

## The role of the Brazilian Unified Health System in combating the global syndemic and in the development of sustainable food systems

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**Abstract** *The undernutrition and obesity pandemics associated with climate change are a global syndemic. They have a point of convergence, which is the unsustainable current food systems. This paper aims to discuss the role of public health policies, particularly the Brazilian Unified Health System (SUS) in the context of Primary Health Care, in combating the global syndemic and in the development of sustainable food systems. In this scenario, the National Food and Nutrition Policy is a leading intersectoral tool for an adequate and healthy diet and food and nutrition security. Also, the Dietary Guidelines for the Brazilian population is a strategic tool to support food and nutrition education. We highlight the need to articulate health, agriculture, and environmental policies to achieve sustainable development. Thus, SUS can be the arena to promote the main discussions on this topic, potentiating individual, group, and institutional actions to provide a fairer, healthy, and sustainable food system.*

**Key words** *Unified Health System, Health policy, Food and nutrition security, Sustainable development*

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## Introduction

There are three severe global threats to human health and survival: the undernutrition and obesity pandemics – which includes their relationship with the development of chronic noncommunicable diseases (NCDs) – and climate change, which together establish a global syndemic<sup>1</sup>. Once seen as divergent and isolated conditions from each other, they have been recognized as synergistic factors that coexist in time and space and share common social determinants on a global scale. They also share interactions in the biological, psychological, and social fields<sup>1</sup>.

In synergy with what the term global syndemic proposes, the Food and Agriculture Organization of the United Nations (FAO) recognizes the latent challenge of the prevalence of malnutrition in all its forms, including undernutrition, specific nutritional deficiencies, overweight, obesity, and NCDs associated with eating habits<sup>2</sup>. In Brazil, despite several advances in this field, with particular attention to the impact of the *Bolsa Família* (Family Aid) Program (PBF) in improving the availability and purchase of food among low-income households<sup>3-5</sup>, it is still possible to find Brazilian homes living with some degree of food insecurity. According to the 2017-2018 Brazilian Household Budget Survey (POF), severe food insecurity was found in the homes of 10.3 million people (4.9% of the population), which means that there was a lack of food among all residents, including children<sup>6</sup>.

On the other hand, recent data from the National Health Survey (PNS) show that, in 2019, 25.9% of the population over 18 years old were obese (41.2 million people), and about 60.3% of the people in this age group (96 million people) were overweight<sup>7</sup>. The proportion of obese people in the population aged 20 years and over more than doubled between the POF 2002-2003 and the PNS 2019, hiking from 12.2% to 26.8%<sup>7</sup>. Simultaneously, data from the Surveillance System for Risk and Protective Factors for Chronic Diseases by Telephone Survey (Vigitel) for 2019 indicate an advance in NCDs among Brazilians – 7.4% have diabetes, and 24.5% have hypertension<sup>8</sup>.

NCDs are the leading cause of global morbidity and mortality, and unhealthy eating is one of its main risk factors<sup>9</sup>. Given its direct adverse effects on health, along with the indirect effects resulting from associated chronic diseases, undernutrition is a double burden for health systems, with high

socioeconomic costs and overly affecting the impoverished population and low-income countries<sup>10</sup>.

Furthermore, food production, including agriculture and livestock, is responsible for about 70% of all greenhouse gases released in Brazil<sup>11</sup>. These gases are directly linked to global warming and climate change, contributing to an increased risk for chronic diseases and pose challenges for food production itself<sup>12-14</sup>.

At the common root of the three problems – undernutrition, obesity, and climate change – is the unsustainability of current food systems<sup>1,15</sup>. According to FAO<sup>16</sup>, food systems are elements and activities related to the production, processing, distribution, preparation, consumption, and disposal of foods that affect health and socioeconomic and environmental issues. This system is influenced by several factors, including sociocultural, demographic, and political determinants.

In this sense, a radical change is required in the systems that guide lifestyles, consumption, transport, and food, which, unlike the current orientation, must be conceived holistically, understanding the impact on the health of individuals and the reverberations on planet Earth. This change supports the urgency of a reorientation based on sustainability, including the construction of fairer and more resilient, healthy, and sustainable food systems; the development of synergistic actions between different sectors of society; and the strengthening and improvement of health systems, which must integrate nutrition as an essential service, and planetary health, including human and planet health and well-being<sup>1,17-19</sup>.

Considering the emergence of actions and public policies based on healthier and more sustainable food systems, this paper aims to discuss the role of public health policies, particularly the Brazilian Unified Health System (SUS) in the context of Primary Health Care (PHC), in combating the global syndemic and in the development of sustainable food systems. Without intending to exhaust the subject, this work contributes to current discussions by reflecting on what has been developed and what needs to be done.

