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What could be wrong about planting trees?

The new push for more industrial tree plantations in the global South

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The new push for more industrial tree plantations in the Global South

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We thank Shalmali Guttal, Frank Luvanda and Vanessa Cabanelas for commenting on the draft of this document.

World Rainforest Movement
February 2020

This work was made possible through the contributions from Misereor/KZE (Germany), the Swedish International Development Co-operation Agency (Sida) through the Swedish Society for Nature Conservation (SSNC) and Bread for All from Switzerland. The views herein shall not necessarily be taken to reflect the official opinion of contributors or their funders.

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CONTENTS

WRM | What could be wrong about planting trees?

ABOUT THIS BOOKLET

What could be wrong about planting trees? Haven't communities around the world been planting a diversity of trees since the dawn of human civilization?

Yes they have. But in more recent times, companies have also been planting trees, especially in Africa, Asia and Latin America, and the way they do so is very different from that of communities. They cover huge areas with trees from one single species, creating vast industrial or monoculture plantations devoid of biodiversity.

Today, these same companies plan to start a new round of massive expansion. Exploiting growing public awareness and concern about climate change, they argue that monoculture plantations are an excellent option to help solve some of the world's most urgent problems: loss of forests, global heating and dependence on fossil fuels (oil, coal and gas).

The corporate argument is that plantations will encourage "forest restoration", can serve as a natural "solution" to the climate emergency, or help foster a "bio-economy". The simple truth, however, is that the industries involved want more plantations simply to increase their profit margins. And other industries and polluters are

WRM | What could be wrong about planting trees?

also using such deceptive arguments, in order to hide their contributions to an ever-worsening social and environmental planetary crisis.

In this booklet, WRM aims to alert community groups and activists about the corporate push for a new round of industrial tree plantation expansion. It also reveals why planting trees on such a large scale can be extremely detrimental, in spite of seductive marketing campaigns claiming that these plantations will or could be a "solution" to the climate crisis.

One of the lessons learnt from struggles to halt industrial tree plantations around the world over recent decades is particularly important: it is much better to prevent plantations from being established in the first place, than to try to stop them once the trees are rooted in the ground.

It is time to strengthen social organizations, join forces and take direct action to nip the expansion plans of the industry in the bud. Otherwise, even more community land will be lost and the livelihoods of small farmers destroyed.

In order to trigger debates and reflections about the problems with industrial tree plantations, this booklet includes suggested questions at the end of each section. The notes indicated throughout the text refer to a list of sources of information and suggestions for further reading at the end of this booklet.

1 WHAT ARE INDUSTRIAL TREE PLANTATIONS?

Wherever you see a vast tree plantation, either in Brazil, Tanzania or Indonesia, there is something very striking about them: **they always look very much the same**, even if the planted trees or the country is different. Why is that?

The reason is that all companies adhere to the same **plantation model**, which ensures the highest possible productivity and thus the greatest possible profits. The model itself was developed about two hundred years ago in Europe and is based on the following:

- **planting trees on a large-scale.** This means covering hundreds or even thousands of hectares with the same kind of tree species, along with mechanized operations frequently using heavy machinery for planting and harvesting;

- always planting row upon row of **one single tree species, or rather a monoculture**, to help reduce costs and further increase productivity and profits; chemical fertilizers and agrotoxins are almost always used in such monocultures;

- **selecting fertile and mostly flat lands, with enough water resources/rainfall** to ensure high productivity;

- **selecting areas where the land titles and deeds of local communities are mostly insecure, vulnerable or unrecognized by the state** and/or where the government might facilitate displacements of communities or seizures of their lands following a company's request;

Monoculture tree plantation.

Photo: WRM.

On the basis of this model, a huge wave of expansion of large-scale monoculture tree plantations swept the Global South in the 1960s and 1970s in countries located in Latin America, Africa and Asia. Eucalyptus, pine, acacia, teak and rubber were the most commonly used species for these industrial plantations.[1]

What are monoculture tree plantations used for?

Plantation expansion happened in tandem with increasing **consumption** of plantation products, such as paper made from wood pulp, car tires from rubber and numerous timber products. These are mainly consumed in urban centres mostly in the industrialized countries of Europe and North America, which have levels of consumption significantly much higher than in the rest of the world. And much of this consumption has been encouraged by the industry itself.

THE PULP AND PAPER INDUSTRY

Paper consumption was once low. Paper was used mainly to make books and other printed materials. However, from the 1960s onwards, the paper industry itself started to drive an ever-growing demand, leading to a huge expansion in global consumption. These days most of the eucalyptus planted in the Global South is used to manufacture disposable products (packaging, tissue and toilet paper), consumed by a minority of the world's population in industrialized countries and urban centres elsewhere.

WRM | What could be wrong about planting trees?

Tree plantations in the Global South are generally set up to supply products to **export** markets. Companies in the Global North realized that they could greatly increase their profits if they established their plantations and pulp mills in the Global South, lured by government subsidies and incentives, a much cheaper labour force and low-cost and fertile lands. But perhaps most importantly, a favourable climate and thus a much higher output of wood per hectare than in their home countries such as Finland or Sweden.

Question for debate

What problems are likely to arise for communities that depend on a given territory for their livelihood, after a company starts planting trees using the plantation model described above?

2 PROBLEMS CAUSED BY LARGE-SCALE MONOCULTURE TREE PLANTATIONS

'We were born here, we grew up here, and we lived here long before the existence of this company. They arrived (...), invaded our territory and planted eucalyptus, even close to the river Caraíva, next to the Barra Velha village where I live with my husband and children.... This company [Veracel] is causing discord among our people; there are chiefs receiving money to oppose us. These chiefs are selling the right of our children, grandchildren, and great-grandchildren, and this is not fair. Veracel for us represents the force of evil.'

MARLENE, INDIGENOUS WOMAN FROM THE PATAXÓ PEOPLE, BRAZIL, 2008.
SOURCE: *Gonçalves, I., Overbeek, W., 2008. Violações socioambientais promovidas pela Veracel Celulose, propriedade da Stora Enso e Aracruz Celulose. CEPEDES, Eunápolis. Available: https://is.gd/sFuT4Q*

"Those who come from outside harass the women when they walk outside and this happens every day. We are not free to walk alone anymore. For us women, eucalyptus plantations have created a situation of fear, violence and sexual harassment".

PEASANT WOMAN FROM RIO GRANDE DO SUL, BRAZIL, 2008.
SOURCE: *WRM, 2009. Women raise their voices against tree plantations: Testimonies from Brazil, Nigeria and Papua New Guinea. Video. Available at: https://wrm.org.uy/?p=3633*

"Without the natural forests and farmland we will starve to death".

VILLAGE CHIEF LIVING NEAR RUBBER PLANTATIONS, CAMBODIA.

"When the jungle remained, there was an abundance of food (...) Now, there is no more forest and life is difficult".

FEMALE ELDER, NEAR RUBBER CONCESSION IN LAOS.

"Losing the forest is like losing life".

VILLAGE ELDER, CAMBODIA.

"I told the bulldozer driver not to clear my land and he stopped. The next day I returned to check and all of my land had completely disappeared. I went to meet the company people to complain, they said they do not know where my land is located".

VILLAGER FROM RATANAKIRI PROVINCE, CAMBODIA. HE DESCRIBES HOW THEY LOST THEIR LAND TO HAGL RUBBER COMPANY.

SOURCE: *Global Witness, 2013. Rubber barons. Available at: https://is.gd/T1T1I6*

Rubber plantation.

Photo: Gavin White

"In my community, we realised the pine plantations were poisoning our native plants. They were poisoning the grasses which retain and store water. And the pine trees were drying up the springs of water. That is why, about eight years ago, Pachamama (the Earth Mother) turned against the pine plantations and about 70 hectares were burned in a fire. After some time there was another fire which consumed the rest. Now we see that the water springs are being recreated."

JOSEFINA LEMA, COMMUNITY OF MOJANDITA DE AVELINO ÁVIL, ECUADOR. THOUSANDS OF HECTARES OF PINE TREES WERE PLANTED BY THE COMPANY FACE-PROFAFOR WITH THE AIM TO ABSORB CARBON DIOXIDE TO SUPPOSEDLY "OFFSET" THE EMISSIONS GENERATED BY A THERMOELECTRIC POWER PLANT BUILT IN THE NETHERLANDS.
SOURCE: *WRM Bulletin, 2015. Josefina and the Water Springs against Pine Plantations in Ecuador's Páramos. Available at: https://wrm.org.uy/?p=9579*

"Before we had the drought or other natural elements as opponents, now in addition to these we have Green (Resources) as an additional problem in our struggle for survival. Before we produced corn, beans, cassava, vegetables, but now only cassava remains for us because the land has no longer conditions for the cultivation of other crops. Our children are showing signs of malnutrition because they eat cassava three times per day, if we cannot sell cassava to buy corn".

