

BRAZIL

National Pathways to Sustainable Food Systems

The Food System Summit constitutes a unique opportunity to review, improve and strengthen food systems with a view to achieving the Sustainable Development Goals, including ending hunger and tackling food insecurity at all levels.

Brazil believes that efficient, sustainable, and resilient food systems are capable of providing healthy food at affordable prices and adequate quantities, thus ensuring food and nutritional security for the world population. Food systems have a key role in promoting economic growth, fostering social inclusion and protecting the environment, while contributing to the 2030 Agenda. The way we produce, trade and consume food is crucial to achieving the future we want.

Over the past decades, Brazil has developed food systems based on a highly efficient tropical agriculture model, in which conventional, innovation-based, agro-ecology and organic agriculture, coexist. Production levels have expanded steadily while prices have fallen over time, converting the country into one of the “breadbaskets” of the world. Investments in science, technology and training, together with the commitment to market liberalization and international trade, have played a key role.

Moreover, the increase in production has been accompanied by growing sustainability, demonstrating that food systems can contribute to the global challenge of overcoming hunger and malnutrition while assisting in addressing climate change. Agriculture is part of the solution to tackle climate change and meet the Paris Agreement goals and the objectives of the post-2020 global biodiversity framework under the Convention on Biological Diversity.

The implementation of the Low Carbon Agriculture Plan (*Plano ABC*) for instance, promoted the use of modern technologies and practices resulting in reduced carbon intensity while fostering adaptation measures. Between 2010-2018, the initiative benefitted around 54 million hectares. Based on our experience, it is clear that sustainable food systems can pave the way for the achievement of Sustainable Development Goals such as “zero hunger” (SDG 2), “affordable and clean energy” (SDG 7), “decent work and economic growth” (SDG 8) and “climate action” (SDG 13).

Access to healthy, nutritious, and adequate food is considered a human right by the Federal Constitution of Brazil. The National Food and Nutrition Security System (SISAN) integrates public policies at the local, state and federal levels to achieve food and nutrition security. Initiatives such as the *Alimenta Brasil* Program (ABP, previously national food acquisition program) and the School Meals Program (PNAE) have shown promising results in the fight against hunger and malnutrition not only in Brazil, but also in other countries, where they have been introduced through international cooperation. Conditional income transfer and social protection programs, such as the *Auxílio Brasil* Program (previously *Bolsa Família*), also play an important role in the promotion of food and nutritional security in Brazil, reducing poverty (SDG 1) and inequality (SDG 10).

Notwithstanding advances in the national food system, domestic institutions and legal frameworks, Brazil acknowledges that there are still considerable challenges to be overcome. The COVID-19 pandemic has increased poverty, hunger and inequality worldwide. In Brazil, preliminary studies indicate that food insecurity may have expanded

during the current sanitary crisis. In this context, it is clear that we need to strengthen common efforts towards addressing SDG 1 and 2 - both nationally and globally. The modernization of agriculture and market liberalization, including open international trade, are essential if we are to achieve our common goals, especially greater participation of small farmers, indigenous peoples, traditional groups and local communities in the national food system.

At the same time, we need to address challenges related to unhealthy diets and eating habits, such as the high prevalence of overweight and obesity. The so-called double burden of malnutrition, characterized by the coexistence of undernutrition along with overweight, affects many countries across the globe, including Brazil. Noncommunicable diseases (NCDs) associated with dietary risk factors are the main causes of death and illness in Brazil and cause substantial economic and health burdens.

The COVID-19 pandemic has also brought to light the need to strengthen food safety. Wet markets, the consumption of wild animal foods without sanitary controls, and the lack of cold storage networks present critical challenges that must be addressed in the coming years. It is clear that food safety, nutrition and food security are closely linked and should be addressed together, as unsafe, inadequate, and unhealthy food creates a vicious cycle of disease and malnutrition, particularly in infants, young children, elderly and the sick.

The following paragraphs presents Brazil's vision regarding the future of the national food systems and the proposed national pathway to achieve the goals established in the 2030 Agenda. A brief summary of Brazil's game changing solutions submitted to the Food Systems Summit preparatory process is also included as an annex.

