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## [Open letter delivered to the Brazilian National Technical Biosafety Commission \(CTNBio\)](#)

### **To: Brazilian National Technical Biosafety Commission (CTNBio)**

We, the undersigned, have been informed that FuturaGene, a biotechnology firm wholly owned by the pulp and paper company Suzano, has submitted a request for commercial planting of its yield enhanced genetically modified eucalyptus trees.

Suzano/FuturaGene, as well as other companies like Fibria (ex-Aracruz) and ArborGen, have been conducting research and field experiments on GM Trees for years.

Suzano/FuturaGene's interest has been to increase the productivity of their tree plantations. They argue that their new GM tree will result in a 20% increase in productivity and by doing so will increase "competitiveness and environmental and socio-economic gains through higher productivity using less land and therefore overall lower chemical inputs and lowered carbon release, as well as making land available for food production or conservation and enhancing the income of outgrowers." (1) These myths do not stand up to real facts and are addressed below.

### **GM TREES WILL ADD TO THE PROBLEMS CAUSED BY INDUSTRIAL TREE PLANTATIONS, NOT REDUCE THEM**

The use of faster growing GM trees in industrial plantations will exacerbate the already well-known negative social and environmental impacts caused by industrial tree plantations while introducing yet further impacts and knock-on effects due to the additional risks inherent to genetic engineering.

Industrial tree plantation companies have long promised that gains in productivity would lead to less land use. This is a myth. In Brazil, for example, where the productivity of monoculture tree plantations per hectare increased from 27 m<sup>3</sup>/ha/year in the 1980s to 44 m<sup>3</sup>/ha/year currently, the area covered by plantations has increased from about 4 million hectares at the end of the 1980s to more than 7.2 million hectares today. Historically, there is thus no evidence that in Brazil, increases in productivity led to less land being occupied by industrial tree plantations. A newly formed association, Indústria Brasileira de Árvores (Ibá), representing the Brazilian industrial tree plantation industry states that they intend to double the area of industrial tree plantations to 14 million hectares by 2020.

### **SUZANO SEEKS TO EXPLOIT NEW MARKETS FOR PLANTATION TREES**

Suzano recently opened a new pulp mill in the state of Maranhão with an 1.5 million tons/year capacity. Huge areas of land covered with tree monocultures will be needed to fulfill Suzano's wood demand for pulp, as well as for an added demand, in particular its plans to explore new uses of its wood with a project in the same state to produce and export wood pellets for energy production, to cofire with coal in the UK. The use of biomass for industrial scale energy production remains highly controversial, and its negative social, environmental and climate impacts have been documented

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widely. Both the pulp and wood pellet projects aim solely at profiting from new market opportunities, which is the mission of Suzano.

## **BRAZILIAN PEOPLE AND ENVIRONMENT WOULD PAY THE COSTS**

While profits from this expansion accrue to Suzano shareholders, the social, ecological and economic costs as well as increased risk to regional food sovereignty and health will be borne by the Brazilian public, and local communities surrounded by plantations in particular. Many and serious conflicts over access to land already exist, and living conditions of communities surrounded by Suzano's operations have deteriorated to the point that communities are now struggling to guarantee their food sovereignty and are increasingly at risk of losing their territories (2) .

## **GM CROPS LEAD TO INCREASED APPLICATIONS OF AGROTOXINS**

Further, there is no plausible reason to expect that the use of “chemical inputs”, including agrottoxins, will decrease as a result of planting GM trees. On the contrary, it will increase with the increasing occupation of land which is planned to take place and the intensification of growing cycles and the ensuing nutrient depletion of soil and land. Brazil, sadly, is already the world's leading consumer of agrottoxins, causing injury to hundreds if not thousands of victims per year, putting further strain on already insufficient public health provision. Industrial tree monocultures, lacking biodiversity, and promoted at very large scale, will augment the application of agrottoxins by huge amounts. The argument used by the GM technology lobby that the introduction of GM crops—such as soy and maize—results in less use of pesticides and fertilizers has already been proven to be false. In countries including Brazil, Argentina, and the United States – front-runners in GM soy & maize production—research has shown not a decrease, but rather an alarming increase in the use of agrottoxins (3).