MR. VICTORINO, A COMMUNITY MEMBER OF LANCHEQUE, RIBÁUÉ, MOZAMBIQUE, 2016. HIS COMMUNITY IS AFFECTED BY GREEN RESOURCES' EUCALYPTUS TREE PLANTATIONS.
SOURCE: *Lexterra, JA! and UNAC, 2016. The Progress of Fore st Plantations on the Farmers Territorie s in the Nacala Corridor, the case of Green Re source s Moçambique. Available at: https://bit.ly/2RHgIVQ*

WRM | What could be wrong about planting trees?

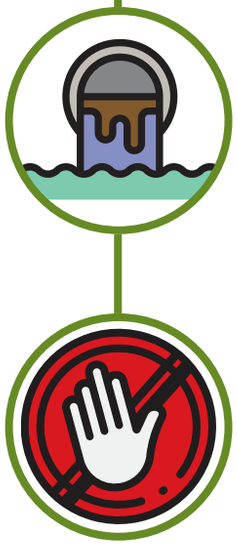
Wherever large-scale monoculture plantations have been set up in the past, communities have experienced damaging impacts, including the following examples:

- companies invade fertile, agricultural lands and destroy the topsoil of forests, grasslands and savannas;

- companies promote deforestation and replace forest areas with plantations;

- companies create very few of the promised jobs, while those offered to members of the local community are low paid, carried out under precarious conditions and include dangerous tasks, such as the application of agrotoxins;

- women in particular are hard hit when the plantations interfere with their capacity to produce food; many have also been exposed to harassment and sexual abuse and violence;



- once the industrial plantations are established, water sources become depleted or contaminated by agrotoxins;

- the presence of security guards frequently has a severe impact on the freedom of movement of the local community; people are regularly harassed and face controls and restrictions over their daily comings and goings.

Resistance to large-scale tree plantations

Ever since it first appeared, this industrial plantations model has created conflicts for the communities living in and around the plantations. However, communities and their support groups have gradually started to document and speak out about the many negative impacts they have experienced. These issues received increased visibility in the 1980s and 1990s when environmental problems such as deforestation and industrial pollution began to foster greater public concern.

Photo: Eduardo Seidl

Struggle against monoculture tree plantations in Brazil.

As a result, some governments started to implement and strengthen environmental legislation that forced companies to reduce their pollution and destruction. Profit-driven plantation companies, nevertheless, maintained their model and continued to expand, even though they were fully aware that the same model was the root cause of the problems associated with large-scale monoculture tree plantations.

(To read more about resistance to industrial plantations, go to “Ways forward” - page 52)

How plantation companies try to counter a negative image

When detrimental impacts become clearly visible, they affect the corporate reputations of plantation owners. In response and from the 1990s onwards, these same companies have been trying to create a different and more positive image. Claiming that industrial plantations can be managed in a socially and environmentally responsible way, plantation companies want to ensure that banks continue to provide them with credit to expand plantations, while consumers continue to purchase their products.

Some companies have even joined forces with environmental NGOs, consultants, government institutions and academics in order to discuss how industrial tree plantations can be presented as something positive, sustainable and acceptable to the public and investors.

Among the most relevant initiatives of this type that plantation companies engaged in since the 1990s are the following:

The **Forest Stewardship Council (FSC)**,[2] created in 1993. The FSC awards a label if a company demonstrates the so-called "sustainable forest management" of its logging operations. Since 1996, the FSC has also permitted the use of the same label for industrial tree plantations. The FSC label is marketed as a guarantee to consumers that the corporate plantations are managed to the benefit of local economies, workers are treated well and that such operations are not harmful to the environment. Before a plantation company receives the label, it hires an auditing company to assess if its plantation operations meet FSC's social, environmental and economic principles and criteria. Unsurprisingly, the FSC label has been a success for the companies. In many cases, they have received the label even if documents showed that their land ownership titles were illegal or that the company was embroiled in conflicts with local communities. Only in very few cases has the FSC decided not to certify or to decertify a company.[3] Most of the world's main plantation companies have been certified by the FSC, including International Paper, UPM, Stora Enso and Suzano.

The Forest Dialogue,[4] created in 1998. Steering committee members include major plantation companies such as Stora Enso, CPMC, Sappi and The Navigator Company. This initiative organizes meetings with companies, environmental NGOs and academics in regions with large-scale monoculture plantations. These events are focused on issues considered important, such as new possible products for which more plantations would then be needed. Attempts are often made to engage community organizations and/or members in such meetings, claiming they can create trust between companies and communities and help solve any existing conflicts. This of course does not take into account the evident power imbalance that exists between the different actors.

The New Generation Plantations Platform,[5] launched in 2007 by the World Wildlife Fund (WWF), one of the world's biggest conservation NGOs. Most participants are major international plantation corporations such as UPM, Suzano and Mondi. The initiative claims plantations can help reduce forest destruction and thus better protect forests. The Platform organizes study tours, workshops and conferences to promote industrial tree plantations. According to WWF and its partners, the world needs another 250 million hectares of such plantations between 2010 and 2050 in order to meet a predicted increase in demand.[6] This would mean transforming an area representing the combined size of Ghana, Ivory Coast and Togo into a vast monoculture plantation.[7]

Questions for debate

What do the initiatives of the FSC, Forest Dialogue and New Generations Plantations have in common?

These and other initiatives suggest a so-called "dialogue" between companies and communities. Do you know of any examples where such a dialogue has resolved a conflict? Or, conversely, where they have made the situation even worse for communities affected by these plantations?

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3 THE UN PARIS AGREEMENT: DRIVING ANOTHER ROUND OF INDUSTRIAL TREE PLANTATIONS?

In 2015 in France, most of the world's governments approved a document called the United Nations (UN) **Paris Agreement.** This accord outlines what governments intend to do voluntarily about the global climate crisis; it entered into force in 2016 and will be implemented as from 2021. It is now the main international agreement to address global warming and climate change.

Although national governments signed the Paris Agreement, transnational companies, such as fossil fuel and plantation companies, together with big international conservation NGOs that have close ties with these corporations, are the ones influencing most of the decision-making processes. In order to safeguard their profits, they actively promote bogus solutions such as tree plantations or forest conservation projects that, they argue, would offset the carbon emissions from the burning of fossil fuels, which is the main cause of climate change.

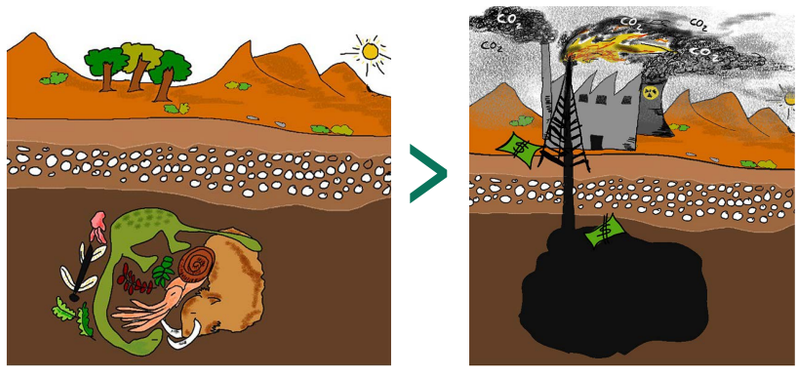
Photo: UN/Rick Bajornas

UN Climate Conference in Paris, 2015.

WHAT IS THE CLIMATE CRISIS?

What is referred to as *climate change, the climate crisis or global warming/heating* is a change in the climate of the earth that results from certain industrial/human-led activities. **The cause is the release of so-called greenhouse gases, especially carbon dioxide gas (CO2) – that has mainly resulted from the burning of fossil fuels over the past 150 years** for the production of energy, for transport, along with industry and large-scale agriculture. And it is the transnational companies themselves that control most of these activities, such as the oil, gas, coal, aviation and agribusiness industries, which are all heavily dependent on fossil fuels. Their primary concern is to find ways to delay the end of the use of fossil fuels in order to protect ever-increasing profits and corporate expansion.

The main fossil fuels are oil, coal and gas. They were formed as a result of the decomposition and compression of organic matter (plants, bacteria, algae, etc.) that took place over millions of years. Oil, coal and gas can be found in subterranean deposits in different parts of the world. They contain a high concentration of carbon dioxide and other gases, such as methane, that would otherwise remain



locked deep underground unless they are extracted by energy companies and burned.

