



SPOTLIGHT ON ORGANISATIONS: BRAZIL'S ETHANOL PROGRAMME



This Spotlight highlights some of the most influential organisations that focus on biofuel production, consumption and environmental impacts. These organisations are categorised here according to their approaches: they include organisations that carry out academic research and write reports; and others that focus on specific issues such as climate change, environmental assessments, sustainability and environmental policies, technologies, energy efficiency, and cogeneration and industrial processes. Most of the organisations are Brazilian, though the Spotlight also includes groups from elsewhere in Latin America and Europe.

ACADEMIC RESEARCH ON BIOFUELS

► **Brazilian Reference Centre on Biomass (*Centro Nacional de Referência em Biomassa – CENBIO*)**

Link: <http://cenbio.iee.usp.br/indexen.asp>

Areas of Expertise: Bioenergy, biomass, energy efficiency

Key Activities: Research, publications, knowledge exchange, seminars

The Brazilian Reference Centre on Biomass (CENBIO/IEE/USP) is a bioenergy research group based at the University of São Paulo. CENBIO was established with the main goal of promoting the development of research activities and the disclosure of scientific, technological and economic information in order to make the use of biomass feasible as an efficient energy source in Brazil. To achieve these goals, CENBIO has focused on developing studies and projects on biomass, and promoted the exchange among Brazilian and foreign institutions of technical data and information on the economic, social and environmental results of biomass technology use for energy. Today, CENBIO is one of the most important centres in Brazil for the development of energy generation from biomass. They publish a journal, the [Brazilian Journal of Bioenergy](#), and many of their [publications](#) are available in English.

► **Interdisciplinary Environmental Sciences Laboratory (*Laboratório Interdisciplinar de Meio Ambiente - LIMA*) – Rio de Janeiro, Brazil**

Link: <http://www.lima.coppe.ufrj.br/>

Areas of Expertise: Biofuels, environmental planning, environmental assessments, climate change

Key Activities: Academic research, project implementation, consultancy services



The Environment Sciences Laboratory (LIMA), under the Energy Planning Programme (EPP), is part of the Technology Centre of the Federal University of Rio de Janeiro (UFRJ). Its goal is to strengthen the performance of teachers and students of the Postgraduate and Research Centre for Engineering (COPPE) in the Environmental area. LIMA brings to the university projects related to climate change, environmental economics and pollution control, among other issues. Its researchers conduct academic research and projects related to biofuels, energy efficiency, environmental assessments and other issues related to energy and the environment, most of which are published in English. For example, the [Sugarcane Environmental Zoning in Brazil](#) project was developed by LIMA to analyse costs and benefits of reducing greenhouse gas emissions (GHG) related to ethanol production. Many of their [books](#) and [scientific papers](#) are published in English.

ENVIRONMENTAL IMPACTS OF BIOFUELS

► *Fundação SOS Mata Atlântica* (SOS Atlantic Forest Foundation)

Link: <http://www.sosma.org.br/>

Areas of Expertise: Sustainability, biodiversity conservation, environmental policies, forest restoration

Key Activities: Environmental conservation, data production, biome mapping and monitoring, advocacy campaigns, public policy, environmental education programmes, forest restoration, protection and management of ecosystems

SOS Atlantic Forest Foundation is a non-governmental organisation established in 1986. It is a private, non-profit organisation whose mission is to promote the conservation of biological and cultural diversity in the Atlantic Forest biome. SOS encourages actions for sustainable development and promotes education and knowledge about the Atlantic Forest; in short, they aim to mobilise, empower and encourage environmental citizenship. In particular, SOS has been working to ensure native forest is not replaced by ethanol plantations in areas of this biome. The objectives of the organisation are environmental conservation, professionalising people and generating knowledge about the biome.

► *Repórter Brasil* (Brazil Reporter) – Biofuel Watch Centre

Link: <http://www.reporterbrasil.org.br/biofuel/>

Areas of Expertise: Biofuels, public policies, sustainability

Key Activities: Research, reports, data analysis, monitoring of biofuel production

The Biofuel Watch Centre is a programme of the organisation *Repórter Brasil*, whose mission is to publicise the social and environmental impacts of crops used to produce biofuels in Brazil. The agricultural expansion needed to increase ethanol and biodiesel production has been shown to cause serious environmental and social impacts, the most important of which are deforestation, slave labour, land tenure, increase in food prices and impacts on traditional and indigenous populations. The Biofuel Watch Centre works to create mechanisms to fortify the capacity of the government and civil society to control and supervise damage caused by biofuel production.

► Roundtable on Sustainable Biofuels (RSB)

Link: <http://rsb.epfl.ch/>

Areas of Expertise: Sustainability, biofuel, environmental assessments

Key Activities: Certification, biofuels publications

The Roundtable on Sustainable Biofuels (RSB) is an international initiative, coordinated by the Energy Centre at the Polytechnic Federal School of Lausanne (*École Polytechnique Fédérale de Lausanne* - EPFL), whose mission is to promote



the sustainability of biofuel production worldwide. It brings together different stakeholders such as farmers, private companies, non-governmental organisations, experts, governments and inter-governmental agencies to discuss the problems and challenges of biofuel production. RSB's first Regional Stakeholder Meeting was held in Brazil, where technical workshops, regional outreach, road maps and social guidelines relating to ethanol and biodiesel production were conducted and developed. RSB has also developed an independent certification system for sustainable biofuels to ensure environmental standards and social and economic principles.