## **DAMAGING SOIL AND WATER SUPPLIES**

Genetically modifying trees to make them grow faster, while planting them on a continuously expanding portion of the land in ever larger industrial tree plantations, will only lead to further depletion of soil nutrients and fresh water. This is especially true for eucalyptus trees, already notorious for their voracious water consumption, which has been shown to result in the overall drying out of surrounding soils, springs and waterways. Communities living around non-GM tree plantations within and outside of Brazil have already widely reported water shortage and soil depletion. The introduction of faster growing GM Trees will only further aggravate this situation.

## **UNEXPECTED NEGATIVE EFFECTS OF GM CROPS COULD BE EVEN WORSE IN GM TREES**

Serious uncertainties exist with respect to the potential environmental and socio-economic impacts of genetically engineered trees. Unexpected effects have already been reported for GM food crops, including for example the proliferation of herbicide resistant weeds, the emergence of secondary pests decimating crops, altered fertility such as higher rates of outcrossing, as well as increased allergenicity. Given the long and often complex life-cycle of trees and their interaction with biodiversity, predicting the outcomes and impacts of GM trees is practically impossible. While eucalyptus is non-native to Brazil, it is widely planted, and contamination of non-GM eucalyptus trees by GM eucalyptus is another serious risk, although FuturaGene, paradoxically, welcomes it (4). Will it alter invasiveness, attract new pests, weaken or deter predators? Such questions have neither been asked nor are there data to provide answers. The catalog of risks is high.

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Based on the history of industrial tree plantations and the introduction of GM crops in general, we object to and deny industry's claim that society as a whole would benefit from the commercial release and planting of GM trees. Existing evidence points squarely into the opposite direction. The only benefit we see from this new high-risk technology with unknown future impact (and possible associated incalculable cost) is that of increased profits to Suzano's shareholders.

## **WE URGE NOT TO AUTHORIZE THE COMMERCIAL RELEASE OF GM TREES**

For the aforementioned reasons, scientists, lawyers and organizations around the world are calling for a global moratorium on the commercial release of genetically modified trees, due to their unknown but potentially severe social and ecological impacts and incalculable economic risks, which would overwhelmingly accrue to the public.

Therefore, the undersigned organizations and people **wish to express their deep concern and urge the CTNBio not to authorize the commercial release of yield enhanced GE eucalyptus by Suzano/FuturaGene or by any other company that also has, or will present in future, a request for such a release.**

### **Organizations:**

1. MST - Movimento dos Trabalhadores Sem Terra
2. Campanha Permanente Contra os Agrotóxicos e pela vida
3. Via Campesina – Brasil
4. O Fórum Mudanças Climáticas e Justiça Social
5. Fundação Padre José Koopmans – FUNPAJ
6. Sindicato dos Bancários do Extremo Sul da Bahia
7. Movimento de Luta pela Terra (MLT)
8. Movimento dos Pequenos Agricultores (MPA)
9. RECOMA – Rede Latinoamericana contra os monocultivos de árvores
10. Terra de Direitos – Brasil
11. Cepedes – Centro de Estudos e Pesquisas para o desenvolvimento do Extremo Sul Bahia
12. Comissão Indigenista Missionário (CIMI)
13. Rede Ambiental do Piauí-REAPI, Brasil
14. CEAS - Centro de Estudos e Ação Social - Salvador - Bahia
15. Fórum de Entidades e Movimentos Sociais do Sudoeste da Bahia
16. Amigos de la Tierra - Paraguay
17. Justiça nos Trilhos – Brasil
18. ETC Group, internacional - Silvia Ribeiro
19. Fórum de Entidades e Movimentos Sociais do Sudoeste da Bahia
20. Acção Académica para o Desenvolvimento das Comunidades Rurais-ADECRU, Moçambique
21. União Nacional de Camponeses - UNAC membro da La Via Campesina Africa
22. Red de Coordinación en Biodiversidad, Costa Rica
23. Coecoceiba, Costa Rica
24. Red por una América Latina Libre de Transgénicos
25. Otros Mundos AC/Chiapas, México
26. Acción Ecologica, Ecuador
27. Savia - Guatemala
28. Amigos de la Tierra - Argentina.
29. Amigos de La Tierra - Uruguay
30. Colectivo de Comunicación Mapuche Mapuexpress