These gases have always been present in the atmosphere and in fact play a crucial role in regulating the Earth's temperature and thus ensuring life on our planet. However, with the massive extraction and burning of fossil fuels, huge quantities of CO2 have been released into the atmosphere, upsetting the Earth's carbon cycle. The rapid increase of CO2 in the atmosphere has contributed to global warming and an ever-worsening climate crisis.[8]

This results in, for example, stronger and longer lasting storms, floods and droughts. The weather has become increasingly more unpredictable. The Earth's glaciers and ice caps are melting and the sea level is rising. These consequences affect coastal, peasant and other communities that are dependent on land, agriculture, livestock and fisheries. The average global temperature on Earth is expected to further increase in the coming decades, with catastrophic consequences according to scientists. **Therefore, to halt climate change the most urgent measure is to stop burning fossils fuels and leave such deposits buried underground.**

Photo: J. Ramírez (facebook.com/juanoscar.ramirez)

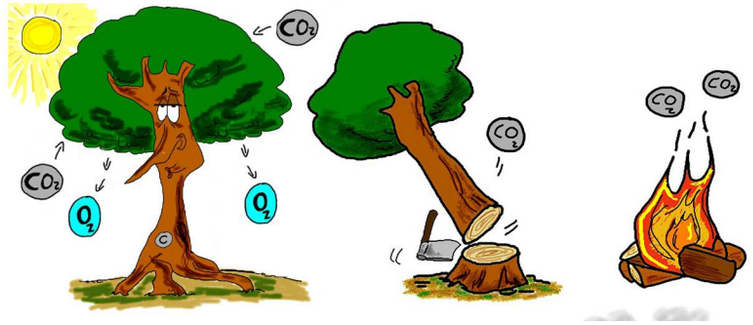
Demonstration of a Mapuche community in oil and gas extraction sites, in Argentina.

Are industrial tree plantations a solution to the climate crisis?

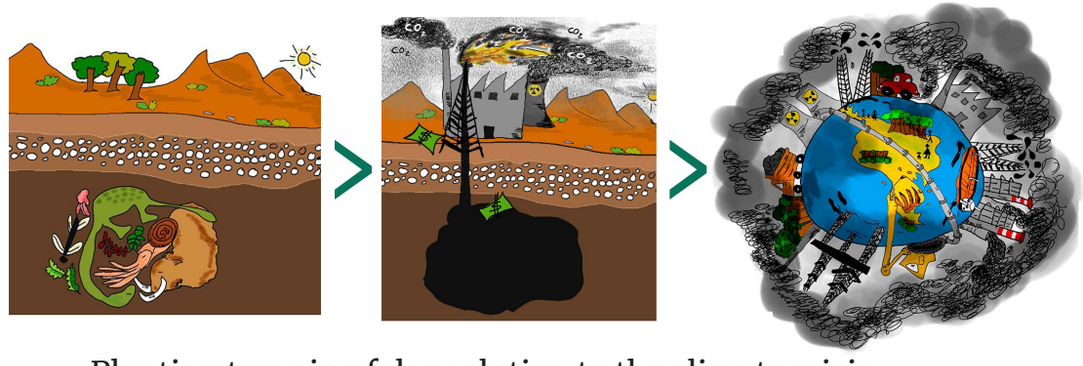
The Paris Agreement has defined the climate crisis very specifically: as just a problem of **too much CO2 molecules in the atmosphere** – without any concern about addressing where this excess CO2 is coming from. It therefore concludes that the solution is to remove this excess carbon. Because *trees* have the capacity, when they grow, to absorb carbon dioxide and store it in their trunks and roots, supporters of the Agreement, including conservation NGOs, plantation companies and scientists, propose that **forests would be one of the most reliable, if not THE most reliable way of removing this excess carbon.** In theory, increasing *tree* coverage could remove some carbon from the atmosphere, as long as the trees are not destroyed. But is this really a long-term solution?

Carbon stored in trees vs carbon stored in fossil fuels

According to science, trees harvest the energy from sunlight, and absorb CO2 and water in a process called photosynthesis[9], which they use to grow. The CO2 the tree does not immediately need is stored in its wood and roots. The burning of wood releases CO2 into the atmosphere. This has happened for millions of years.



The oil and coal deposits deep inside the Earth also store carbon (called "fossil carbon"), and it took millions of years for plants to be transformed into these elements. However, unlike trees, this carbon does not come into contact with the atmosphere. Heavy machinery is used in order to extract these deposits. When fossil fuels are burnt, huge amounts of carbon are released into the atmosphere because the carbon contained in petroleum or coal has become very concentrated over millions of years. This makes fossil fuels such a powerful source of energy. The constant burning of fossil fuels has released too much excess carbon into the atmosphere. This is the main cause of global warming.



Planting trees is a false solution to the climate crisis. First, because there would never be enough land to plant sufficient trees to absorb all the excess carbon released

into the atmosphere when fossil fuels are burned; but also because carbon stored by plants is just a temporary process. Vegetation may absorb part of the carbon dioxide in the atmosphere, but when a plant dies or if there is deforestation or a forest fire, the CO2 is simply released and returns to the atmosphere.[10] **Consequently, it is the discharge of carbon dioxide caused by the burning of oil, coal or gas that has to stop to effectively address climate change.**

Why the Paris Agreement promotes more industrial tree plantations?

There are several reasons that underline why the Paris Agreement, while referencing the importance of forests, is in fact a clear push for a massive expansion of industrial tree plantations, especially in the Global South:

- **The Paris Agreement makes absolutely no reference to and how to address the main cause of global warming and climate change: the excessive burning of oil, coal and gas**, which has been happening over the last 150 years, and is continuing unabated!

- **However**, The Paris Agreement very ambitiously states that governments want to keep the global temperature rise well below 2°C, and that nations will pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels to prevent "climate chaos". To do so, **the Agreement hopes to urgently remove excess CO2 that is already in the atmosphere.** The main proposals for doing that are **forest restoration** and **reforestation** so that the trees planted would absorb this excess carbon

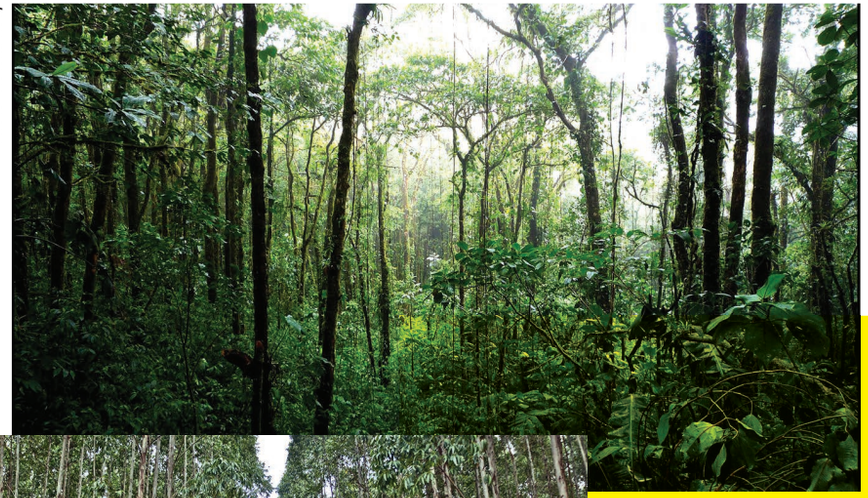


Photo: Victoria Reay

Photo: Cássio Abreu

- **This is a direct result of the lobby carried out by Plantation companies and large conservation NGOs. They claim trees to be among the most reliable and effective options to remove excess carbon from the atmosphere, especially in the Global South, where trees grow much faster due to the favourable climate.** The Intergovernmental Panel on Climate Change (IPCC), which is the panel of scientists that advises the UN climate conferences, argued in 2018 that **an area of around 24**

million hectares of trees needs to be added each year until 2030[11] in order to achieve the Agreement's target, an area approximately the combined size of Cambodia, Laos and Vietnam.

- **The Paris Agreement accepts that a eucalyptus, pine, acacia, teak, bamboo or rubber tree monoculture is the same as a forest, and thus qualifies as forest restoration or reforestation. This is because the definition of forests contained in the Paris Agreement** is the one also used by the UN Food and Agriculture Organisation (FAO), and accepted by most national governments. This definition **considers almost any area that is merely covered by trees to be a forest!** It also disregards the many other fundamental, diverse and interconnected elements that make up a forest, including human communities.

4 THE MAIN EXISTING INTERNATIONAL PLANS FOR THIS MASSIVE EXPANSION OF PLANTATIONS

Before, during and after the negotiation of the Paris Agreement, governments, along with energy, plantation and other companies, launched a number of international, regional and national plans and programs for tree planting.[12] They promote these plans as representing "reforestation" or "forest restoration".

Among the main plans at the international and regional level are the following:

The Bonn Challenge, launched in 2011 with support from the German Ministry of Environment and the International Union for the Conservation of Nature (IUCN). Its aim is **to "reforest" 350 million hectares – equivalent to the combined size of Chile and Uruguay - by 2030**, implementing what is referred to as a "forest landscape restoration approach". Up until 2019, pledges by participating governments had been made to plant 160 million hectares. Taking into account the FAO forest definition, the risk that the Bonn Challenge will result in a huge expansion of industrial tree plantations is real. Its approach includes promoting well-managed so-called "planted forests" and "silviculture" - the

science that studies how to plant "forests", two terms that according to the FAO's forest definition mean in practice one thing: industrial tree plantations. The Bonn Challenge also proposes to maintain and create so-called protected areas –forest or other areas with native vegetation into which people are largely forbidden to live within or enter. Protected areas are frequently being used or targeted by plantation companies so as to claim that they protect forests and biodiversity.