### **Brazilian Unified Health System, public policies, and food systems**

SUS was established in 1988 and aims to promote universal and comprehensive access to health care for all Brazilians (or not) in the national territory. It is governed by several organi-

zational and doctrinal principles, including equity, universality, integrality, social control, and decentralization<sup>20</sup>. Far from acting only in clinical and hospital care, the SUS is also responsible for health promotion and disease prevention, vaccination, campaigns to prevent infectious diseases, among other actions<sup>21</sup>. Over the past few years, SUS has made consistent progress in providing universal and comprehensive health care to the Brazilian population, reducing inequalities in access to health care<sup>22</sup>.

SUS works together with other policies, essentially through Primary Health Care PHC, to fight the global syndemic, promote the control of the prevalence of obesity and malnutrition, and mitigate and adapt to climate change<sup>23</sup>.

In this context, the Brazilian government has been working with guiding documents for the planning, monitoring, and evaluation of programs and policies to guide the actions of the SUS at the federal level. For this purpose, the National Health Plan (PNS), which establishes guidelines, priorities, goals, and indicators for the period, is proposed every four years. The current PNS (2020-2023)<sup>24</sup> is supported by other initiatives to improve internal controls and continuous improvement in the governance process. Its objectives provide for the expansion and resolution of integrated and planned PHC actions and services. Since its actions must be in line with society's demands and government guidelines, the plan provides for the convergence between internal and external guiding actors, among other documents in the Guidelines of the National Health Conference, which in its guideline 12 provides for ensuring the implementation of the National Food and Nutrition Policy (PNAN), the National Food and Nutrition Security Policy (PNSAN), and the National Policy on Agroecology and Organic Production (PNAPO), encouraging the production of environmentally, socially, and economically sustainable food<sup>24</sup>.

In turn, the PNAN gathers the efforts of the Brazilian State in a set of public policies that encompass protection, respect, and promotion of human rights to health and food<sup>25</sup>. In this sense, PNAN is an essential link between the health sector and others related to the human right to adequate and healthy food and to food and nutrition security (FNS)<sup>26</sup>, which are part of the essence of the SUS for the sustainable development of the food system. One of its goals refers to improving the conditions of food, nutrition, and health of the Brazilian people, through food and nutrition surveillance, the promotion of adequate and

healthy eating practices, prevention, and comprehensive care of diseases associated with food and nutrition<sup>25</sup>. Thus, the PNAN is situated within the SUS, facing the current global syndemic setting and reinforcing the need for intersectoral actions that transcend the health sector.

Dialoguing with PNAN, within the National Food and Nutrition Security System (SISAN), the PNSAN provides as one of its guidelines the promotion of supply and structuring of sustainable and decentralized systems, based on agroecology, production, extraction, processing, and distribution of food<sup>27</sup>. As this policy reaches different spheres (production, distribution, sale, access, and consumption of food), the participation of the health, agriculture, economy, education, supply, protection, work, environment, and social promotion sectors is required for its effective implementation<sup>28</sup>.

In line with such policies, the National Health Promotion Policy (PNPS) understands sustainable development as a reference for the formation of health promotion agendas and the adoption of priority strategies and themes, a cross-cutting theme of this policy<sup>29</sup>. For its realization, the PNPS adopts the values of solidarity, happiness, ethics, respect for diversity, humanization, shared responsibility, social justice, and social inclusion, contributing to the development of broader and transformative strategies that bring the population closer to sustainable development<sup>29</sup>. The National Primary Health Care Policy (PNAB), addressed here as PHC, understands health promotion as a principle for health care for its work process, highlighting adequate and healthy eating and promoting sustainable development as relevant themes that should be considered in this approach<sup>30</sup>.

In the context of the federal administration's actions, in 2014, the Ministry of Health published the second edition of the Dietary Guidelines for the Brazilian population<sup>31</sup>, which is one of the strategies for implementing the guideline to promote adequate and healthy eating underlying the PNAN. Also, the Dietary Guidelines support SUS food and nutrition education actions, guiding food practices that aim to promote health and prevent nutrition-related diseases within a sustainable food system<sup>31,32</sup>, considering the social and environmental impacts of the current agri-food system in effect. Thus, the Dietary Guidelines recognize that adopting an adequate, healthy, and culturally appropriate diet must act as a promoter of socially and environmentally sustainable food systems<sup>31</sup>. In this sense,

by guiding healthy and sustainable choices, this instrument can be recognized as a triple work action; that is, it can simultaneously influence the malnutrition and obesity pandemics and climate change<sup>1</sup>.