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31. PACS - Instituto Políticas Alternativas para o Cone Sul
  32. Instituto de Investigacion y Capacitacion Agraria - Jorge Ernesto Llosa Montagne - Pozuzo IINCAGRO - POZUZUO, Peru
  33. Instituto Socioambiental e Educacional de Carrancas – MG Leandro José de Oliveira, Engenheiro Florestal,
  34. Movimiento de Chacrereros del Ejido de Mercedes, Pablo Martinez Bravo Uruguay
  35. Instituto de Permacultura da Bahia - Catarina S. Camargo
  36. Movimento Roessler para Defesa ambiental
  37. Grupo NSAE - Maurício Takeshi Uehara
  38. CEMEAR - Centro de Motivações Ecológicas e Alternativas Rurais, Pres. Getúlio / SC - Alexandre Tkotz,
  39. Ecologistas en Acción - Espanha
  40. Marea Azul AC - Marco A. Rodriguez Badillo - México.
  41. Centro de Estudos Ambientais - Cíntia Barenho – Brasil
  42. Ong Caatinga - Celma Gomes de Lemos – Brasil
  43. Núcleo de Ecojornalistas do Rio Grande do Sul – Brasil
  44. GRUPO DE ESTUDIOS AMBIENTALES (GEA AC), Mexico
  45. Articulação Nacional de Agroecologia- ANA – Brasil
  46. Grupo Contestatores - Teatro de Rua
  47. Cooperativa Cooperar (MST) - David Luiz M. Wigg – Brasil
  48. Association Franco Uruguayenne - Luis A Franco, France
  49. ACS – Instituto Políticas Alternativas para o Cone Sul, Rio de Janeiro
  50. ONG BIOS - Rocío Damiano, , Argentina
  51. Red de Custodios de Semillas en Risaralda y Red de Familias Quindianas Custodias de Semillas Libres, Juan Sebastián Barrera Montealegre - Colombia.
  52. Grupo Guayubira - Uruguay
  53. Aliança RECOs – Redes de Cooperação Comunitária Sem Fronteiras
  54. Movimento Mulheres pela P@Z!
  55. ONG GNOSE AMOR MAIOR - JOSÉ DIAS DA FONSECA,
  56. Grupo Paso a Paso (integrado a Red de Agroecología del Uruguay,
  57. Junta de Acción Comunal del Barrio Laureles, de la Ciudad de Ibagué - Rodrigo López Oviedo, Colombia
  58. Fernando Avarez Ramírez, Red Escuelas Campesinas de Agroecología Y Custodios De Semillas, Colombia.
  59. Movimento Amigos da Rua Gonçalo de Carvalho - Cesar Cardia,
  60. Comunidad Ecuménica Martin Luther King
  61. Movimiento Generación 80 (G80)
  62. LIBERTARIO GONZÁLEZ, Organización: Asamblea Popular Plaza el Ombú, Argentina
  63. Centro de Agricultura Alternativa do Norte de Minas CAA – Brasil
  64. Movimento Geraizeiro: guardião do Cerrado MG – Brasil
  65. Articulação Rosalino de Povos e Comunidades Tradicionais do Norte de Minas – Brasil
  66. Alberto Pastor Escobar, Director del Plantel, Paraguay
  67. Asociación de Productores Orgánicos de la Zona Norte (Asoprozonn) Javier Baltodano Aragón , Upala - Costa Rica
  68. Colectivo VientoSur – Chile
  69. ASSOCIATION POUCE VERTE - LE PRE ST. GERVAIS, Hilary Sandison, Francia
  70. Assessoria Técnica Popular Dignitatis, Brasil
  71. Centro de Referência em Direitos Humanos (CRDH/UFPB) - Projeto Ymyrapytã : Povos, Comunidades Tradicionais e Meio Ambiente - Brasil
  72. Igor SH de Carvalho, Centro de Agricultura Alternativa do Norte de Minas, Brasil