Another aspect of the "forest landscape restoration approach" is to promote a so-called climate-smart agriculture,[13] in reference to agricultural techniques that are deemed better for the climate. In addition to governments, one of the main global tree plantation companies also participates in the Bonn Challenge: the Asian Pulp & Paper company (APP) in Indonesia, which has been linked with massive deforestation and an extensive record of human rights violations.

CLIMATE-SMART AGRICULTURE

The term "climate-smart agriculture" may sound enticing but does not have a clear definition. It was first introduced in international climate discussions promising more productive agriculture with lower negative impacts on the climate. This initiative is mainly focused on Africa. In practice, this approach tends to appropriate agricultural or pastoral land, and increases the control of agribusiness over peasant agriculture, promoting industrialized agriculture and increasing the use of fertilizers and chemicals for small-scale

Yara fertilizer plant and phosphate rock mining in Finland. Photo: Yara

agricultural practices. The only intergovernmental program for climate-smart agriculture is controlled by companies active in the agro-chemicals sector, and which also make major contributions to climate change, the world's largest fertilizer companies such as Yara.

The **20X20 initiative**, launched in 2014, includes the participation of 11 national governments in Latin America, along with three Brazilian state governments and two major conservation NGOs, among others. Its aim is to **"restore" 20 million hectares in Latin America and the Caribbean by 2020.** This meant the initiative would have six years to reforest 20 million hectares and that by 2020 the trees would have to be in the ground! Although according to the project's website "restoration projects supported by Initiative 20x20 are flourishing", these basically represent only small-scale interventions on the ground, and nowhere

near the stipulated target.[14] The wishful thinking goes even further: participating governments increased their pledges to 27.7 million hectares of forest restoration by 2020! The initiative secured US $730 million from private investors and US$ 125 million from public funding.

The **African Forest Landscape Restoration Initiative (AFR100)** was launched in 2015 at an event in Paris during negotiations for the Paris Climate Agreement. The Initiative was launched by the World Bank, the German Ministry of Economic Cooperation and Development (BMZ), FAO and other agencies. It claims it will **"restore" 100 million hectares of deforested and degraded land in Africa by 2030.** However, most land classified as "deforested and degraded" is used by local communities for their livelihood activities. To date, 21 countries have joined the initiative and have made commitments to restore 63.3 million hectares of forest. The World Bank, through its Forest Investment Program (FIP), pledged US$ 1 billion for the Initiative. To support the AFR100, it has already endorsed FIP country programs in Mozambique and the Ivory Coast. Private-sector financiers have also committed to contribute US$ 540 million.

Furthermore, national governments have also launched tree-planting initiatives. Some examples include:

-In 2019, the Brazilian government approved a project to support plantation companies in expanding their monoculture tree plantations in the country by 2 million hectares by 2030.[15]

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-In 2019, the Mozambican government announced its Forest Agenda 2035, the aim of which is to plant 1 million hectares of trees by 2035. [16]

Oil companies´ plans to clean up their image

Oil and energy companies have also launched their own programs. These companies are concerned about their corporate image, given that they extract and refine oil, coal or gas and thus facilitate its massive use as, for example, a transport fuel or to generate electricity. And not only are they interested in planting trees to clean up their image, but also view this activity as a new business opportunity:

- In 2018, the Anglo-Dutch energy giant SHELL announced "massive reforestation" plans to supposedly offset their increasing carbon emissions.

- In 2019, Italian energy company ENI announced similar plans, suggesting it would establish 8.1 million hectares of tree plantations in Mozambique, Tanzania, Ghana and South Africa to cut/offset its greenhouse gas emissions.[17]

- In 2019, French energy company Total announced it would invest USD100 million per year in "forest protection". [18]

questions for debate

Are there to-date any large-scale reforestation or forest restoration projects being implemented in your country / region / province? If so, what have been their social and environmental impacts?

Why is so much government money and support going into promoting industrial tree plantations; and so little into small-scale reforestation with species used by and beneficial for local communities?

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5 "FOREST RESTORATION" IS THE HEADLINE, PROMOTING INDUSTRIAL TREE PLANTATIONS THE SMALL PRINT

An article published in Nature Magazine in 2019[19] studied a total of 292 million hectares of "reforestation" commitments made by 43 governments, both with respect to the Bonn Challenge as well as national schemes. They all have the same stated objective: "forest restoration". The results from the study show that:

- of the areas allocated in the commitments **"45% involve planting vast monocultures of trees as for-profit enterprises"**. The majority are planned in large countries including Brazil, China, Indonesia, Nigeria and the Democratic Republic of the Congo;

- only 34% of the area to be reforested will be dedicated to natural regeneration, which is the process where trees regrow from fallen seeds from other trees in the surroundings. This, according to the same study, is the "cheapest and technically easiest option";.

- and the last option is agroforestry, a system that combines trees and shrubs with crops and animal farming, which would make up 21% of the restoration area. The authors of the study add that agroforestry is already used by

many small farmers all over the world, but generally on a small scale. However, in the restoration proposals analysed by the authors, there is a big risk that exotic, fast-growing trees will be use on a large-scale, benefiting big farmers and the industrial tree plantations sector.

The study claims that if the above plans are fully implemented, **industrial tree plantations in the world's tropical and subtropical zones would rise by 157 to 237 million hectares, the latter an area as big as one third of Indonesia.**

There is nothing new about governments that claim to implement "forest restoration" but in practice simply promote industrial tree plantations. For further reading, see examples from India, Brazil and Mozambique at the end of this publication.[20]

Forests are much better carbon sinks than industrial tree plantations

Many studies show that forests capture and store more carbon than tree plantations. According to the aforementioned Nature Magazine article on "reforestation" commitments, forests are 40 times better than plantations at storing carbon.

The article states that "plantations hold little more carbon, on average, than the land cleared to plant them. Clearance releases carbon, followed by a rapid uptake by fast-growing trees such as Eucalyptus and Acacia ... But after such trees are harvested and the land is cleared for replanting ... the carbon is released again by the decomposition of plantation

waste and products (mostly paper and woodchip boards)."

Furthermore, and as opposed to forests, industrial plantations have no benefit at all in terms of protecting biodiversity; rather they are sources of pollution to the soil and water, given the pesticides and chemical fertilizers that are employed. Industrial tree plantations also cause many problems for local communities, which along with pollution can include land grabbing, and they generally provide few, poorly paid and hazardous jobs (read more about these aspects in section 2).

These problems are very much the same with respect to those industrial plantations that have been set up around the world since the 1990s, the so-called "carbon sinks" (to capture and store carbon), which is the case in Ecuador, Uganda, Tanzania and India.[21]

questions for debate

Most programs promoting industrial tree plantations are claiming to be established on "marginal" or "degraded" agricultural lands. What do you think is meant by "marginal" or "degraded" land?

Do you know of any community experiences regarding corporate or government promises to establish plantations on "marginal" or "degraded" agricultural lands?

6 WHO WILL PAY FOR THE "REFORESTATION" AND UNDER WHAT CONDITIONS?

In practice, citizens in the Global South, where industrial tree plantations are expanding, will pay through their taxes for the so-called reforestation, most often large-scale industrial tree plantations, yet they will have no meaningful say in the decisions taken.

The reason is that most governments in the Global South adhere to neoliberal economic policies. The logic is to govern for the market and the benefits of the private sector, rather than to govern for their own people and provide decent and accessible healthcare and education. Governments invest less and less in the environmental control of corporate activities and scale back on environmental regulations and monitoring of their compliance. Meanwhile, more and more small-scale farming practices are declared illegal and small farmers families are confronted with hefty fines and surveillance practices.

Thus, the main reason why there are so many large-scale monoculture tree plantations in the Global South is because companies demand, lobby, put pressure on and finance the campaigns of politicians most likely to win elections, while also offering bribes in order to obtain land concessions, permissions, incentives and subsidies from national governments to set up and run these plantations. Meanwhile, it's the ordinary citizens of these same countries who foot the bill. Otherwise, industrial plantation companies would never have generated such astronomical profits.

URUGUAYAN CITIZENS PAY A HEAVY DEBT FOR YET ANOTHER PULP MILL

In Uruguay, the pulp industry is one of the main drivers of monoculture tree plantation expansion. Both the plantations, as well as the pulp mills are subsidized by the State. As a condition to install its second pulp mill complex in the small country of Uruguay, the Finnish pulp and plantation giant UPM, demanded that the Uruguayan government build a new railroad, linking the site where UPM plans to locate its mill to the port from where it would export the pulp, a distance of about 300km. The multimillion-dollar railway project will turn Uruguayans into debtors, as they will have to repay the debt acquired by the government. As is often the case, the cost of this transport infrastructure will be more than double that of initial government estimates.[23]

If the tree planting and "restoration" plans turn out to be more than empty promises and are put into practice, a massive plantation expansion is looming. That expansion will again be sustained by large flows of public money from national and international development banks, and other favourable incentives and conditions.

