



**EXECUTIVE DIRECTOR**

**Press Release(23)30**  
**(English only)**

**3 May 2023**

**AgriSustainability Article from the Brazilian Embassy in London**

The Executive Director would like to draw your attention to the article below which is relevant to the sugar sector.



Ambassador's word

Dear friends,

Over the last four decades, Brazilian agriculture has primarily relied on science and technology to increase its output. Greater productivity and sustainable practices have advanced substantially in the wake of research carried out notably by universities and public institutions. In recent years, new forces have contributed to speeding up the transition towards climate-resilient, sustainable and productive agriculture, namely the increasing participation of financial markets and the emergence of agritech innovation ecosystems.

In this edition of *AgriSustainability Matters*, you will learn first-hand how this trend has been developing. Mariana Vasconcelos, CEO and Co-founder of Agrosmart, a leading Brazilian agritech, will guide you through a journey that begins with the challenges facing our food system, then moves on to discuss how financial markets are shifting to address them, with a view to devising innovative solutions for agribusiness.

In this perspective, Ms Vasconcelos highlights the emergence of regional agritech hubs in Brazil. She shows how investors have recognised the potential for sustainable agriculture to provide long-term returns while also benefiting the environment and local communities.

The combination of financial support from investors and new technologies from agritechs is helping to drive the growth of sustainable agriculture in Brazil. In order to promote greener finances and leverage climate solutions, now as ever, AgriSustainability Matters.

Enjoy the reading.

**Fred Arruda**

Ambassador of Brazil to the United Kingdom



-----

## Growing a net-positive agriculture: how the innovation ecosystem is shaping the future of Brazilian agribusiness

**Mariana Vasconcelos**

CEO and Co-founder of Agrosmart

Brazilian agribusiness has long been a powerhouse when it comes to science, technology and innovation, and in future it will have further opportunities to stand out on the international scene, not only as an exporter of commodities, but also as a generator and exporter of climate solutions. To that end, technology plays a fundamental role in leveraging transparency and good practices based on science and data, creating a favourable environment for the ecosystem of Brazilian climate and agtech companies capable of developing solutions for agribusiness.

Before delving deeper into the innovation ecosystem of Brazilian agribusiness, it is worth highlighting why this agenda is so important: according to IPCC projections, it is necessary to reduce greenhouse gas (GHG) emissions by 60% by 2035 to avoid an average increase of 1.5°C in global temperature. To understand how challenging this scenario is, we only need to look at the adaptation costs: US\$ 140-300 billion per year for developing countries until 2030.

The serious climatic risks, coupled with the high costs of mitigation and adaptation, will likely lead regulators in different countries - but especially in the more developed ones - to propose stricter regulations that may affect the dynamics of different markets, one of them being Brazilian agribusiness. A clear example is the current discussions being held in the United Kingdom and the European Union to combat 'greenwashing' and prevent the importation of agricultural products produced in areas of illegal deforestation.

Another point worth mentioning is the fact that food production is highly vulnerable to climate change. Farmers are exposed to extreme events such as rains, floods, droughts and changes in pest, disease and weed dynamics. These conditions also affect supply chains 'post-farming', that is, during the logistics, marketing and processing of agricultural

products, with interruptions and delays occurring more frequently.

Against this background, any strategy aimed at cutting GHG emissions will need, at some point, to consider agricultural and farming production. This adds another layer of uncertainty, since the production and export of commodities and other products based on raw materials of agricultural origin are part of a global network of production and commercialisation. Greater uncertainty also brings greater risk. Bearing in mind that Latin American countries, especially Brazil, play a crucial role in the global supply of food, it becomes clear why food security, changes and climate solutions cannot be discussed without considering Brazilian agribusiness – which has been playing an ever-growing central role when it comes to sustainability.

### **A food system transition is happening**

In addition, we must also take into account the growth of the world population, which will require a 70% increase in food production by 2050. In light of such a scenario, the transition of agrifood systems is already underway. These factors create a fertile ground for investments in mitigation, resilience, and adaptation of agribusiness.

