts for half of the world's paper use. The French national center of independent information for waste, estimates that in France packaging generates 5 million tons of waste every year. Most of the waste is recycled but more than 50% is incinerated, causing a threat for soil, water, air and people's health. As for excessive printing, most of the packaging used today could be spared, for instance the numerous individual packaging and small conditioning that are very "fashionable" nowadays.
- Junk mail: the enormous amounts of junk mail we receive at our homes give us the idea that paper is a free resource. Only in France, every year 18 billions of printed prospectuses are sent to the mailboxes, the equivalent of 40kg of paper for each household. If 5% of people could choose not to receive junk mail, 150 millions Euros

spent in waste treatment could be saved.

That is why Friends of the Earth - Paris organized last September a denunciation action aimed at increasing awareness of deforestation, its links with tree plantations and the excess of advertising. For the International Day Against Tree Monocultures, the local group invited artists Barbara Hashimoto and Andrew Chartier to present their work at the Krajcberg Space. Hashimoto's ongoing environmental art project began in 2007 in Chicago when she collected and shredded every piece of junk mail sent to her studio for a year. In 2009 with Friends of the Earth Paris "The junk mail experiment" involved 200 children from a local school into collecting the junk mail they received at their homes for several months, Barbara Hashimoto made Parisian public become aware of the incredible amount of paper they receive in their mailbox. Andrew Chartier explores the links between technology, art and environment through his work. In the Paris exhibition he presented his tree machine which gives a tree shoot in exchange for a piece of paper: too bad that this reverse mechanism is just a dream!

The stake nowadays is really in reducing drastically paper over-consumption, avoiding deforestation and land occupation due to the implementation of large scale monoculture tree plantations. If only the northern countries watched to stop consuming paper for pointless purposes, it would be a tremendous saving for forests and a precious gain for humanity as well.

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<http://www.amisdelaterre.org/-Paris-.html>

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