

# Monoculture Tree Plantations Fuelling the Climate Fire



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In 2015, the world celebrated the Paris Agreement and its ambitious 1.5C target. To meet this target, countries proposed their mitigation measures and action plans. In this context, an increasing number of project/s (proposals), including large-scale monoculture tree plantations, are emerging mainly in developing countries. In theory, these plantations store carbon in form of biomass and are partly to be used for bioenergy purposes. However, monoculture plantations are closely linked to a whole row of very critical social and biodiversity issues. [1]

Background photo: Stuart Rankin/Flickr

## **Plantations Undermine Climate Resilience**

Monoculture tree plantations of alien species have even been accused of being at the core of some of the recent most harmful forest fires. For instance, in January 2017, a prolonged period of drought triggered extensive fires in the widespread monoculture pine plantations in Chile. No less than 600.000 hectares of tree plantations, native forests and other lands went up into flames, causing 11 fatalities and massive social and economic harm. The Chilean fires provided another evidence that monoculture tree plantations undermine countries' climate resilience. They are highly susceptible to fire, pests, and storm damage. They also erode the soils, deplete water resources, and when cut as part of the productive cycle, cause significant risks of land slides when planted on slopes.

## **Plantations Contribute to Climate Change**

The replacement of forests or other natural ecosystems by monoculture tree plantations forms a major source of greenhouse gas emissions. Tree plantations are often sold as a sustainable solution to combat the climate change using degraded or abandoned land to expand forest cover and, at the same time, absorbing and fixing CO2 emissions. However, due to the often short-rotation processes in which they are operated, plantations take up only a fraction of carbon compared to old-grown trees or restored (natural) ecosystems. [2] In addition, evergreen species such as eucalyptus and pine, which are two of the most common plantation species', take up water from the ground the whole year leading to extreme dry grounds fuelling wildfires and eventually worsen the effects of climate change. They also tend to deplete soil carbon, including through the allelopathic effect of especially Eucalyptus, one of the most popular plantations species [3], which can be a primordial cause of land degradation

through jump-starting the process by which the land is exposed to erosion, compaction and excessive solar irradiation. If planted on former peatland, the carbon loss is even greater.

## **Plantations Destroy Biodiversity & Water Resources**

Tree plantations often replace natural ecosystems, or lands that were in process of ecosystem restoration. The replacement of forests by tree plantations is one of the main threats to the world's biodiversity. Monoculture tree plantations also have a negative impact on water sources, as they tend to require the use of agrochemicals, and often exist of species like Pine and Eucalyptus that require an excessive amount of water. Alien invasive species like Eucalyptus (if planted outside its country of origin, Australia) are the second most important cause of global biodiversity loss.

## **Plantations Destroy Local Communities**

Monoculture tree plantations are the most labour-extensive form of land use after large-scale cattle ranching. The few jobs they provide per hectare of land tend to be temporary, badly paid, and often they are given to outsiders rather than local workers. As a result, the expansion of tree plantations has been associated with poverty, rural unemployment, rural depopulation, and the decline of rural livelihoods, triggering green deserts that are not only devoid of biodiversity, but also of people. The Community Conservation Resilience Assessments in countries like Chile, South Africa, Malaysia, India and Uganda identified tree plantations as a major threat to communities and their conservation initiatives. Women are particularly hard-hit as they are often responsible for gathering fuelwood and other natural resources that are privatized or depleted when ecosystems are replaced by plantations.

## Plantations should not be subsidized as they are false a false solution to climate change

Despite all the aforementioned, is not uncommon to find that international climate-related funding mechanisms direct money, whether in the form of grants or loans, towards projects that include subsidies for monoculture tree plantations. As highlighted in box 1, 2 & 3, despite the evidences, there are already projects proposed and even being funded largely based on monoculture tree plantations. One reason is the growing dependency of climate policies on private investments through public private partnerships and other forms of blended finance. For private investors, a commercial tree plantation is a more profitable investment than forest conservation or restoration, despite the benefits of the latter for local communities, Indigenous Peoples and women. Offsets for highly polluting industries like the airline industry, subsidies for bioenergy - which is wrongly considered a renewable source of energy despite causing more emissions than fossil fuels - and ill-considered proposals like Bioenergy and Carbon Capture and Storage (BECCS), provide subsidies and other incentives for tree plantation expansion too. The underlying drivers are flawed accounting mechanisms that hide the emissions of plantations and create massive amounts of hot air in the Climate regime.

[1] The Global Forest Coalition recently published a special issue on plantation related fires, see here: [http://globalforestcoalition.org/forest-cover-52/?utm\\_content=buffer391e3&utm\\_medium=social&utm\\_source=twitter.com&utm\\_campaign=buffer](http://globalforestcoalition.org/forest-cover-52/?utm_content=buffer391e3&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer)

[2] <https://www.chathamhouse.org/publication/impacts-demand-woody-biomass-power-and-heat-climate-and-forests>

[3] See for example a report on a regional expert consultation organized by FAO on the Biophysical and Environmental Impacts of Eucalyptus Plantations: <http://webcache.googleusercontent.com/search?q=cache:E3VJcZPaai8j;www.fao.org/docrep/005/ac777e/ac777e0a.htm+&cd=2&hl=en&ct=clnk&gl=th&client=firefox-b>

## PROEZA Project Proposal from Paraguay

The Paraguayan PROEZA project, which has been submitted by the World Bank and FAO to the Green Climate Fund, includes a component that aims to subsidize at least 32.500 hectares of the up to 450.000 hectares of monoculture tree plantations the Paraguayan government aims to plant. The plantations are primarily meant to produce bioenergy for the soy sector, which is one of the main drivers of deforestation and greenhouse gas emissions in the country. The project also proposes to plant Eucalyptus in agroforestry systems, ignoring the allelopathic effect of Eucalyptus. [4] The project will be discussed at the July 2017 GCF Board meeting.

