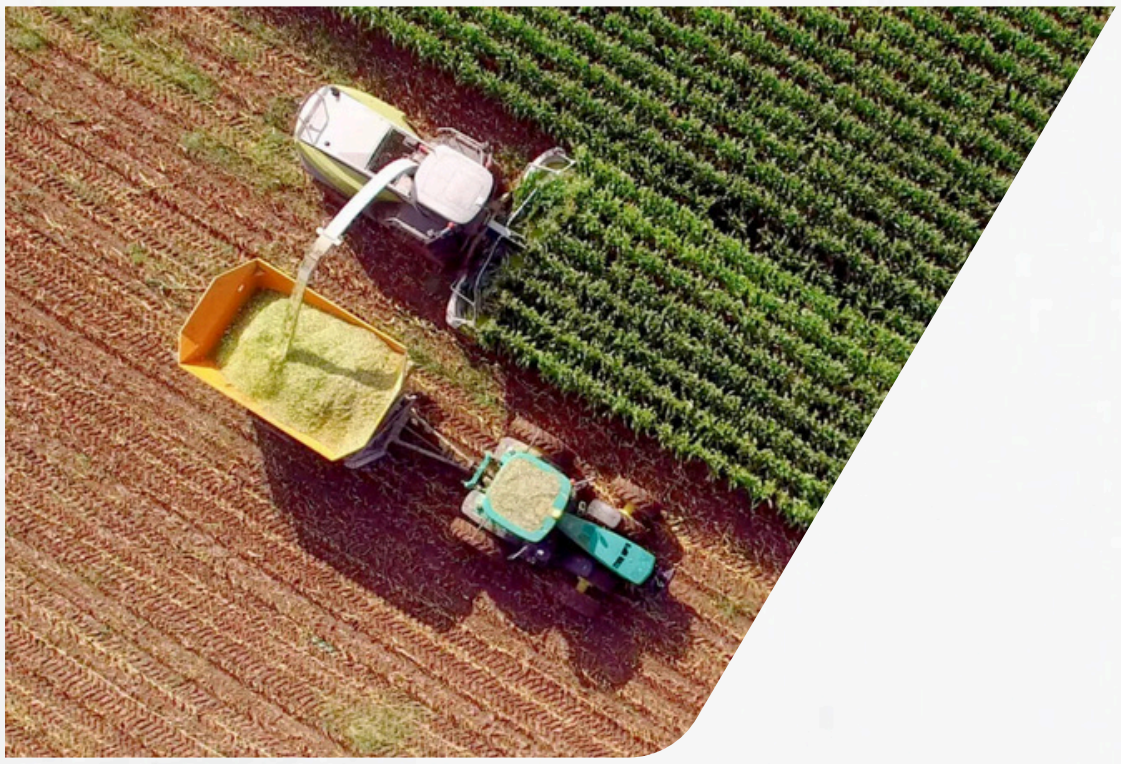

**Photo: Solinftec**

# EXECUTIVE SUMMARY

# BRAZIL COUNTRY DIAGNOSTIC CASE STUDY

Brazil spans nearly half of South America and encompasses globally significant biomes, including the Amazon, Cerrado, Pantanal, Atlantic Forest, and Caatinga. It is Latin America's largest economy and the world's fourth-largest agricultural exporter, playing a critical role in global food and climate systems. Its economy, valued at USD 2 trillion (2023), is diversified, with agribusiness contributing 27% of GDP and nearly half of total exports. With abundant natural resources, diverse ecosystems, and a strong agribusiness sector, the country is a leader in food production.

The Climate Resilient Food System (CRFS) Alliance launched country diagnostics in 2022, with the first batch of countries comprising Ethiopia, Fiji, Belize, and The Gambia. These reports aim to facilitate resource mobilization and the exchange of best practices amongst countries. These case studies consider the country's Nationally Determined Contributions, National Adaptation Plans, Food System Pathways, and other relevant national strategies relating to food and climate change.

Brazil Country Diagnostic Report 2025 examines the country's food systems by tracing each step from production, through distribution, to consumption. The country's food system plays a critical role in both the national and global economy. Agribusiness contributes nearly half of Brazil's exports and employs 20% of the workforce. Small-scale farming is responsible for 77% of staple food production consumed domestically. Despite an abundant supply, 18% of Brazilians experience food insecurity, and obesity affects nearly one-third of adults. Supply chains face major inefficiencies, with grain losses worth USD 1.1 billion annually and 30% post-harvest losses for fruits and vegetables.

Despite progress, Brazil faces persistent gaps in financing, infrastructure, and institutional support that limit effective adaptation. Smallholders lack affordable credit, insurance coverage remains low, and access to technical assistance is uneven across regions. Weak storage, irrigation, and logistics systems contribute to post-harvest losses, while women and youth remain underrepresented in agricultural innovation.

Brazil is increasingly vulnerable to a wide range of climate-related hazards, including heatwaves, droughts, floods, and sea level rise. Agriculture is especially vulnerable, with projected declines in maize, wheat, and coffee yields, while livestock faces heat. The 2020–2022 La Niña caused 18% soybean and 15% corn yield losses, while the 2023–2024 El Niño flooding caused USD 4.5 billion in damages in Rio Grande do Sul. Semi-arid Northeast faces desertification risk, while coastal cities like Rio and Recife are highly exposed to sea-level rise. Smallholders, Indigenous Peoples, and low-income groups are disproportionately exposed due to limited access to finance, technology, and insurance. Without stronger adaptation, climate extremes could reduce GDP by up to 7% by 2100 and deepen social and regional inequalities.

Brazil has introduced several strategies to strengthen food and climate resilience, including the ABC+ Low-Carbon Agriculture Plan 2020-2030, the National Adaptation Plan (NAP) 2021, the Nationally Determined Contribution 2024, and a Bioeconomy Strategy 2024 focused on sustainable use of biodiversity. Institutional measures, such as creating the Ministry of Indigenous Peoples and enforcing deforestation controls, have already contributed to a 36% drop in forest loss in 2023. Brazil is implementing a wide range of programs to strengthen climate-resilient food systems, from forest protection and water security to sustainable agriculture and soil management. Key initiatives include the Amazon Sustainable Landscapes Project, Payment for Ecosystem Services, and MAIS climate-smart farming modules, alongside major water and sanitation projects in the Amazon, Espírito Santo, Pernambuco, and the Northeast. . These efforts support family farmers, expand access to climate-resilient infrastructure, and integrate nature-based solutions into disaster risk management.

At the national level, the PronaSolos Soil Program is mapping and conserving soils to guide sustainable land use, reflecting Brazil's commitment to operationalizing its climate and food system goals in partnership with global institutions and local communities.

The proposed entry points for the CRFS Alliance include a) scaling climate-smart agriculture, expanding efficient irrigation, and promoting healthier and more sustainable diets. B) Protecting ecosystems and Indigenous lands, reducing food loss and waste, and empowering women, youth, and smallholders are central to achieving inclusive adaptation. The strategy emphasizes aligning production with conservation through incentives for ecosystem services and integrating nutrition goals into agricultural and social policies.