1. Foster continuous and inclusive scientific research and innovation for the development of sustainable food systems

The development, access to and diffusion of technology, innovation and good practices at all levels are crucial to building productive, prosperous and resilient food systems. In this regard, investment in science and technology is a cornerstone to strengthening the four pillars of food security and nutrition (FSN): availability, access, utilization, and stability.

It is critical to adopt new technologies and innovative tools, practices and managing standards, in order to meet the growing global demand for food in the coming decades, eradicate poverty, ensure healthy lives and well-being, promote responsible production and consumption, as well as to address climate change challenges (SDGs 1, 2, 3, 12 and 13), among other objectives.

Brazil has extensive experience in integrating science and technology to build sustainable food systems, adapted to its tropical and temperate climates and the characteristics of its 6 unique biomes. Partnerships between academia, public research institutions and the private sector, from a national and international perspectives, have played a key role in boosting innovation in all segments of the food system, from the farm level to consumers.

Key Priorities Towards 2030

- Implement agricultural innovation policies: innovation can promote significant improvements in efficiency, productivity, and cost reduction in agriculture, increasing the availability of and access to safe, healthy, and nutritious food. Fostering innovation through research and development carried out by public and private institutions is critical to meeting the growing global demand for food in the coming years.
- Invest in research and development of bio inputs and promote their increased production and usage: initiatives, such as the National Plan for Biological Inputs, allow for the development of norms and regulations for the operation of bio-input production units, prioritizing small and medium bio-factories, and enabling a favourable environment for infrastructure financing.

2. Support the development of multiple food systems approaches adapted to local circumstances with a view to achieving food security, reducing GHG emissions and fostering resilient agriculture

Ensuring stable food supply in the context of increasing extreme climate events is a major global challenge to achieving the Agenda 2030 goals. As one of the main producers and exporters of agricultural products, Brazil is ready to continue providing healthy and nutritious food to meet national and global food security.

Brazil considers that food systems are complex and diverse, incorporating local characteristics. To effectively meet Agenda 2030 priorities most notably those related to SDG 2 and 12, it is fundamental to recognize that countries and regions have distinct climate, soils, water patterns, eating and dietary habits, cultures and traditions, access to technology and levels of development, among other factors that shape food systems. In Brazil, the food system is composed of diverse and complementary segments which fulfil specific roles and functions and may be linked to different SDGs, such as 1, 2, 3, 9, 10, 12 and 13.

Public policies aimed at continuous innovation to reduce GHG emissions and to facilitate the adaptation to climate change are essential to promote increasingly productive, diverse, resilient, and sustainable food systems (SDG 2, 12, 13).

Key Priorities Towards 2030

- Implement adaptation and emission reducing measures in the food system: initiatives, such as the Sectoral Plan for Adaptation to Climate Change and Low Carbon Emission in Agriculture with a view to Sustainable Development (ABC+ Plan), aim to promote adaptation to climate change and reduce GHG emissions in Brazilian agriculture. Such measures increase the efficiency and resilience of production systems, in the context of an integrated landscape management.
- Promote the conservation and restoration of native vegetation in rural areas through full implementation of the Forest Code: the Forest Code mandates the conservation of native vegetation as well as the recovery of degraded land, in rural properties. The Code promotes sustainable solutions by integrating food production and environmental conservation.

- Strengthen sanitary and phytosanitary systems: In order to provide access to safe, healthy, and nutritious food for all, it is critical to ensure food safety to consumers and prevent the spread of pests or diseases among animals and plants. To that effect, it is necessary to strengthen food safety standards and institutions.
- Continue to implement and strengthen income support programs: income support to vulnerable and marginalized groups, including small and subsistence farmers, is necessary to promote social inclusion of less developed rural areas.

3. Boost renewable energy generation and use within the food systems

Transitioning towards clean and renewable energy is central to the effort of developing sustainable food systems, covering the four FSN pillars. Brazil already has one of the least carbon-intensive energy matrices among the major economies, with 48,4% of the national energy supply derived from renewable sources. Biomass from sugarcane is responsible for 19,1% of the renewable energy produced in the country. Biodiesel, wind, solar and other sources are increasing their participation, currently accounting for 7,7% of the total.