## Ghana: Public- Private Partnerships for the Restoration of Degraded Forest Reserve through VCS and FSC Certified Plantations [5]

This project was approved by the FIP in July 2016 and consists of a USD 10 million concessional loan aimed to catalysed the private sector involvement in large-scale commercial teak plantation in assumingly degraded forest reserves in Ghana. It aims to expand an already existing Forest Stewardship Council (FSC) and Verified Carbon Standard (VCS) plantation of 5,000 ha to 11,700 ha. The composition of this plantation is only 10% indigenous trees species and 90% teak. One of the main rationales behind the project is the need to increase teak plantations to meet the expected rising global and domestic demand for teak. [6]

## Brazil: Commercial Reforestation of Modified Lands in Cerrado

This project proposal, which was part of Brazil 's FIP Investment Plan, was endorsed in 2013 for a total of USD 15 million of non-grant investment. The project is mainly aims to encourage the "development of forest plantation on modified habitat in the Cerrado biome by funding a direct intervention on a new

forest product, teak grown over a short rotation". [7] The project aimed to subsidize a private corporation called the Company to plant a total of 18,000 ha of teak to meet the expected increasing demand for this type of wood products. At FIP Board discussions several concerns were raised about this project, such as the need for strong monitoring systems to avoid leakages, and the relevance of developing specific environmental and social action plans to minimize the potential negative impact, but it was nevertheless approved.

### **Green Resources´ plantation in Uganda**

In 2011, and as part of its mandate to combat global climate change, the Swedish Energy Agency entered into a 20-year contract agreement with Green Resources, a Norwegian company. The Agency is buying so-called 'carbon credits' from a tree plantation in Kachung, Uganda where there are documented cases of forced evictions of farmers, pesticide pollution of adjacent watercourses, and instances where indigenous peoples' rights to land, consultation and project consent were not considered. Since the trees are planted on land formerly used by communities, the families now have less land to grow food on and cannot access grazing land for their cattle. [8]

[4]  
[5] [https://www-cif.climateinvestmentfunds.org/sites/default/files/meeting-documents/fip\\_-\\_form\\_ghana\\_project\\_proposal\\_-\\_public\\_document\\_-\\_august\\_2016.pdf](https://www-cif.climateinvestmentfunds.org/sites/default/files/meeting-documents/fip_-_form_ghana_project_proposal_-_public_document_-_august_2016.pdf)

[6]  
[7] [https://www-cif.climateinvestmentfunds.org/sites/default/files/meeting-documents/ifc\\_proposal\\_fip\\_set\\_aside\\_public.pdf](https://www-cif.climateinvestmentfunds.org/sites/default/files/meeting-documents/ifc_proposal_fip_set_aside_public.pdf)

[8] <http://www.swedwatch.org/en/2015/11/05/lessons-learned-kachung>

[9] [https://www-cif.climateinvestmentfunds.org/sites/default/files/meeting-documents/mozambique\\_fip\\_investment\\_plan.pdf](https://www-cif.climateinvestmentfunds.org/sites/default/files/meeting-documents/mozambique_fip_investment_plan.pdf)

[10] [https://www-cif.climateinvestmentfunds.org/sites/default/files/meeting-documents/report\\_of\\_the\\_eg\\_on\\_ranking\\_of\\_new\\_pilot\\_countries.pdf](https://www-cif.climateinvestmentfunds.org/sites/default/files/meeting-documents/report_of_the_eg_on_ranking_of_new_pilot_countries.pdf)

### **Mozambique: Emissions Reductions in the Forest Sector Through Planted Forests with Major Investors.**

This project has been recently approved by the FIP, in April 2017, for a total of USD 1.85 million of grant funding. One the main goal of the project is to facilitate the afforestation of over 200,000 hectares, mainly with Eucalyptus. Portucel, which is a leading pulp and paper production company, is one of private actors involved in this project and is in charge of expanding the plantations area. [9]

### **DRC: Support Project for the Development of Agroforestry in four Provinces (PRODAF)**

The decision to approve this project was deferred due to economic funding constrains. The core component of this project, which was proposed to the FIP Board consists on the implementation of an outgrower scheme on palm oil production through a private company and Acacia fuelwood production on what they barely defined as "degraded land" as a way to reduce forest loss in supposedly degraded lands. [10] The decision to approve this project was deferred due to economic funding constrains.

Due to their harmful environmental and social impacts, projects including large-scale monoculture tree plantations should not be financed by the GCF and other climate funding mechanisms. As these mechanisms aim to support real climate solutions and transformative change, they should prioritize financial support for small-scale community and peasant based projects instead.

**Monoculture tree plantations should not be defined as forests and have no place in climate change policies. They are commercial enterprises, and should not be subsidised with climate finance.**