The financial backers of today might also include new stakeholders that have not previously invested in industrial plantations.

Eucalyptus plantation in Uruguay

Photo: Jukka Paakkonen

New plantation money

While in the past, public money through national and international development banks was the main source of finance for tree plantation companies, this scenario has changed. These funds are still important to start up their activities– for example, the World Bank financing governments to implement the African Forest Landscape Restoration (AFR100) initiative. But other investors, from the **financial capital sector, such as pension and other investment funds, have become increasingly important as financial backers** of plantation expansion.

One reason that such investors are interested in tree plantation expansion projects is that since the financial-economic crisis of 2008, land is considered one of the most secure investments. These investors put pressure on national governments to offer ever more favourable deals to plantation companies.

There is also **an increased trend of the new financiers becoming plantation owners**, in a so-called win-win model with the plantation companies. Nowadays in Brazil, for example, investment funds - several from the Global North - already own plantations. According to contracts signed with the plantation companies, 800,000 hectares of industrial plantations are owned by these investment funds, which then receive part of the profits made by the plantation companies.[24]

Questions for debate

What are the important issues to find out about how the government in your country support or finance the tree plantation companies?

In what ways does this happen and is the general public aware of this?

How do you think you can access and disseminate this type of information?

7 BIOECONOMY AND "NATURE-BASED SOLUTIONS"

Over the years companies have set up their industrial tree plantations for different purposes, such as paper, rubber and timber products, and found markets where they can sell these products. They have succeeded in expanding these markets and thus continue to expand their plantations. But now, in order to confront the criticisms related to the global environmental and climate crisis, plantation companies are claiming that they can produce a series of additional products to help solve and/or contribute to "the solution," which they hope will lead to further plantation expansion.

With the help of **The Forest Dialogue** (see Section 3), plantation companies organized events in 2011 and 2012 to discuss how industrial plantations could supply and/or contribute with what they consider to be four crucial demands for the world, the so-called **4Fs: fuel, food, fibre and forest.**

Companies claim that:

- wood can be transformed into **fuel** for energy, for electricity generation or transportation;
- trees could be planted together with **food** crops in agroforestry systems, transforming tree plantations into "tree farms";
- the **fibre** – cellulose - besides being the source to produce pulp and paper, could serve other purposes, for example, it could become a raw material for textiles to produce clothes;
- industrial tree plantations, misleadingly considered as **"forests"**, can help capture CO2 from the atmosphere and store it, and can thus offset the lost carbon sinks of forests that no longer exist.

According to the plantation companies and their allies, all of these claims would enhance a different economy not dependent on fossil fuels: they call this a circular or "bio-economy". The discussions about the **"bio-economy"** and the important role that wood plays in it are especially popular in countries with a wood/plantation-based economy, such as Canada, Finland and Sweden.

A presentation made by the Ministry of Agriculture and Forestry of Finland claims that "the circular economy is an economic system aimed at minimizing waste and making the most of resources" and "raw materials are kept as long as possible in various value chains and products". The ministry also claims that wood-based materials are very important for such an economy.[25]

Plantation companies make the same assertion. According to Markus Mannström, head of biomaterials of the Swedish-Finnish pulp and paper plantation company Stora Enso: "Our philosophy is that everything that is currently fossil-fuel based can eventually be replaced by trees".[26] However, Stora Enso's "tree" solution in reality causes land conflicts with indigenous peoples and forest-dependent communities. It also has other negative environmental and social impacts. [27] This shows how the Finnish pulp and paper industry and the consultancy companies connected to this sector are principally driven by their business and profit-making interests.

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Other deceptive propositions include the **"Nature-Based Solutions", also called "Natural Climate Solutions"**. These are promoted by many NGOs and scientists working on climate change, including major conservation NGOs and private companies. The claim is that "Nature-Based Solutions" will help reduce the carbon concentration in the atmosphere by storing more carbon in the "landscape" (trees, soils, agricultural fields, forests, wetlands, mangroves, etc.). They strengthen the illusion that catastrophic climate chaos can be avoided without the need to stop burning fossil fuels; and that a global climate crisis can be sidestepped if more carbon is stored by "nature". The source of the problem, however, remains unaddressed: an economic system built on the principle of constant, destructive growth based on the burning of oil, coal and gas. In accordance with this capitalist model, "**Natural Climate Solutions"[28] are thus likely to set in motion a massive expansion of industrial plantations** (misleadingly referred to as "forests" according to the prevailing FAO definition).[29]

Tree plantations as a source of energy

Using **plantation products to generate energy** is nothing new and has been employed by companies whenever they deem it to be economically viable. Since the 1970s in Brazil, for example, pig iron producers have been establishing

large-scale eucalyptus plantations for the production of charcoal as an energy source for their industries. And for many years, pulp mills have been producing their own energy using wood waste, simply because it serves their economic interests to do so.

Photo: Reuters

Charcoal ovens in Brazil.

A more recent trend is the huge increase in the consumption of what's known as **woody biomass, particularly wood pellets. These are used for both co-firing coal power stations as well as to fuel biomass-only power plants in Europe.**[30] The push for woody biomass to generate electricity was heavily promoted as a result of the European Union´s target, established in 2009, for 20% of energy to be generated from renewable sources by 2020. This resulted in subsidies for energy plants to use woody biomass, once it is considered to be a renewable energy.

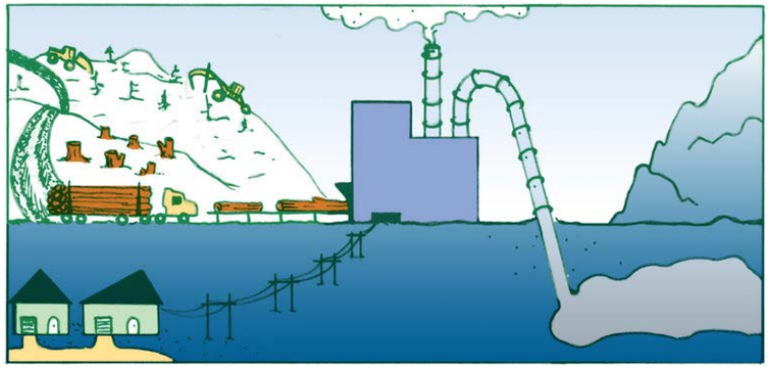
Photo: ODF/Flickr

Wood pellets.

For now, the demand for wood pellets for biomass energy in Europe is supplied mainly from existing plantations in the USA and Canada. It is expected that by 2027, South Korea and Japan will also be important woody biomass consumers. More industrial plantations to produce woody biomass for export are expected to be set up in Brazil, Mozambique, Vietnam, Malaysia and Indonesia.

BECCS

A particularly dangerous trend according to the logic of the Paris Agreement and of a "bio-economy" is a "geo-engineering" technology called Bio-energy with Carbon Capture and Storage or BECCS, the aim of which is to produce "bioenergy" while capturing and storing the emitted carbon.[31]



The BECCS theory, capture carbon with trees, burn trees for energy, capture carbon at the smokestack, bury carbon underground. Source, http://www.geoengineeringmonitor.org/?p=3223)

It assumes that,

(1) there is sufficient land to grow carbon-absorbing crops, for example fast-growing trees, that can be burned to produce energy,
(2) that it is possible to prevent the carbon being released into the atmosphere when this biomass is burned,
(3) that the carbon, instead of being released into the atmosphere, would be "captured" and stored somewhere such as underground mines that are no longer in use.

The BECCS technology **would require by 2050, according to studies, a further 380 to 700 million hectares of land, equivalent to an area twice the size of Mozambique, to plant a mix of tree plantations such as eucalyptus along with maize and switchgrass** *(Panicum virgatum)*[32]. This would mean an unrealistic and enormous land grab, as plantations are only productive on fertile lands, which are often already occupied by communities for agriculture and livelihood activities. Besides, there are enormous uncertainties as to how and if the carbon can be "captured" and stored somewhere so it will not one day be released into the atmosphere.

Other new uses of wood

Trees and sub-products are also being explored or are already commercially available in order to obtain other products. These products include textiles, plastics, cosmetics, pharmaceuticals, paints, coatings, medicines, animal feeds, food ingredients, fertilizers, resins and composites.

Plantation companies will invest in these new uses if they see them as a possibility to make more profits. **This always depends on the availability of subsidies and incentives**, which is generally the case in the wood-based economies of the Global North, such as Canada and Finland.

The new uses also mean that trees would need to produce as much wood as possible while also having other specific characteristics in order to facilitate the manufacturing of new products. The possible use of transgenic or genetically engineered trees, a technique with unpredictable risks, is therefore considered important by plantation companies.

THE THREAT OF GENETICALLY ENGINEERED (GE) TREES

Motivated by possible new uses and the expansion of plantations, companies have been researching the use of genetic engineering in order to create more "productive trees", and also trees that are, for example, tolerant to adverse climatic conditions or agrotoxins like glyphosate.