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73. Coletivo Tartaruga - Diego Menezes – Brasil
  74. ECO SITIO, Argentina
  75. BIOS ARGENTINA, Argentina
  76. Lic. Silvana Buján, Argentina
  77. RENACE - Red Nacional de Acción Ecologista de la Argentina [www.renace.net](http://www.renace.net)
  78. Universidad de Granada, Consejería de Educación de la Junta de Andalucía
  79. Agrupacion de Mujeres Mapuche XANALAWEN, Jeannette Paulina Canio Ñanculeo, Presidenta: Chile
  80. Associação de Mulheres Rurais Nova Galiléia - Colider/MT Norma Apª de Oliveira, Brasil
  81. APROMAC – Associação de Proteção ao Meio Ambiente de Cianorte / Brasil
  82. AMAR – Associação de Defesa do Meio Ambiente de Araucária - Brasil
  83. TOXISPHERA – Associação de Saúde Ambiental - Brasil
  84. Observatorio Latinoamericano de Conflictos Ambientales, Chile
  85. María Isabel Cárcamo, RAPAL, Uruguay
  86. Red de Coordinación en Biodiversidad, Carlos Eduardo López Quirós - Costa Rica
  87. Fórum de Juventude Negra – PE – Brasil
  88. Movimento Negro Unificado – PE – Brasil
  89. Central de Movimentos Populares – PE – Brasil
  90. Sociedade das Jovens Negras Feminista – PE – Brasil
  91. Caminhada de Terreiro de Pernambuco – PE – Brasil
  92. Movimento de Luta e Resistência Popular – PE – Brasil
  93. Rede Jovem Nordeste – PE – Brasil
  94. Rede Brasileira de Justiça Ambiental – Brasil
  95. Rede Alerta contra o Deserto Verde – Brasil
  96. Observatório dos Conflitos do Extremo Sul do Brasil – RS
  97. Relações Raciais, Desigualdades Sociais e Educação da UNIGRANRIO – Brasil
  98. Articulação Popular São Francisco Vivo (MG / BA / PE / AI / SE)
  99. Associação Homens e Mulheres do Mar da Baía de Guanabara – AHOMAR –RJ
  100. Sindicato dos Pescadores Profissionais e Pescadores Artesanais do Estado do Rio de Janeiro - SINDPESCA-RJ
  101. Comissão Pastoral da Terra - CPT Nacional
  102. GEDMMA (Grupo de Estudos: Desenvolvimento, Modernidade e Meio Ambiente), vinculado à Universidade Federal do Maranhão – MA
  103. Núcleo TRAMAS - Trabalho, Meio Ambiente e Saúde Faculdade de Medicina - Universidade Federal do Ceará

#### **Individuals:**

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2. Debora F. Lerrer, Professora-Adjunta do CPDA/UFRRJ
3. Luis Bonaje Negrin Plasencio
4. María Jacinta Sánchez Marcos, España
5. Antônio Roberto Achel, servidor público
6. Paulo Roberto da Silva - Universidade Federal Fluminense, Brasil
7. Marcia Regina do N de Souza, Brasil
8. Veronica Gonzalezes - Argentina
9. Francisco das Chagas Loiola Maia, associado e Técnico em Educação Ambiental da ADAARI -(Associação de Desenvolvimento Ambiental e Agroecológico da Região dos Inhamuns )
10. Odile JACQUE, FRANCE