In Brazil, food systems contribute to the production of electricity and biofuels, including sugar cane, soy, maize, fats, and biomass. Renewable energy sources from agriculture-based inputs contribute to strengthen production and distribution chains and to reduce electricity prices, while promoting clean, stable, and less costly energy supply. Biomass and biofuel production are complementary and integrated with several agricultural production chains, considering second crop season, generating co-products to animal feed, and pose no threat to food production.

Based on the Brazilian experience, biomass and biofuels obtained by agricultural production and waste contributes to diversify renewable energy sources (SDGs 2, 7), alleviate hunger, and reduce rural poverty, while promoting health and well-being (SDGs 1, 2 and 3). They create jobs and income across the food system (SDG 8, 9, 10, 11, 12 and 13), allowing for regional resilience and local development.

Key Priorities Towards 2030

- Foster integration of renewable energy into food systems: programs, such as Renovabio contribute to the production of renewable energy from agricultural-based sources, as an integral and complementary part of the food system, in line with the SDGs.
- Enhance the renewable share of the energy matrix; foster regional initiatives and develop new energy sources; meet renewable energy targets established by Brazil at the Paris Agreement.

4. Support small holders and family farming towards promoting sustainable livelihoods and food diversification

Small holders and family farming have an important role in food systems, supplying diversified food while enhancing and fostering socio-economic development. Supporting

and enhancing their role contributes to strengthening the four pillars of food security and nutrition (availability, access, utilization, and stability). In this regard, it is important to provide technical assistance and financial support to small holders and family farming, including indigenous peoples and traditional communities in order to disseminate sustainable technologies and best practices. As part of a diversified agricultural structure, small holders and family farming can contribute to the eradication of hunger and enhance health and well-being (SDG 1, 2, 3), improve land and water use (SDG 14, 15), build resilience, and foster socio-economic regional development (SDG 8, 10, 12, 13).

Key Priorities Towards 2030

- Support smallholder and local farming: Implement public policies, such as the Public Purchase Program, that guarantees income for smallholder farmers and promotes economic activity at the local level. The Program contributes also to improving food and nutritional security of public school students. Local governments are required to invest 30% of the funds received from the Public Feeding Program in local purchases from family farming.
- Provide income and direct support when and where needed: Initiatives, such as the *Auxílio Brasil* Program (previously, *Bolsa Família*) and the *Alimenta Brasil* Program complement income of family and subsistence farmers, while benefiting people in situation of vulnerability.
- Strengthen family farming: Support initiatives, such as the National Program for Strengthening Family Farming (PRONAF), that provide credit and technical assistance to small and family farmers nationally.
- Disseminate sustainable technologies and best practices to agricultural producers through technical assistance, capacity building and rural extension programs

5. Foster further agrobiodiversity integration into the food systems

Agrobiodiversity can provide safe, healthy, nutritious and adequate food, build resilience and support solutions adapted to cultural and local circumstances. Food Security and Nutrition (FSN) is improved by the richness and diversity of food sources. Investment in science, together with supportive public policies, can foster agrobiodiversity and help shape food systems. Diversified agricultural and biological systems can contribute to the reduction of hunger and poverty (SDG 1, 2), to the promotion of local well-being and rural development.

Brazilian agrobiodiversity is well known by its own people, especially at the regional and local levels, but is often not fully integrated into the national food system. It is important to explore opportunities to develop socio-biodiversity products and integrate small-scale farmers, indigenous peoples and local communities, thus contributing to FSN.

Key Priorities Towards 2030

- Support Brazil's 6 biomes: implement policies that support the conservation of Brazil's 6 main biomes and the diversification of production. The Minimum Price

Guarantee Policy for Socio-biodiversity Products, for instance, guarantees a minimum price for 17 extractive products typical of Brazilian biomes.

- Promote biodiversity in production chains: foster policies, such as the Bioeconomy Productive Chains Program, that establish actions to promote Brazilian biodiversity production chains and promote sustainable development in all Brazilian biomes.

6. Ensure safe, healthy, and nutritious food for all

Everyone should be able to have access to nutritious, safe, adequate and healthy foods, as a human right. Persons in vulnerable situations, like children, low-income groups, the homeless and migrants, require special attention from the government. To that effect, it is necessary to implement adequate policies at the country, regional and international levels.