GE or transgenic trees are different from trees improved by cloning, which means producing genetically identical individuals. Genetically engineering means artificially inserting a genetic characteristic from one species into another, or forcing some - naturally-occurring - genes to be overactive, while silencing others.

The risks are huge. For example, the potential biological contamination of forests that GE trees might provoke if such trees are planted on a commercial scale. Nevertheless, all of the main plantation companies are investing into research to obtain GE trees in the future.

Up until now in the Global South, one GE eucalyptus tree variety, cultivated by the pulp and paper company Suzano, and that is supposedly 20% more productive than the cloned eucalyptus type, was approved for commercial use in Brazil in 2015. Prior to this, two GE poplar tree varieties were approved for commercial use in China.

The argument companies use to justify more productive trees is that they supposedly would need less land and thus more terrain would be available for food crops. But this argument is false as the case of Brazil illustrates, where a significant increase in productivity rates, from 27 m3 per hectare per year in the 1990s to 44 m3 per hectare per year

20 years later, achieved with conventional techniques such as cloning, happened in tandem with a significant expansion of the size of industrial tree plantations, which rose from 5 to more than 7 million hectares over the same period. The global "Stop GE Trees" campaign opposes the use and spread of genetically engineered trees.[33]

Photo: Stop GE Trees Campaign.

Demonstration against GE Trees.

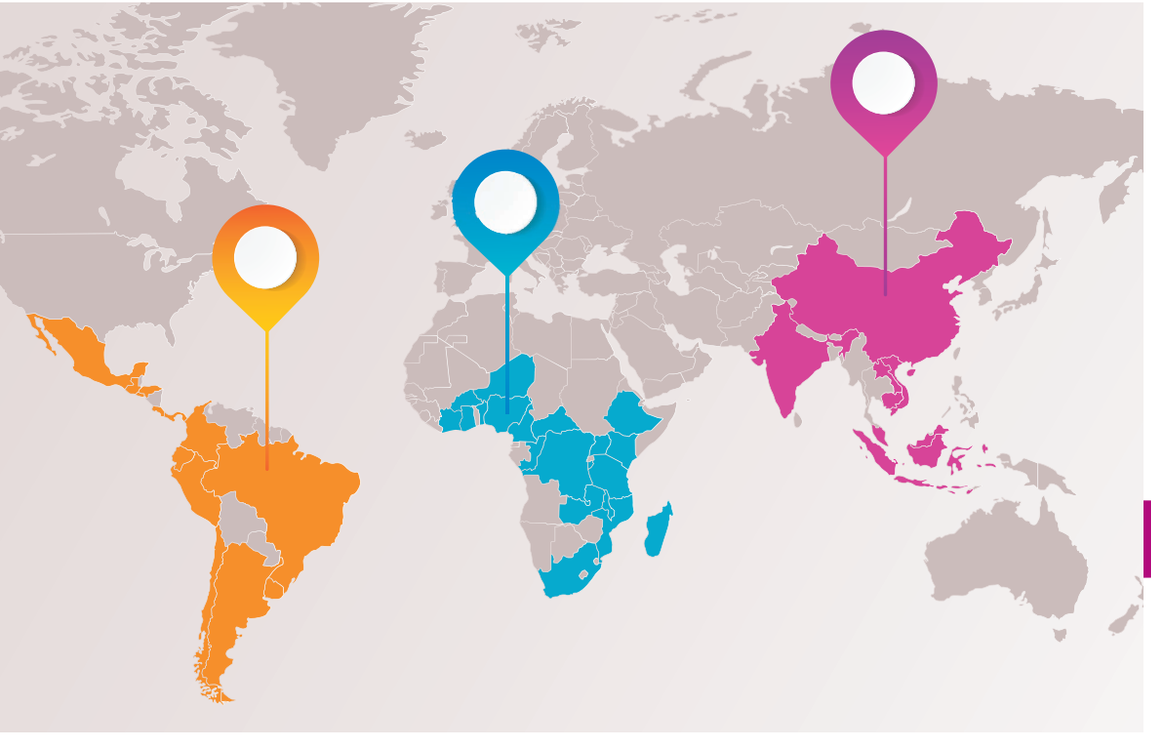
questions for debate

Whose "needs" or "demands" are catered to with the plans for the millions of hectares of industrial tree plantations that conservation NGOs, governments or companies claim the world would "need"?

What do you think could be possible alternatives/ solutions to the problems of the over consumption of energy?

8 WHERE AND FOR WHAT PURPOSE ARE PLANTATIONS EXPANDING?

The following map of the Global South – Africa, Latin America and Asia – indicates the countries where plantation expansion is taking place or can be expected to do so as a result of commitments and climate action plans made by national governments, either according to their adherence to the Paris Agreement and/or as part of international plans for "reforestation" and "forest restoration".[34]



LATIN AMERICA

ARGENTINA, BRAZIL, CHILE, COLOMBIA, COSTA RICA, ECUADOR, EL SALVADOR, GUATEMALA, HONDURAS, MEXICO, PANAMA, PERU AND URUGUAY

- Most of the expansion expected in this continent is for pulpwood plantations, mainly in Argentina, Brazil, Chile and Uruguay.
- Brazil is the country where most plantation expansion is expected, in order to produce cellulose, timber and energy.

AFRICA

BENIN, BURKINA FASO, BURUNDI, CAMEROON, CENTRAL AFRICAN REPUBLIC, DEMOCRATIC REPUBLIC OF THE CONGO, ETHIOPIA, GHANA, IVORY COAST, KENYA, MADAGASCAR, MALAWI, MOZAMBIQUE, NIGER, NIGERIA, REPUBLIC OF THE CONGO, SOUTH AFRICA, TANZANIA, UGANDA AND ZAMBIA

- Most of the expansion on this continent represents timber, energy and rubber plantations.
- Most of the expansion expected in Mozambique represents timber, energy and possibly cellulose plantations.
- Most timber plantation expansion is expected in Mozambique, Tanzania, Angola and Uganda.
- Expansion of rubber plantations is expected in Cameroon, Central African Republic, Democratic Republic of the Congo and Republic of the Congo.

ASIA

CAMBODIA, CHINA, INDIA, INDONESIA, LAOS, MALAYSIA AND VIETNAM

- Most of the expansion in this continent is for cellulose, energy and rubber plantations.
- Most plantation expansion is expected in China.

ASIA

CAMBODIA, CHINA, INDIA, INDONESIA, LAOS, MALAYSIA AND VIETNAM

- Increase expected in energy plantations in Indonesia, Malaysia and Vietnam.
- Increase in rubber plantations expected in Cambodia, India, Laos and Vietnam.
- Increase in plantations for cellulose expected in China, India and Indonesia.

Some more trends to highlight

- According to the Brazilian consultancy company STCP, in terms of what they consider **"available" land** for plantation expansion, Brazil leads (187 million ha), followed by Africa (142 million ha), other Latin American countries (81 million ha) and Asia (42 million ha).
- According to Poyry, it is **still pulp and paper demand that will drive most of the plantation expansion globally**, due to the foreseen increased demand for **packaging paper (containerboards) and also tissue papers.** A 78 million tons expansion in pulp production is expected by 2030, which will occur especially in India, China and the rest of Asia where most new paper mills will be built, followed by Latin America and Eastern Europe. This means almost 100 million tons of pulp by 2030, which also means tens of new pulp mills to be built.
- On the other hand, the **consumption of writing paper will slightly fall in North America and Europe.** Nevertheless, much of the additional demand of packaging paper will go into packaging export products from the main exporting country of the world – China – to other global consumption markets such as Europe and North America, so overall consumption will not necessarily be reduced.
- An indication that most of the plantation expansion is expected to happen in Latin America, is that in terms of the **new pulp mills that are expected to be built in the coming years, most will be concentrated in Latin America** (12 million tons/year), followed by China (5 Mt/year) and the rest of Asia (4 Mt/year).
- Especially in Africa, and under pressure from the plantation sector, international financial institutions and plantation countries in the Global North such as Sweden, Norway and the UK, there is a trend that national governments sell state plantation companies to the private sector, so that these can make easy profits while the recently planted trees in expansion areas still need to grow.

Photo: PIP

Demonstration against Arauco's monoculture tree plantations in Misiones, Argentina, 2019

9 WAYS FORWARD

"My name is Francisca María, and I am from the village of São Raimundo, Maranhão. Is it possible to resist plantations? Yes, it's possible. Primarily through the unity of the community, by organizing and seeking supporting groups. And this is key: Never accept the company's deceptive proposals. Because they come with some good promises, and then everybody knows how it ends. It is deceptive propaganda, and then problems arise. And when the community accepts such a proposal, it is already too late. So, pay attention: never accept such a deceptive proposal from the company. It is just a matter to organize, to believe. Together we can overcome difficulties".

"My name is Ronaldo. I am from the northern part of Minas Gerais state in Brazil, a region that has been heavily impacted by eucalyptus plantations since the 1970s. Is it possible to resist to large-scale eucalyptus plantations? I say yes. We have several experiences of resisting in my state, and one of the two very important things I would highlight when we build up a resistance movement is unity: The mobilization among peoples, impacted communities, and the coordination and participation of different organizations— be it at the State, country or international level—to unite, support and strengthen the movement."

