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## [Genetically Engineered Trees: A technology that expands monoculture plantations](#)

The January 2017 bulletin focused on the numerous initiatives being announced worldwide that promote the expansion of millions of hectares of tree plantations ([Bulletin 228](#), January 2017). At the same time, the plantations and pulp and paper industries, among others, are strongly pushing for Genetically Engineered (GE) trees – eucalyptus and poplar in particular – to be licensed for commercial use. Consequently, this time, the editorial of the WRM Bulletin warns about the promotion of GE trees.

As the WRM has pointed out on many occasions (1), GE trees would primarily benefit the plantations and pulp and paper industries. GE trees would grow more uniform fibre faster, with fewer branches and straighter trunks, generating shorter cycles for cut and re-plant and thus more profits. GE disease resistant trees would serve large-scale monoculture plantation companies, as their large monocultures are particularly susceptible to diseases. Trees engineered to be sterile would grow faster since the trees would focus on growing rather than producing flowers. Certain areas not suitable for large-scale tree plantations, such as areas with occasional frost or droughts, could be covered with freeze-tolerant or drought-tolerant GE eucalyptus trees. Moreover, GE trees with reduced lignin would simplify turning the wood cellulose into a liquid fuel (ethanol), raising the interest from companies in the energy sector. Likewise, burning of wood pellets from “biomass plantations” is being promoted across the EU as ‘renewable energy’, and GE trees would result in faster growing plantations producing more biomass in shorter time, the argument goes.

This is very bad news for forests and the communities dependent on forests. It is also bad news for communities living within and in the vicinity of monoculture plantations since GE trees would only exacerbate the already known devastating impacts on land, water, biodiversity, livelihoods and cultures. Poplars and eucalyptus trees are extremely flammable. Within situations of drought, these monocultures of flammable trees at large-scale create the perfect recipe for disaster. A large wild fire just swept through a region of Portugal where vast areas of land are covered with eucalyptus plantations. The fire took the lives of more than 60 people. In Chile, fires in early 2017 burnt over 600 thousand hectares along with entire villages and people’s livelihoods. Such fires will be more frequent and forceful as areas planted with tree monocultures expand.

In June this year, the Tree Biotechnology Conference of the International Union of Forest Research Organizations (IUFRO) was held in Chile. At the Conference, the latest advances and developments in forestry biotechnology are promoted. IUFRO’s biennial Conference provides a platform that facilitates the link between the tree biotechnology companies, monoculture plantations companies and biotechnology university centres, working hand in hand to advance GE tree technology.

This year’s Conference, organized by the University of Concepción, was held in the Bío Bío region which experienced the worst wildfires in the country’s history in early 2017. One of the largest extensions of monoculture plantations in the country is found in this region. The plantations industry planting mainly eucalyptus and pine trees has been heavily criticized for increasing the likelihood and severity of the fires which burned entire communities. As a press release from the Stop GE Trees

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Campaign states, the fact that the IUFRO Conference was in the same region as the disastrous fires “was a slap in the face to those people who lost everything.” (2)

A look into the Conference sponsors reveals the interests at stake in these events. These include:

\* FuturaGene: a subsidiary of pulp and paper company Suzano, controlling almost 900 thousand hectares of land in Brazil. In 2015, a FuturaGene application for the commercial use of GE eucalyptus trees was approved in Brazil despite strong local, national and international resistance and evidence of GE eucalyptus trees intensifying industrial plantations’ impacts. This was the first approval of GE trees for commercial release in Latin America. (More information in an [article from Bulletin 213](#), May 2015)

\* ArborGen: a US developer of biotechnology tree seedling products. In 2015, the US Department of Agriculture gave this company permission to sell a GE loblolly pine with increased wood density (3). And it is currently seeking approval for a freeze-resistant GE eucalyptus tree, with the intent of growing vast plantations across the southern US. This species is known by the US Forest Service to take up 20 per cent more water than native tree species and it is also highly flammable. (More information in [an article from Bulletin 206](#), September 2016)

\* Arauco Group: One of the five biggest industrial tree plantation companies in the world, with pulp mills in Chile, Argentina, Brazil, Uruguay, the US and Canada, and commercial presence in more than 80 countries. (4) In Chile, Forestal Arauco is one of the most influential economic groups in the country and owns vast extensions of tree plantations. Between 2004 and 2007, the University of Concepción and of Andrés Bello developed GE frost-tolerant eucalyptus experiments for Forestal Arauco. (More information in [an article from Bulletin 212](#), April 2015)

Despite the companies' and governments' efforts to use GE technology for tree monoculture practices, communities directly affected by these plantations continue to strongly oppose what is an intensification and expansion of a destructive industry.

Traditional and indigenous Mapuche communities in Chile, together with national and international groups, opposed the IUFRO Conference and denounced that GE trees will deepen the already proven harmful consequences of industrial tree plantations. Moreover, several groups in the US are organizing to prevent ArborGen from receiving approval to commercially release a freeze-resistant GE eucalyptus tree. You can [support this struggle by signing here](#).

It is time to stop the expansion of monoculture plantations!

(1) <http://wrm.org.uy/browse-by-subject/tree-plantations/genetically-modified-trees/>

(2) [http://wrm.org.uy/highlighted\\_post/declaration-from-the-campaign-to-stop-ge-tree/](http://wrm.org.uy/highlighted_post/declaration-from-the-campaign-to-stop-ge-tree/)

(3) <http://www.mintpressnews.com/usda-moving-toward-less-oversight-regulation-regarding-new-ge-trees/202163/>

(4) <http://www.arauco.cl/informacion.asp?idq=626&parent=625&idioma=21>