Such actions were corroborated with the launch of the Decade of Action on Nutrition 2016-2025 by the United Nations (UN), in which Brazil led these discussions and was the first country to sign commitments in the context of the Decade<sup>33</sup>. Furthermore, the commitments assumed also dialogue with the PNAN guidelines, which indicate the lines of action to improve the food, nutrition, and health conditions of the Brazilian population<sup>33</sup>. In this context, Chart 1 brings documents published nationally and internationally with recommendations for healthy and sustainable food systems.

As described, Brazilian public policies try to integrate the sustainability and nutrition agendas. However, the complexity of the challenges to achieving essential goals, such as equity, eradicating hunger and poverty, and combating all forms of undernutrition, and sustainability, have required greater integration between public policy agendas for health, agriculture, and the environment. At the international level, a leading example of this articulation was establishing the Sustainable Development Goals (SDGs)<sup>40</sup>.

The SDGs were created in 2015 to promote the progress and learning of the eight Millennium Development Goals established by the UN, and are aligned with the concept of planetary health, therefore having a transdisciplinary nature<sup>17,40</sup>. All SDGs are directly or indirectly related to promoting more sustainable food systems and population health, emphasizing SDGs 2 and 3.

The SDG 2 (Zero Hunger) aims to end hunger, achieve food security, improve food and nutrition, and promote sustainable agriculture<sup>40</sup>. Therefore, the entire food production chain must be considered, developing more resilient agricultural practices with less environmental impact, and establishing and strengthening incentive policies for small farmers, including women, indigenous people, and family farmers<sup>40</sup>. Also, expanding existing programs, such as the PBF, qualified technical assistance for small producers, increasing public purchases from family farming, developing food and nutrition education programs, and regulatory measures for the production and sale of food are necessary strategies for achieving this goal<sup>41</sup>.

In turn, SDG 3 (Good Health and Well-Being) guarantees access to quality health care and

the promotion of well-being for the entire population. Two points that should be highlighted in this SDG are reducing early mortality from NCDs and the number of deaths and diseases resulting from hazardous chemicals and air, soil, and water contamination<sup>40</sup>. This last point is closely related to the unsustainability of food systems and the indiscriminate use of land to produce monocultures and livestock, raising the need for regulation and tightening of policies aimed at controlling the use of land, fertilizers, and pesticides. Furthermore, it is worth noting that one of the strategies of this SDG is that health systems are universal and strongly guided by PHC, with evidence-based health policies for the management, mitigation, and adaptation of climate change and the environment<sup>40</sup>.

### **Challenges of the Brazilian Unified Health System**

Strengthening the SUS is essential for promoting more sustainable food systems. However, there are numerous obstacles and challenges to this. In the field of health, there is still a lack of integration between the public policy agendas for health, agriculture, and the environment despite the great capillarity of the SUS and its access to different Brazilian realities.

The involvement of all actors of the food system (government, industry, and civil society) is required to construct intersectoral public policies. However, few agents participate in developing policies, which hinders the expansion of views on the subject. Furthermore, this limited engagement means that these policies can serve private interests at the expense of society's demands<sup>42</sup>.

Thus, the horizontal organization of these public policies, which allows for greater integration between them<sup>43</sup>, is the first step towards developing more sustainable food systems. Social participation is also fundamental for these policies to be effective. It includes the population's actions, civil society organizations, social movements, non-governmental organizations, and multilateral entities<sup>42</sup>.

Furthermore, the recent dismantling of social policies related to income distribution, poverty reduction, and the promotion of FNS deserves attention. Some examples are the cost reduction of structuring programs, such as the PBF, Family Agriculture Food Acquisition Program, and family farming incentive programs<sup>44</sup>. Moreover, the extinction of the National Council for Food and

**Chart 1.** Recommendations for healthy and sustainable food systems according to documents published nationally and internationally.