Brazil has wide experience in developing and implementing public policies that provide effective safety nets and social floors for its population, such as the school feeding program, which is linked to the Family Agriculture Food Acquisition Program and to Program. Infrastructure and economic development can also contribute to social welfare, making use of national and international partnerships (SDG 8,9,10, 11, 12 and 17) that can embrace solutions and improve coordination of all segments along the food systems.

Key Priorities Towards 2030

- Implement food and nutrition security policies: The National Food and Nutrition Security System promotes coordination, follow-up and evaluation of food and nutrition security policies and plans. It further encourages the integration of efforts between government and civil society in promoting the right to food.
- Promote food security, healthy eating habits, learning and academic performance of children through school feeding programs: With over 60 years of existence, the National School Feeding Program (PNAE), serves more than 40 million students from the entire public basic education network, encompassing around 150 thousand schools.
- Others: Intensifying food and nutrition surveillance of the population and monitoring health determinants; intensifying the implementation of food-based dietary guidelines supported by scientific evidence; implementing recommendations that strengthen traditional diets; strengthening the incentives to fruit and vegetable consumption; providing legal framework and partnerships to promote food donation; supplying adequate and healthy foods according to the recommendations of the dietary guidelines; implementing social technologies to access water for individual consumption and farming.

7. Promote healthy and nutritious diets

Healthy, nutritious food and diversified diets that respect local culture can contribute to health, well-being, and help fight non-communicable diseases (SDG 2, 3, 12). It is important to promote healthy environments that foster better dietary habits and

behaviour. In addition, it is necessary to develop better food products throughout the food systems.

Brazil faces a dual challenge in overcoming malnutrition and obesity. Promoting health through fresh and safe foods, encouraging the consumption of fruits, vegetables, and natural and minimally processed foods are relevant factors to improve healthy and nutritious diets. Food education and consumption needs to be addressed throughout life, from early childhood into adulthood, including older persons and the elderly.

Key Priorities Towards 2030

- Continue to promote breastfeeding and healthy feeding for children under two years old: public program, such as the Breastfeeding and Feeding Brazil Strategy, are an important component of comprehensive FSN policy in order to provide adequate and healthy foods during the first 1000 days, preventing malnutrition.
- Intensify food and nutrition surveillance, as well as its determinants. This involves improving data bases on health, food, and nutrition of the Brazilian population, as well as identifying possible gaps that should be the focus of FSN public policies;
- Implement dietary guidelines based on scientific evidence, to support public policies in different sectors. Such policies should strengthen consumer information and reinforce agendas that foster healthy diets, in particular the consumption of fruits and vegetables,
- Ensure that public initiatives on food and nutrition, such as the PNAE, are aligned with national dietary guidelines and contribute to healthy diets and eating habits.

8. Reduce food waste and loss in the food system

Tackling food waste and loss along the food system is a key measure, which concerns all four FSN pillars. It is a relatively cost-effective means to increase food supply, address hunger and promote health and well-being (SDG 1,2, 3, 10), while employing resources more efficiently and sustainably (SDG 12, 13, 14, 15).

It is crucial to raise awareness among all stakeholders and along all the supply chain about how to tackle food loss and waste. It requires behavioural change, political commitment, and investment in new production processes (SDG 9, 11, 12) to bring more food to market at the same level of production. Public policies should encourage (SDG 16, 17) better awareness about food consumption.

Key Priorities Towards 2030

- Implement innovative food waste and loss policies: The government will support research and development initiatives to reduce food waste and loss, taking into account the national intersectoral strategy for the reduction of food waste and loss. Such measure can lead to product and process innovation along the production and supply chain and improve relationships among all segments of the food system.

9. Free agricultural trade as an essential condition towards FSN

The right to healthy, safe, and nutritious food is universally recognized. International trade in agricultural and food products is a necessary condition to allow supply and access to food from regional and national perspectives. It has a fundamental role in the reduction of hunger and malnutrition, as it enables access to multiple foods and sources, contributing to health and well-being.

Barriers to trade and distortive trade measures, including subsidies and sanitary and technical measures, should not impose arbitrary, disguised, and unjustifiable restrictions to international trade. The international trading system and national food systems must be mutually supportive, integrated to countries realities and challenges related to food security and nutrition.