To get an idea of the enormous potential of this market, the climate tech sector should have a projected market valuation of US\$ 147.5 billion by 2032, with a compound annual growth rate of 24.2% (2022-2032). Therefore, the expectation is that new climate techs focused on accelerating this transition from productive systems to more efficient, sustainable and climate-resilient models will emerge in the coming years, including in Latin America – a region that, despite the strong expansion of start-ups in recent years, has so far been underserved by this market.

### **New climate techs focused on accelerating this transition from productive systems to more efficient, sustainable and climate-resilient models will emerge in the coming years**

Furthermore, Latin America has exceptional advantages to absorb such investments. Brazil, in particular, is home to the largest tropical forest in the world – the conservation and preservation of which are essential for tackling climate change –, has an extensive agricultural area and high potential for the development of the bio-economy and nature-based solutions.

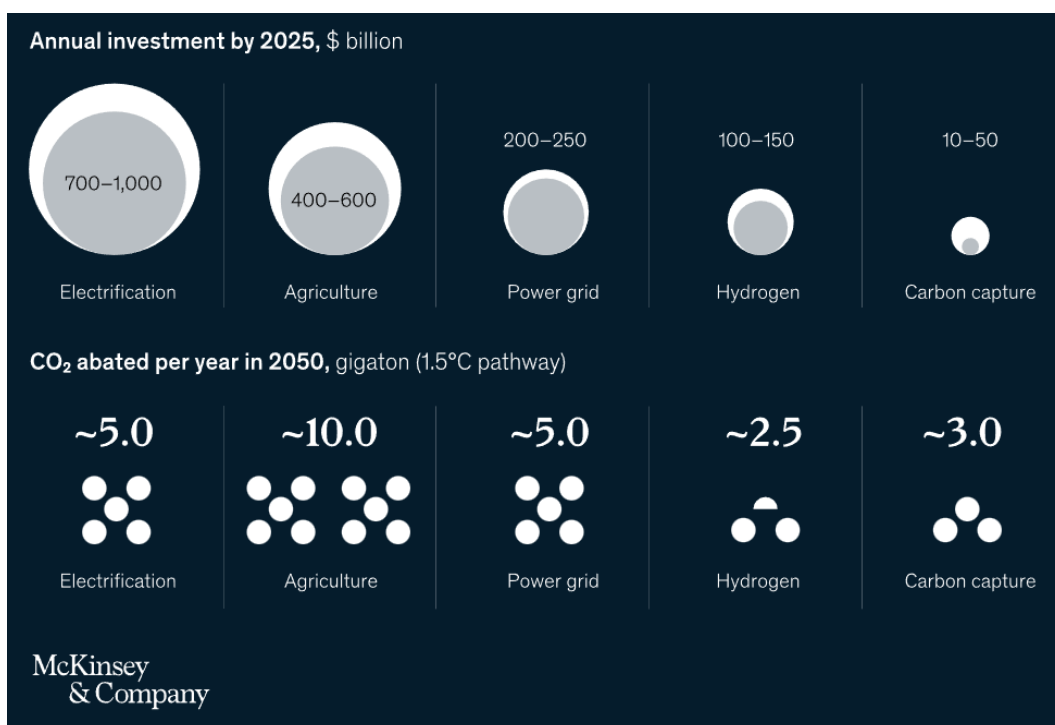
### **Leveraging climate solutions through Brazilian food systems**

Nature-based solutions (NbS) are approaches that aim to solve environmental, social and economic problems through the protection, restoration and sustainable management of natural ecosystems. These solutions include actions such as reforestation, conservation of natural areas, sustainable agriculture, and watershed management, amongst others. The main objective of the NbS is to address global challenges such as climate change, biodiversity loss, water scarcity and food insecurity, as well as to increase the resilience of local communities and promote overall human well-being.

It is possible to harmonise agricultural production with nature-based solutions, through practices such as low-carbon agriculture, regenerative agriculture, amongst other approaches already practised in Brazil. This ensures sustainable growth in local production with lower carbon emissions, whilst at the same time creating mitigation solutions by

increasing the stock of carbon in the soil. It also brings the additional advantage of protecting biodiversity, something that is not possible in some of the solutions for reducing and/or offsetting emissions.