INTERNATIONAL ORGANISATIONS PROMOTING BIOFUELS

► Economic Commission for Latin America (ECLAC) - Natural Resources and Energy Unit

Link: <http://www.eclac.org/> ; <http://www.cepal.org/drni/urne/>

Areas of Expertise: Economic and social development, sustainable development, poverty, gender, infrastructure, natural resources

Key Activities: Research, reports, publications, capacity building, international cooperation

CEPAL is one of the five regional commissions of the United Nations and is headquartered in Santiago, Chile. It was founded to contribute to the economic development of Latin America. The Natural Resources and Energy Unit focuses on the thematic areas of water, energy, mining and transportation and infrastructure, and conducts research, knowledge sharing and project implementation. This Unit has also been active in promoting seminars, conferences, workshops and studies about biofuels in Latin America and the Caribbean.

► Renewable Energy Policy Network for the 21st Century - REN 21

Link: <http://www.ren21.net/>

Areas of Expertise: Renewable energy policy

Key Activities: Research, publications, interactive tools, knowledge generation

REN 21 is a global multi-stakeholder network focused on renewable energy policy that convenes international leaders from the public, private and civil society sectors to increase the share of renewable energy in the world energy matrix. REN 21 is committed to provide policy-relevant information and research-based analysis on renewable energy that are driven by climate change, energy security, and poverty alleviation. To achieve its objectives, REN 21 encourages action in three key areas: policy, advocacy and exchange. Through reports and interactive maps, REN 21 provides important information about ethanol in Brazil, as well as in countries in Africa and Asia.

ENERGY COGENERATION, BIOMASS TECHNOLOGY AND INDUSTRIAL DEVELOPMENT OF BIOFUELS

► Brazilian Bioethanol Science and Technology Laboratory (*Laboratório Nacional de Ciência e Tecnologia do Bioetanol* - CTBE)

Link: <http://www.bioetanol.org.br/english/>

Areas of Expertise: Cellulosic ethanol, industrial ethanol process, sustainability, agriculture

Key Activities: Academic research, technology development, workshops and outreach events

The Brazilian Bioethanol Science and Technology Laboratory (CTBE) is a national laboratory that contributes to developing sustainable production of Brazilian ethanol from sugarcane. The centre invests in basic scientific research and technological



innovation in order to reach this goal. CTBE represents a strong investment by the Brazilian federal government in science and technology related to sugarcane ethanol. Studies cover the sugarcane lifecycle and focus on industrial technologies for cellulosic ethanol. Overall, CBTE works to promote Brazilian scientific development of ethanol to make ethanol as efficient and sustainable as possible.

► Dedini Base Industry

Link: <http://www.dedini.com.br/index.php>

Areas of Expertise: Industrial and agricultural processing of sugar cane

Key Activities: Industrial development for sugarcane mills, research

Operating in several industrial sectors, Dedini is a private company and the largest provider of equipment for the sugar and ethanol sector, including high pressure boilers to burn the bagasse from sugarcane. Dedini is the most important supplier of equipment for ethanol and sugar production in Brazil and has contributed to ethanol expansion. Its mission is to develop, trade and produce capital goods according to customer demand with advanced technology, quality, and competitive prices. Dedini has also conducted research on eco-efficiency and sustainability to meet environmental requirements for ethanol production. Though a private corporation, it has been included here because of its contribution to developing ethanol-related technologies to improve water use and vinasse disposal and reduce energy waste.

► Industry Association for Energy Cogeneration (*Associação da Indústria de Cogeração de Energia - COGEN*)

Link: <http://www.cogen.com.br/origem.asp>

Areas of Expertise: Bagasse cogeneration

Key Activities: Research, advocacy to promote bioelectricity supply and trade

COGEN is a non-commercial and independent civil society group established in 2003 to encourage energy cogeneration projects and diversification of the Brazilian energy matrix through more efficient, cleaner and less expensive energy options. It aims to create an appropriate environment to enable an increase in the supply of bioelectricity to the regulated market (auctions) and the free market. COGEN also conducts studies on alternative access and connection to the grid, seeking to rationalise costs, and focuses on creating and refining mechanisms to promote and trade bioelectricity.

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To learn more about these and other key organisations related to Brazil's ethanol programme, contact the author, Pedro Ninô de Carvalho, Researcher at the Environmental Sciences Laboratory (LIMA) of the Federal University of Rio de Janeiro, at pnino22@ppe.ufrj.br.

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To learn more about Brazil's experience with ethanol, read the [ELLA Guide](#), which has a full list of the learning materials developed for this theme. To learn more about other ELLA development issues, browse other [ELLA Themes](#).



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