Key Priorities Towards 2030

- Promote international trade liberalization towards food security and nutrition as a common goal at the multilateral level in the World Trade Organization and Regional Trade Agreements.
- Promote increased market access for safe, healthy, and nutritious products.
- Recognize food safety as a global common goal towards food security and nutrition.
- Strengthen the use of science as a basis for trade-related measures

Annex

Game Changing Solutions – Brazil

This document lists the proposals for game changing solutions elaborated by several agencies of the Brazilian government as part of the preparatory process for the Food Systems Summit, in which representatives of the public sector, the private sector and civil society participated.

- 1) Food and Nutritional Monitoring of the Population - The monitoring of the population's food and nutrition situation, as well as its determinants, should be intensified in order to support the formulation, implementation and analysis of policies and actions for the population in general and specific groups according to their situation and needs.
- 2) Food Guides – Dissemination of guidelines on healthy eating, prevention of all forms of malnutrition and strengthening of health and intersectoral policies.
- 3) Public Food Purchase – Public food purchase for assistance programs should be based on articulation between the health, agriculture and education sectors, based on local food guides.
- 4) School Feeding – The National School Feeding Program offers adequate, healthy and nutritious food for children and adolescents in public schools, acquired primarily from small and medium-sized local farmers, based on nutritional criteria in line with local food guides.
- 5) Reinforcement of agendas to encourage the consumption of fruits and vegetables – social marketing strategies and policies to increase access to fruits and vegetables for the population.
- 6) Adopt a Park Program – Invite national or foreign companies, as well as individuals, to adopt Conservation Units with a contribution of R\$50 or €10 per hectare per year.
- 7) Floresta + Program – creates, encourages and consolidates the market for environmental services, with activities such as, among others, fire prevention, forest conservation and recovery, restoration of native vegetation and protection of water sources.
- 8) Ecotourism – Strengthening public-private partnerships for the administration of ecotourism activities in national parks.
- 9) Access and Benefit Sharing of Genetic Resources - Ensure access and fair and equitable sharing of economic benefits resulting from research and development of products that use the genetic heritage of Brazil, in line with relevant international treaties, such as the Convention on Biological Diversity and its Nagoya Protocol.
- 10) Low Carbon Agriculture Plan – Adopt specific measures, such as policies that facilitate the access to credit and technical assistance, in order to promote the use of low carbon technologies in agriculture.
- 11) Biological Inputs Plan – Promote the use of sustainable pesticides and fertilizers, with the objective of reducing dependence on hydrocarbons.
- 12) National Biofuel Policy – Foster the use of Biofuels as a low-cost solution for the transition in favour of renewable energy, especially in developing countries.

- 13) Agricultural Research and Innovation – Promotion of investments in agricultural research and innovation, with the objective of meeting the growing world demand for food in a sustainable way.
- 14) Land Use Registration and Regularization Program – Initiatives such as the "Titula Brasil Program" can contribute to socioeconomic development and environmental conservation, establishing sustainable agricultural systems.
- 15) Sustainable Use of Soil – The National Soil Program in Brazil (PronaSolos) makes it possible to adapt agricultural activity to local soil and climate conditions, contributing to promote sustainable agricultural systems.
- 16) Native Vegetation Recovery – The National Plan for Native Vegetation Recovery (PLANAVEG) aims to rehabilitate and restore the native vegetation of a locality or region, through instruments such as technical assistance, awareness campaigns and research.
- 17) Environmental conservation, planning and sustainable use of land on private properties – Foster environmental conservation and restoration of natural ecosystems on rural properties through the implementation of the regulatory framework of the Forest Code. Moreover, ensure the use of verification systems and public transparency on environmental regularity through the Rural Environmental Registry- CAR, promoting positive results for environmental conservation and mitigation of climate change in line with agricultural production.
- 18) Agricultural Defence – Agricultural Defence Systems are essential to ensure food safety and compliance with national and international sanitary and phytosanitary standards. The existence of robust agricultural defence systems plays a fundamental role in structuring domestic food markets, as well as in the development of agro-export sectors, which generate employment, income and scale production.
- 19) International Trade – International trade is a crucial to eradicate hunger and achieve global food and nutrition security, especially for net food importing countries. Fair, transparent and science-based trade rules, which adequately remunerate all links in the production chains, are therefore fundamental to the improvement of global food systems.