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"My name is Rosalva Gomes, I am the daughter of a babassu coconut breaker, from Imperatriz, Maranhão. It is possible to resist monoculture tree plantations in many ways. One of the most powerful ways to resist all of that invasive capital is to continue living inside the territory, to see oneself as the territory, as part of the territory. We also are the place where we live. There is not a territory and a people separated one from each other: The people are the territory, the territory is the people. Our connection with our livelihood, the way we dress, play, grow food and eat...our experience with nature...all of that strengthens us as a people, because it relates us with our territory in a very powerful way. It strengthens us to resist all this aggression that plantations provoke, whether it's eucalyptus or any other kind of plant or modified tree.

Another way to resist is through production. By producing our food, and thus building more strongly our relationship with the land, we become more independent—especially when it comes to food. Because the lack of food, income generation or independence leads people to subject themselves to easy deals. So people who are producing, feeding themselves naturally, feeling and actually being independent when confronted with capital, are stronger people. Then, it is harder for these companies to enter these territories, co-opt that people, destroy their way of life. So, those are two of the main ways to resist: The relationship between people and their territory, which are the same; and those people's production—to build a bigger independence within their territory when confronted with capital."

THESE VOICES FROM BRAZIL ARE PART OF A VIDEO ABOUT RESISTANCE AGAINST TREE PLANTATIONS, launched on the occasion of September 21st, 2019, International Day of Struggle against Tree Monocultures. Available at: https://youtu.be/2eGM-ThINrk

It is hard to believe that the expected hundreds of millions of hectares of tree plantation expansion will become a reality in the coming years. But even if just a part of the plans are implemented, this will create a disastrous situation for many local communities: land grabbing, the undermining of peoples´ food sovereignty including their right to food, destruction of livelihoods and cultures, water and soil pollution, violence and human rights violations, among other serious problems.

In sharp contrast to these predictable consequences, industrial tree plantations will be presented to communities with seductive names such as natural climate "solutions" or "bioenergy" projects. They will be promoted as "reforestation," "restoration" or "planted forests". Moreover, plantations will most probably be certified by the FSC label (see Section 2), while companies will profile themselves as participants of initiatives that claim to only promote "good" or "sustainable" plantations.

As this booklet outlines, industrial tree planting is completely different from community-driven restoration and planting of mostly native trees, which can conserve soils or water and offer food or other benefits. The companies' tactics to "greenwash" their image are disguising the destructive nature of their large-scale and monoculture model of tree plantations, that appropriates fertile and often community lands, along with bio-diverse woods and forests, in order to yield the high profits that investors expect. Their tactics also distract from identifying and halting the real drivers of the climate emergency, global heating and deforestation.

It is hoped that this booklet not only helps community activists to reflect on and better understand this new push for industrial tree plantations, but also contributes to effective actions and campaigns. This is particularly important at a time when the plans for a massive expansion of industrial plantations are still at their initial stages. Organizing now can help ensure these plans will never become a reality.

Based on lessons drawn over the years from struggles against monoculture tree plantations in the Global South, some concrete suggestions for action are as follows:

- **Be alert** to possible plans for industrial tree plantations; investigate your country's schemes to address climate change; check the agricultural investment projects being planned in your countries.

- **Collect information** about plantation plans in your country or region: demand all documents available about the projects and initiatives from your authorities, in order to learn about the areas targeted, the size of the plantations, the trees that will be used, the companies and/or funds involved, etc.; also use other possible sources, for example, informants, allies, the media and the Internet.

- **Organize a meeting** in your community: discuss the plantation plans that will affect your village and/or region.

- **Visit a community or communities** in your region that are already facing industrial tree plantations in order to learn from their experience and/or invite people from those communities to share their experiences in your community.

- Once you have gathered information and have shared the implications and concerns of the plantation project

with your communities, **organize a public event** with your local or national governmental representatives (if applicable) and/or other possible involved parties to discuss the proposed plantation plans, so that governments and/or companies are forced to present their plans to the community.

- If your government has plans for "forest restoration", **demand** that they do not use industrial tree monocultures.

- Find out what **forest definition** is used in your country. If it includes monoculture tree plantations, as is most often the case, put pressure on your government to exclude monoculture tree plantations from the definition.

- If government and/or company representatives come to your community or territory, document everything: **record in writing** when they came, if possible who they are, whom they met with, what they did and offered, and what they wanted from their visit, etc..

- If the plans are set and/or moving forward, try to **connect with other communities** in your region or elsewhere that are confronting a similar situation, in order to disseminate and highlight your situation even more.

- **Organize protest actions** if your government wants to target your community and/or region with monoculture tree plantations and consider holding an activity around September 21st, the International Day of Struggle against Tree Plantations.[35]

- Advocate for **community-led** forest ecosystem restoration that uses mostly diverse, **native species.**

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Further reading:

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- Overbeek W, Kröger M, Gerber J-F, 2012. *An overview of industrial tree plantation conflicts in the global South. Conflicts, trends, and resistance struggles.* EJOLT Report No. 3, 100 p. Available at https://wrm.org.uy/?p=1320

- WRM bulletin 244, 2019. *Women Stand Up to Fight the Suzano Paper Mill in Maranhão, Brazil.* Available at https://wrm.org.uy/?p=20384

- WRM bulletin 245, 2019. *Mapuche Lavkenche Women's Resistance to the Chilean Forestry Model.* Available at https://wrm.org.uy/?p=20806

- WRM bulletin 241, 2018. *Tanzania: Community Resistance against Monoculture Tree Plantations.* Available at: https://wrm.org.uy/?p=19637

- WRM bulletin 239, 2018 *Argentina: "Sowing Struggle, We Harvest Land!"* Land Recovery in Misiones. Available at: https://wrm.org.uy/?p=19341

- WRM, 2016. *Industrial tree plantations impacts on water.* Available only in Spanish and Portuguese at https://wrm.org.uy/?p=11312

- WRM, 1999. *10 Replies to 10 Lies (about large-scale tree plantations)*. Available at: https://wrm.org.uy/?p=3404

References

1 Although WRM views industrial oil palm plantations as tree plantations, these are not considered in this publication, even though they are also expanding and with new purposes, such as vehicle fuel or electric power generation. The main reason not to include these plantations in this booklet is that they are still considered an agricultural crop according to most international and national definitions, thus they are generally not included in national and international programs for "forest restoration", "reforestation", "planted forests" or "plantation forests". For more information on industrial oil palm plantations and their impacts, visit the WRM website at: http://wrm.org.uy

2 FSC website. Avaiable at: https://fsc.org/en

3 Further reading: To find out more about the FSC and the problems with the certification process, please read this article about how the conflict resolution procedure for FSC certification does not work for communities: *Greenwashing continues: FSC certifies industrial tree plantations as forests and RSPO oil palm plantations as sustainable.* WRM Bulletin Nº 233, 2017. Available at: https://wrm.org.uy/?p=14996. And to find out how plantation companies are awarded certification even if their operations have caused many negative impacts, watch the documentary film *Sustainable on Paper*, made by two Belgian journalists, which tells the story of the Veracel Celulose company in Brazil: https://wrm.org.uy/?p=1657

4 The Forest Dialogue website. Available at: https://theforestsdialogue.org

5 New Generation Plantations Platform website. Available at: https://newgenerationplantations.org/

6 WWF Report 2012. *Forest and Wood Products*. Chapter 4. Executive summary. Available at: https://bit.ly/2Ger9e8 and https://newgenerationplantations.org/

7 Further reading: *No to the WWF New Generation Plantations Project!.* Latin American Network Against Monoculture Tree Plantations (RECOMA), 2011. Available at: https://wrm.org.uy/?p=2502

8 Read more here: WRM, 2017. *What do forest have to do with climate change, carbon markes and REDD+?* Available at: https://bit.ly/3aBhBIa

9 For more information about the photosynthesis, see WRM, 2017. *What do forest have to do with climate change, carbon markes and REDD+?*. Chapter 2, pages 14-15. Available at: https://bit.ly/3aBhBIa

10 For a clearer understanding as to why a carbon plantation, often referred to as a REDD+ project, is a bogus solution to climate change, please visit the WRM website (https://wrm.org.uy) and read the booklet *10 things communities should know about REDD* (available at: https://wrm.org.uy/?p=1283); we also recommend our publication *What do forests have to do with climate change, carbon markets and REDD+* with the accompanying REDD flipcharts (available at: https://wrm.org.uy/?p=12387)

11 *Restoring natural forests is the best way to remove atmospheric carbon.* Nature, April 2, 2019. Available at: https://is.gd/ug7tGx

12 For further reading about the international/regional reforestation plans, please see WRM bulletin 221, *The Paris agreement: worsening violations of rights and people's territories*, 2016. This contains articles with more details about the Bonn Challenge, the 20x20 and the AFR100 initiatives. Available at: https://wrm.org.uy/bulletins/issue-221/

