



Brazil

1 Which bioeconomy-related policy strategies exist?

Brazil does not have a dedicated bioeconomy strategy. However, important sub-strategies fostering bioeconomy development have been launched since the 1970ies. In the wake of the oil crisis, Brazil started the first large-scale biofuel program in 1975 under the name “Próalcool”.

Today, Brazil is a global leader in bioenergy; ethanol covers about a quarter of total fuel consumption. The current ten year energy plan “**Plano Decenal de Expansão de Energia 2023**” was adopted in 2014. It foresees a further increase in the use of biofuels as well as in electricity generation based on sugarcane bagasse and other agricultural residues.

Besides bioenergy, the government has encouraged and supported the development of the (agricultural) biotechnology sector. Brazil is amongst

the largest producers of genetically modified crops in the world and has extensive experience in agricultural biotechnology. In 2007, the government presented a national policy for biotechnology “**Política de Biotecnologia**”, which supports the comprehensive development of biosciences and biotechnology. However, the recent development of the biobased industry (e.g. bioplastics) is mostly industry driven. In 2011, the National Confederation of Industry (CNI) launched its agenda for stimulating innovation in Brazil, which defines the life sciences, biotechnology and biodiversity as key factors for success. Consequently, since 2012 the CNI has organized an annual “Bioeconomy Forum”. In 2013, the document “Bioeconomy: An Agenda for Brazil” was published in collaboration with the Harvard Business Review.

2 Is the term “bioeconomy” or “biobased economy” used in the strategy documents?

Yes

No



Government documents consider bioeconomy issues under the label of green economy, bioenergy development or biotechnology.

3 Who is the author of the strategies?

Bioenergy planning and strategies are under the responsibility of the Ministry of Mines and Energy. The ten-year energy plan has been subject to a multi-stakeholder consultation process.

The development of the biotechnology policy has been led by the Ministry for Development, Industry and Foreign Trade. The policy has been adopted by presidential notice and a “National Committee

for Biotechnology” was formed to further develop and guide the implementation of the biotechnology policy in Brazil. The committee comprises representatives from more than twenty institutions and is formed by all national ministries and agencies in charge of public policies and projects regarding biotechnology.

4 What are the key goals of the strategies?

The promotion of bioenergy development mainly intends to reduce Brazil’s dependency on foreign oil and to foster rural development and income. In recent years, the synergistic co-development of modern agricultural and industry (e.g. bioplastics) has become an important economic and social goal.

The biotechnology policy seeks to contribute to food security and health, strengthen Brazil’s competitiveness in the bioindustries (including the healthcare sector) and to improve the national innovation system.

5 What are the priority areas of the strategies?

Over the years, the bioenergy strategy involved a bundle of measures, such as financial aids to producers, price setting, tax exemptions, blending quotas and consumer support for choosing ethanol-driven vehicles. Furthermore, the state invested in infrastructure for biofuel compatible filling stations. In 2003, the Brazilians launched the flexible-fuel-motor, which runs on the basis of fuel, ethanol or a blend of both. In 2004, the government initiated the program for the development and use of biodiesel. The most important instrument has been an obligatory blending quota for diesel starting in 2013. Additionally, the program includes a social component: a social label (Selo Combustível Social) should promote the purchase of edible oils from disadvantaged farmers from

the north and northeast. The current energy plan foresees an increase in the use of biofuels (ethanol and biodiesel) as well as an increase in electricity generation from bagasse. With a view to business innovation support, the government via the Brazilian National Development Bank and the funding agency FINEP, launched the “PAISS” program in 2010. PAISS intends to co-finance business initiatives that focus on developing and commercializing innovation in the sugarcane-based biofuels and chemicals sectors. In 2013, a new edition of PAISS was launched to focus on agri-tech innovations in the ethanol sector. Key areas mentioned are transgenic improvements, machinery and equipment as well as integrated systems.

With regard to the bioindustry, the biotechnology strategy aims at promoting product and process innovations. For this purpose it supports R&D projects, infrastructure (e.g. technology parks) and business development (e.g. through financial support to companies). Although the biotech policy

addresses the full range of biotechnology applications, there is a focus on advancements in medical biotechnologies (including the wider healthcare sector), agricultural (including animal health) and biofuel applications.

REFERENCES

Federative Republic of Brazil. Government of Brazil. (2007). Política de Biotecnologia. Protecáo et Desinvestimento. Retrieved from: <https://biobs.jrc.ec.europa.eu/>

Federative Republic of Brazil. Ministério de Minas e Energia. (2014). Plano Decenal de Expansão de Energia 2023. Retrieved from: <http://www.mme.gov.br>

Red de Bioeconomía y Cambio Climático. (2014). Estado del arte de la bioeconomía y el cambio climático. Retrieved from: <http://ageconsearch.umn.edu/bitstream/168356/2/Estado%20del%20arte%20de%20la%20bioeconomia%20y%20cambio%20climatico%202014.pdf>

Confederacao Nacional da Indústria. (2013). Bioeconomy: An Agenda for Brazil. Harvard Business Review. Retrieved from: http://arquivos.portaldaindustria.com.br/app/contento_24/2013/10/18/411/20131018135824537392u.pdf

De Jaramillo, E. H. (Ed.). (2014). Towards a Latin America and Caribbean Knowledge-Based Bio-Economy in Partnership with Europe. Retrieved from: <http://www.bioeconomia.mincyt.gob.ar/publicaciones/>