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11. María Cristina Weber Quinteros, Uruguay
  12. Múcio Tosta Gonçalves. Professor Ajusto do Departamento de Economia da Universidade Federal de São João del-Rei (UFSJ)
  13. Hugh Lacey. Pesquisador Colaborador Estrangeiro no Projeto Temático da FAPESP: "Gênese e significado da tecnologia: relações entre ciência, tecnologia e sociedade"), Instituto de Estudos Avançados (IEA), Universidade de São Paulo (USP). Autor do livro, A Controvérsia sobre os Transgênicos: questões científicas e éticas. São Paulo: Editora Idéias e Letras, 2006.
  14. Sergio Argüello Reyes. Psicólogo. Guatemala
  15. Fábio Augusto Denardin Klein
  16. Heloísa Rey Farza - Gerência Geral de Toxicologia- ANVISA
  17. Tania Pacheco - blog Combate Racismo Ambiental
  18. Olinto Ramos Filho – Brasil
  19. Ricardo Corrales - Costa Rica
  20. Bernadete de Oliveira – Brasil
  21. Rosalee Albuquerque Coelho Netto, Manaus, AM – Brasil
  22. Luis Eduardo Tantessio – Uruguay
  23. Cordula Eckert - Engenheira Agrônoma, Emater/RS-Ascar
  24. Luana Rockenbach – Brasil
  25. Lygia Campos - Alemanha
  26. Susana Prizendt, Coordenadora, Comitê Paulista da Campanha Contra os Agrotóxicos e Pela Vida
  27. Maria Nelida Burgos – Brasil
  28. William Martínez – Uruguai
  29. Yolanda Reyes \_ Colectivo Resistencia Sur – Ecuador
  30. Paulo Cesar da Costa Lima – Brasil
  31. William Alessandro Germano – Estúdio Sete Sinos, arte ecológica
  32. Roger Chaves – Costa Rica
  33. Ana Lucia Rapetti Rava, vecinos de la Sierra de Rocha, Uruguay
  34. Adenor Vicente Wendling, Doutorando - UFSC
  35. Prof. Dra. Liliete Canes Souza Cordeiro, Departamento de Análises Clínicas. Centro de Ciências da Saúde, Universidade Federal de Santa Catarina
  36. Fabio Nolasco, UFMT, Cuiabá-MT-Brasil
  37. Mateus Oliveira – Brasil
  38. Abogado Gonzalo Taborga Molina, fundador, ex-Secretario Internacional y ex-Presidente de la Comisión Chilena de Derechos Humanos
  39. ANGELAINE ALVES – ESPAF
  40. Ana Karoline Rodrigues Dias - ESPAF (Escola de Formação Política e Cidadania)
  41. Prof. Paulo Kageyama, Núcleo de Cultura e Extensão em Educação e Conservação Ambiental - NACE-PTECA, Piracicaba-SP
  42. José Otávio Varella, Engenheiro Agrônomo, EMATER-RS, Secretaria de Desenvolvimento Rural, Pesca e Cooperativismo/RS
  43. Inês Mendes Pinto, Prefeitura Belo Horizonte
  44. José Lourenço Pechtoll
  45. José Luís Ciotola Guimarães - autônomo
  46. Elder Andrade Paula, NUPESDAO/UFAC, Brasil
  47. Cristiana Amarante (Rio de Janeiro) – Brasil
  48. Rosemeire Aparecida de Almeida, UFMS-Campus de Três Lagoas – Brasil
  49. Daniel de los Campos
  50. Beti Bernstein, profesora de Química, Argentina-Uruguay