13 For a better understanding of what "climate smart agriculture" means, please read the article *Corporate smart agriculture,* from WRM bulletin 219, 2015. Available at: https://wrm.org.uy/?p=10348

14 Initiative 20x20 website. Available at: https://initiative20x20.org/

15 *Ministério da Agricultura aprova Plano Nacional de Florestas Plantadas para fortalecer o segmento no Brasil.* O Documento, June 6th, 2019. Available at: https://odocumento.com.br/?p=37664

16 *Mozambique: The Threat of Biodiversity "Offsets".* WRM bulletin 243, 2019. Available at: https://wrm.org.uy/?p=20187

17 *NGOs oppose the oil industry's Natural Climate Solutions and demand that Eni and Shell keep fossil fuels in the ground.* Available at: https://wrm.org.uy/?p=20222

18 *Total va investir dans les forêts.* BFM Business. July 7th, 2019. Available at: https://is.gd/VahyW7

19 *Restoring natural forests is the best way to remove atmospheric carbon.* Nature, April 2, 2019. Available at: https://is.gd/ug7tGx

20 "Forest restoration": examples from India, Brazil and Mozambique: 1) In 2004, the National Forest Council, which was set up by the Brazilian government, launched the "Brazilian National Forestry Plan". As the name suggests, this is a plan with policies to supposedly conserve and protect Brazil´s forests during a period

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of extremely high deforestation rates in the Amazon. In practice, however, and in accordance with this Plan, the Brazilian government is promoting the expansion of industrial tree plantations in the country, adding another 2 million hectares to the already existing area of 5 million hectares, which includes huge financial support to the main plantation companies provided by the State through the country's national development bank (BNDES). [Overbeek W, Kröger M, Gerber J-F. 2012. An overview of industrial tree plantation conflicts in the global South. Conflicts, trends, and resistance struggles. EJOLT Report No. 3, 100 p.
Available at https://wrm.org.uy/?p=1320]
2) Another example is India, where the Compensatory Afforestation Fund act from 2016 promised to compensate for forest loss due to destructive activities, but in practice became a mechanism promoting monoculture tree plantations while greenwashing the image of the companies responsible for the destructive activities. The act also resulted in more plantations encroaching upon community land (WRM, 2019. Compensating for Forest Loss or Advancing Forest Destruction? Available at: https://wrm.org.uy/?p=20622)
3) In 2019 in Mozambique, the government adopted its "Forest Agenda 2035". It states that the government intends to promote the plantation of one million hectares of trees by 2035. But the government also adopted the FAO forest definition of forests that considers any area covered with trees to be a forest, thus including monoculture tree plantations. The Mozambican government has already heavily promoted investments in monoculture tree plantations In the past 10 years in the provinces of Niassa, Nampula and Zambezia, and continues doing so. (WRM Bulletin 243, 2019. Mozambique: The Threat of Biodiversity "Offsets. Available at: https://wrm.org.uy/?p=20187)

21 On the WRM website (http://wrm.org.uy), you can read stories from different experiences of communities that had their territories invaded by carbon sink plantation projects: *Carbon Sink Plantations in the Ecuadorian Andes*, available at: https://wrm.org.uy/?p=3151; *A funny place to store carbon: UWA-FACE Foundation's tree planting project in Mount Elgon National Park, Uganda,* available at: https://wrm.org.uy/?p=1778; *Brazil: The case of Plantar – the FSC at the service of the sale of carbon credits*, available at: https://wrm.org.uy/?p=2719; *Tanzania: Community Resistance against Monoculture Tree Plantations*, available at: https://wrm.org.uy/?p=19637; and *India: Forests and tree plantations under carbon offset schemes*, available at: https://wrm.org.uy/?p=2418.

22 For example, in Argentina, national law 25.080 has granted enormous subsidies to industrial tree plantations since 1998. This is the main reason that explains the expansion of the country's tree plantations. For more information, please read: *Argentina: "Sowing Struggle, We Harvest Land!" Land Recovery in Misiones*, WRM bulletin 239, 2018, available at: https://wrm.org.uy/?p=19341; and *Argentina: New law promotes tree plantations in Cordoba Province*, WRM bulletin 233, 2017, available at: https://wrm.org.uy/?p=14979

23 For further reading, see the article: *Uruguay Goes into Debt with Million-Dollar Infrastructure at the Service of a Multinational Pulp Company*, WRM bulletin 244, 2019.
Available at: https://wrm.org.uy/?p=20380

24 For more information about new plantation money, read the article *Argentina: Harvard staunchly defends its tree plantations*, WRM bulletin 202, 2014. Avaible at: https://wrm.org.uy/?p=8556. Companies active in Brazil are as follows. From Brazil: Claritas, BTG Pactual and COPA. From the USA: RMS, GFP, Hancock, Campbell, Granflor (Harvard University), FIA, The Rohatyin group, Brookfield and Greenwood Resources. From Europe: Aquila capital, IWC, the SLB group, the Forest Company and GWB Forestry. See also an article on Fibria and its partner Parkia Investments. *Brazil. Profiting more from doing the same: The financialization of Fibria's eucalyptus monocultures.* WRM Bulletin 213, 2015. Available at: https://wrm.org.uy/?p=9766

25 Ministry of Agriculture and Forestry of Finland. Wood-based materials in circular economy. July 12, 2019.
Available at: https://bit.ly/2Gg2iH1

26 *Stora Enso's lignin wins IChemE Innovative Product Award*, Stora Enso press release, 9 November 2018. Available at: https://is.gd/0FbXb7

27 The negative impacts of Stora Enso´s tree planting activities can be observed, for example, in the case of Veracel, a Stora-Enso owned company in Brazil, and its conflict with the Pataxó indigenous peoples, which you can read about on this article: *Brazil: The monoculture eucalyptus company, Veracel Celulosa, is trying to evict indigenous Pataxó from their land*, WRM bulletin 221, 2016. Available at: https://wrm.org.uy/?p=10538

28 *What are natural climate solutions?*, from Nature4Climate website: https://is.gd/MDYyBv

29 For more information on "Nature-Based Solutions" or "Natural Climate Solutions" see the article *The failure of the UN Climate Action Summit. Helped by the distraction of Natural Climate Solutions*, REDD Monitor, September 26th, 2019, available at: https://wp.me/pll98-crA. Furthermore, oil companies such as ENI,

Shell and Total also promote "Nature-Based Solutions", proposing that they will pay for protecting forests that are at risk of being destroyed, and that the carbon that stays in the trees when the forest is not cut down will compensate the emissions such companies cause through fossil fuel extraction. "Nature-Based Solutions" therefore are just an excuse for the industry to continue extracting more fossil fuels, leading to more climate chaos.

30 To know more about biomass plantations, read this study on impacts of biomass plantations in Brazil for export to the UK: *Eucalyptus Plantations for Energy: A Case Study of Suzano's plantations for wood pellet exports in the Baixo Parnaíba region, Maranhão, Brazil*, CEPEDES and WRM, 2013, available at: https://wrm.org.uy/?p=10538. Also, the study *Are Forests the New Coal? A Global Threat Map of Biomass Energy Development*, Environmental Paper Network, 2018, available at: https://bit.ly/2sN8mn0.

31 Bio-energy with carbon capture and storage

32 *Restoring natural forests is the best way to remove atmospheric carbo*n. Nature, April 2, 2019. Available at: https://is.gd/ug7tGx.

33 For further reading about Genetically Engineered (GE) trees, please visit the website of the Stop GE Trees campaign at https://stopgetrees.org/ and the WRM website https://wrm.org.uy.

34 Sources for the map:

- *Restoring natural forests is the best way to remove atmospheric carbo*n. Nature, April 2, 2019. Available at: https://is.gd/ug7tGx. Article mentioning those countries with information about commitments for the Bonn Challenge or national schemes, and that will use the method of expanding tree plantations to restore "forests": Brazil, Burkina Faso, Chile, China, Colombia, Costa Rica, Democratic Republic of the Congo, Ethiopia, Ghana, Guatemala, India, Indonesia, Ivory Coast, Kenya, Laos, Mexico, Nigeria, Peru, Republic of the Congo, Uganda, Vietnam, Zambia.

- FERN, 2018. *Rubber: agricultural commodity consumption in the EU*. Available at: https://bit.ly/30Ldjcy

- EPN, 2018. *Are forests the new coal? A global threat map of biomass energy development*. Available at: https://bit.ly/2sN8mn0.

- WRM. Articles from the WRM bulletin, see https://wrm.org.uy/bulletins/

- Prospects and Developments of Forest Industry in Brazil and Finland 28.8.2018. Presentations by consultancy companies in a plantation business event in Finland, 2018. Availble at: https://is.gd/2n7IxP

- Desk research by Ricardo Coelho, 2018. Unpublished research for WRM about climate action plans of countries in the Global South and plantation expansion.

35 International Day of Struggle Against Monoculture Tree Plantations on the WRM website: https://wrm.org.uy/?p=372