It is worth mentioning that more than 25% of the Latin American economy is concentrated in agribusiness, which shows a market with great opportunities and a very favourable setting for local start-ups that propose to develop solutions centred on integrating climate, agribusiness and NbS. In fact, according to McKinsey consultancy, agricultural technologies are amongst the five groups of technologies capable of contributing to the abatement of 40% of GHG emissions by 2050, attracting around US\$ 400 to 600 billion in investments by 2025 and being responsible for reducing 10 gigatonnes of CO<sub>2</sub> per year in 2050. Brazil has the opportunity to gain prominence, as it has several research centres, universities, innovation ecosystems and start-up hubs.



Source: McKinsey (2021)

The Brazilian innovation and entrepreneurship ecosystem, in this context, has undergone a rapid transformation in recent years, due to the strengthening of initiatives involving private companies, development agencies, investors, capital managers, and start-ups, amongst others. This has favoured the formation of regional ecosystems focused on agribusiness, such as the Agtech Valley (located in Piracicaba, in the state of São Paulo), which has initiatives such as Agtech Garage and Pulse, as well as the Agro Valley (in Londrina, in the state of Paraná). It is also worth mentioning some institutions that have made an outstanding contribution to the formation of this ecosystem, namely universities, such as the University of São Paulo (USP) and the State University of Campinas (Unicamp), and the Brazilian Agricultural Research Corporation (Embrapa), which has become an international benchmark in the development of technologies focused on tropical agriculture and farming.



*Some of the regional ecosystems in Brazil that work with the Ministry of Agriculture and Livestock.*

*Source: AgroHub Brasil (2022)*

This confluence of investments, science and technology, and entrepreneurship has led to a greater participation of agtechs in Brazilian agribusiness: according to Radar Agtech Brasil 2022, the country has 1703 agtechs, of which: 14.2% operate 'before the farm' (related to agricultural machinery and inputs); 41.4%, 'on the farm' (planting, handling, harvesting, amongst other activities); and 44.4% 'after the farm' (storage and distribution). We must acknowledge that investments in agtechs still do not match the significance of agribusiness and the food sector in the Brazilian and Latin American economy – in the case of Brazil, equivalent to around 25% of GDP. However, investors have shown growing interest in this sector, which tends to become a key player in the global ecosystem. This is evident when observing that Brazil was in the sixth position and Colombia in the 13th, in the ranking of the 15 countries that received the most investments in agtechs in 2021 – in 2020, only Colombia had entered the Top 15.

In addition, it is worth highlighting the fact that the main global investment theses directed at agribusiness – agfintechs, agbiotechs, marketplaces and climatech – are all present in Brazil. Hence, the Brazilian innovation ecosystem can offer a very attractive environment for venture capital funds that seek to invest in technology, impact, nature-based solutions, climate, agrifood technologies etc. over the coming years.

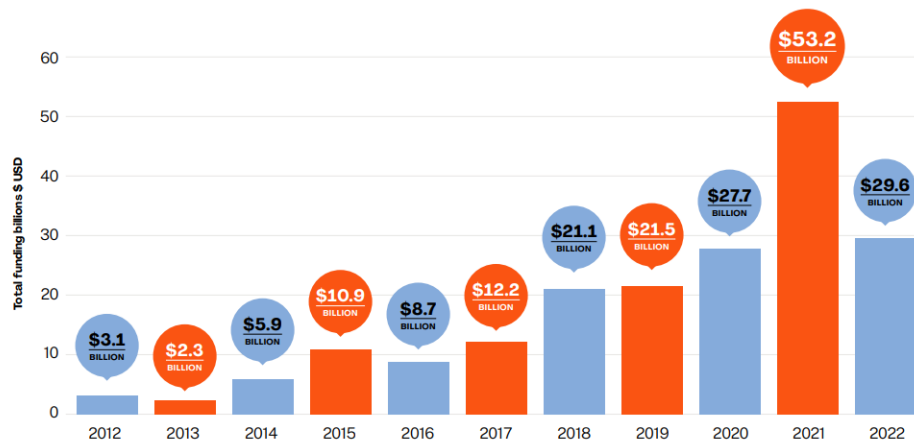
**“Funding to climate-related agrifood technologies bucked the global decline, increasing year-over-year, despite the macro headwinds”.**

– Agfunder, AgGlobal AgriFoodTech Investment Report 2023

Just by taking into account the last decade, it is possible to observe an annual growth in global investments in agrifoodtech (with the exception of 2022, due to the macroeconomic

situation), totalling US\$ 196 billion between 2012 and 2022. Despite the challenges that the technology sector faces, agrifoodtech has a close relationship with the climate agenda, and stakeholders are broadening their understanding of this relationship, which should contribute to funding in 2023.