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51. Gervasio Espinosa, editor de textos de la ciencias sociales, Argentina-Uruguay
  52. Claudio Luiz G. Marques, Eng<sup>o</sup> Agrônomo - Perito Federal Agrário, SR(09)PR/INCRA
  53. João Ernesto Mota Martins, Comunicador na ONG Esplar (Escritório de Planejamento Rural).
  54. Fernanda Teixeira Frade Almeida, Ministério da Educação
  55. Ana Reis – Brasil
  56. Luã de Souza Veiga, graduando em Agroecologia pelo IF Sudeste- MG, membro do NOEA(Núcleo de Observação e Estudos em Agroecologia
  57. Monica Kumpera, Brasil
  58. Fernando Braga Campos, Brasil
  59. Ignacio Stolkin, Uruguay
  60. Ana Victoria Molina Betancor, Colombia
  61. Viviana Lima Silva, PhD in Plant Biotechnology por la Universidad de Malaga, España
  62. Pamela Cabrera, Chile
  63. Irene Iturribery, Proyecto "Gestión Ambiental del Abrazo del Solís Grande", Uruguay
  64. Emília Wanda Rutkowski, bióloga, coordenadora FLUXUS/FEC/UNICAMP
  65. Antonio Graziano, Italia-Uruguay
  66. Roberta Graf
  67. Aparecida Oliveira, Salvador BA
  68. Stéphan Bry, Ilhéus – BA
  69. Jean Pierre Leroy, Fase Rio de Janeiro – Brasil
  70. Hernando Upegui G., Presidente. Asociación de Apicultores del Quindío, Colombia
  71. Antonia Acuña Ipinza, Chile
  72. SIMONE RAQUEL BATISTA FERREIRA - UNIVERSIDADE FEDERAL DO ESPÍRITO SANTO (UFES)
  73. Flávia Maria Galizoni, Professora da UFMG /Instituto de Ciências Agrárias
  74. Coordenadora do Núcleo PPJ/Núcleo de Pesquisa e Apoio à Agricultura Familiar
  75. Silvia Rodriguez Cervantes, Costa Rica
  76. Marina Panziera, trabajadora de la Administración de Parques Nacionales de Argentina
  77. Osvaldo Nicolás Pimpignano, Iniciativa Radial, Argentina
  78. Luis E. Sabini Fernández, Uruguay
  79. RAQUEL MAIA, Pesquisadora-Sociedade Civil, Montes Claros, Brasil
  80. Vladimir Oganauskas Filho - mestrando em Desenvolvimento Rural Sustentável pelo Programa de Pós-graduação em Agroecossistemas da UFSC.
  81. Marina de Castro Schwab, mestranda de Eng. Ambiental/UFRJ.
  82. Gabriel Perfeito Castro, Brasil
  83. Nemesio Juan Rodríguez Mitchell, Investigador, PUIC-UNAM (ex-PUMC-UNAM), México
  84. MARIA CLOTILDE PEREZ PERSICO, BUENOS AIRES – ARGENTINA
  85. Dr. Rosemary Galli, Observatorio das Nacionalidades
  86. Víctor L. Bacchetta, periodista, Uruguay.
  87. Jan van Dijk, Movimiento en Defensa del Medio Ambiente de La Higuera, Chile
  88. Eukarys Colmenares Leal, Montreal - Canada
  89. Humberto Jiménez Saa, Ph.D., [www.hjimenez.org](http://www.hjimenez.org), Costa Rica
  90. Mayron Régis Brito Borges, Brasil
  91. Reinaldo Barberine CPT Sudeste de Minas Gerais
  92. José Luís da Silva Costa, do Movimento dos Trabalhadores Rurais Sem Terra (MST-MA).
  93. Juliana Pazinato, MST/PR, Brasil
  94. Jonathan Mazzini – Brasil
  95. Fernanda Matheus - engenheira agrônoma
  96. Gabriela Scotto - NESA/Núcleo de Estudos Socioambientais - UFF, Brasil
  97. Ing. Angel A. Cruz Diloné

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98. Marcos Penna Sattamini de Arruda  
99. María del Pilar Morales Bartaburu - Uruguay

## Notes

- 1- See FuturaGene web site at <http://www.futuragene.com>
- 2 - <http://wrm.org.uy/pt/livros-e-relatorios/plantacoes-de-eucalipto-para-energia-o-caso-da-suzano-no-baixo-parnaiba-maranhao-brasil/>
- 3 - See [http://www.gmwatch.org/files/GMsoy\\_Sust\\_Respons\\_SUMMARY\\_SPA\\_v1.pdf](http://www.gmwatch.org/files/GMsoy_Sust_Respons_SUMMARY_SPA_v1.pdf)
- 4 - See <http://www.theguardian.com/environment/2012/nov/15/gm-trees-bred-world-energy>