Global agrifoodtech investment by year



Source: AgFunder (2023)

The agtech ecosystem in Latin America, especially in Brazil, is in a privileged position to promote the efficiency, innovation, sustainability and climate resilience of the local agricultural sector, in addition to providing solutions for mitigating and managing climate risks. Leveraging such solutions can represent not only the success of Brazilian and Latin American agribusiness, but also a step forward in mitigation, adaptation and climate resilience of the world economy.

## References

AgFunder (2023). **Global AgriFoodTech: Investment Report 2023.**

<https://agfunder.com/research/2022-agfunder-agrifoodtech-investment-report/>

Cohen-Shacham, E., Walters, G., Janzen, C. and Maginnis, S. (eds.) (2016). **Nature-based Solutions to address global societal challenges.**

<https://portals.iucn.org/library/sites/library/files/documents/2016-036.pdf>

European Commission (2023). **Consumer protection: enabling sustainable choices and ending greenwashing.** 2023.

[https://ec.europa.eu/commission/presscorner/detail/en/ip\\_23\\_1692](https://ec.europa.eu/commission/presscorner/detail/en/ip_23_1692)

FIGUEIREDO, Shalon Silva Souza; JARDIM, Francisco; SAKUDA, Luiz Ojima (Orgs.)

(2022). **Radar AgTech Brasil 2022: Mapeamento das Startups do Setor Agro Brasileiro.** Embrapa, SP Ventures e Homo Ludens.

Future Market Insights (2022). **Climate Tech Market Outlook (2022-2032).**

<https://www.futuremarketinsights.com/reports/climate-tech-market>



HELLSTERN, Tom *et al* (2021). **Innovating to Net Zero**: an executive's guide to climate technology. 2021. Mckinsey. <https://www.mckinsey.com/capabilities/sustainability/our-insights/innovating-to-net-zero-an-executives-guide-to-climate-technology>

IPCC (2023). **Synthesis Report of The Ippc Sixth Assessment Report (AR6)**: Summary for Policymakers. [https://report.ipcc.ch/ar6syr/pdf/IPCC\\_AR6\\_SYR\\_SPM.pdf](https://report.ipcc.ch/ar6syr/pdf/IPCC_AR6_SYR_SPM.pdf)

MIRANDA, Evaristo de (2018). **Potência Agrícola e Ambiental**: áreas cultivadas no Brasil e no mundo. >>>  
<https://ainfo.cnptia.embrapa.br/digital/bitstream/item/174066/1/4942.pdf>

United Nations Environment Programme (2021). **Adaptation Gap Report 2020**. <https://www.unep.org/resources/adaptation-gap-report-2020>

World Bank (2016). **Climate-Smart Agriculture**: A call to action. [https://www.worldbank.org/content/dam/Worldbank/document/CSA\\_Brochure\\_web\\_WB.pdf](https://www.worldbank.org/content/dam/Worldbank/document/CSA_Brochure_web_WB.pdf)

### About the author

Mariana Vasconcelos is co-founder and CEO of Agrosmart, Young Global Leader at the World Economic Forum, and serves as an advisory board member at Thought For Food, Fundação Espaço ECO (BASF), and Instituto Interamericano de Cooperação para a Agricultura (IICA).

She is a climate activist and an expert in digital agriculture, considered one of the most influential people in Latin America by Bloomberg Línea. An advocate for gender equality, she was recognised by Globant with a 'Women That Build' award in the game-changer category.

With a business background and degrees from UNIFEI, LSE, and Singularity University. She featured in 50 Best's 50 Next Class of 2022, Forbes 30 Under 30 Brazil, Fast Company's Most Creative in Business as well as being recognised as an Innovator Under 35 by MIT Technology Review.



+44 (0)20 7747 4500

[agriculture.london@itamaraty.gov.br](mailto:agriculture.london@itamaraty.gov.br)

[londres.itamaraty.gov.br](https://londres.itamaraty.gov.br)

14-16 Cockspur St, St. James's, London SW1Y 5BL