Entity	Document	Recommendations
<b>National</b>		
Sustentarea	Sustainable diets: the Sustentarea manifesto <sup>34</sup>	<ul style="list-style-type: none"> <li>Preferential consumption of fruits, vegetables, whole grains, pulses, and oilseeds</li> <li>Moderate consumption of fish, poultry, eggs, and dairy products</li> <li>Reduced consumption of red and processed meat, ultra-processed foods, refined grains, and tubers</li> </ul>
Instituto Comida do Amanhã	Diálogo Brasil: Food Systems Dialogues <sup>35</sup>	<ul style="list-style-type: none"> <li>Access to healthy food and fair remuneration for food producers;</li> <li>Smart sanitary protocols</li> <li>Strengthening the income of food producers</li> <li>Resilience of food systems to future pandemics</li> <li>Post-COVID-19 food system in line with the implementation of the Sustainable Development Goals</li> <li>Increasing consumer information about the origins and impacts of the food chain</li> <li>Greater effectiveness of policies and public-private partnerships to fight hunger, food insecurity, and obesity</li> </ul>
Popular Conference for Rights, Sovereignty, and Food and Nutrition Security (CPSSAN)	Open letter for healthy and sustainable food systems in our cities <sup>36</sup>	<ul style="list-style-type: none"> <li>Dynamization of popular supply circuits</li> <li>Access to food and fighting hunger</li> <li>Preservation of common goods and socio-biodiversity</li> <li>Food as heritage, traditional knowledge, and culture</li> <li>Expansion and qualification of nutritional care</li> <li>Strengthening the National Food and Nutrition Security System (SISAN)</li> <li>Urban planning</li> </ul>
<b>International</b>		
EAT-Lancet Commission on Food, Planet, Health	Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems <sup>37</sup>	<ul style="list-style-type: none"> <li>Food based on plant foods</li> <li>Reduced consumption of red meat, refined grains, ultra-processed foods, and added sugars</li> <li>Control of drinking water use</li> <li>Cessation of deforestation</li> <li>Preservation of biodiversity</li> <li>Reduction of nitrogen and phosphorus pollution</li> <li>Adoption of environmentally appropriate agricultural practices, with increased food production</li> </ul>
Food and Agriculture Organization of the United Nations (FAO)	36 <sup>th</sup> FAO Regional Conference for Latin America and the Caribbean <sup>38</sup>	<ul style="list-style-type: none"> <li>Business practices based on multilateral rules</li> <li>Food and nutrition public policies addressing undernutrition in all its forms</li> <li>Production of safe and nutritious food</li> <li>Increased investment and greater cooperation between the public and private sectors for job creation and economic reactivation in agri-food systems</li> <li>Technological and digital research and innovation.</li> <li>Commercial inclusion of family farming, cooperatives and small, and medium-sized companies</li> </ul>
Food and Agriculture Organization of the United Nations (FAO) and National Research Institute for Agriculture, Food, and the Environment (INRAE)	Enabling sustainable food systems - innovators' handbook <sup>39</sup>	<ul style="list-style-type: none"> <li>Attracting and engaging consumers</li> <li>Integrating commerce, producers, and consumers</li> <li>Fair pricing and innovative financing</li> <li>Sharing knowledge about sustainable food production</li> <li>Advocacy</li> </ul>

Source: Author's elaboration.

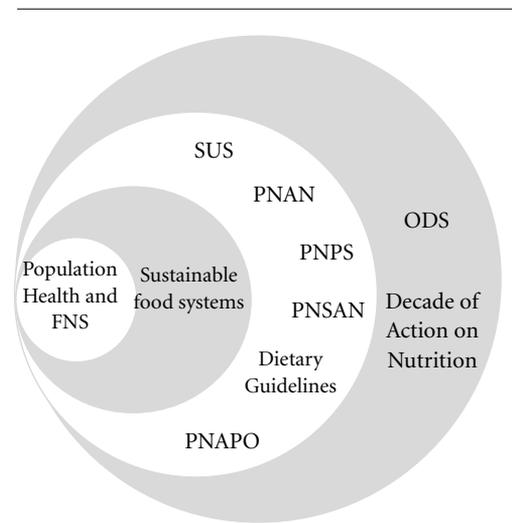
Nutritional Security and the increase in the number of people in poverty and social vulnerability should also be mentioned as threats to the FNS in Brazil<sup>45,46</sup>.

Thus, ensuring the FNS and health of the population and the planet requires actions at individual, institutional, and national and international political levels (Figure 1) for the right of social production of health, which runs from the production to the consumption of adequate and healthy food, to be guaranteed to all<sup>28</sup>. Moreover, the rational use of natural resources is essential for complying with article 225 of the Brazilian Constitution<sup>47</sup>: “Everyone has the right to an ecologically balanced environment, a common good for the people and essential to a healthy quality of life, imposing on public authorities and the community the duty to defend and preserve it for present and future generations.”

### Final considerations

SUS has a fundamental role in care regarding food and nutrition, promoting and protecting health, and acting in the prevention, diagnosis, and treatment of diseases. SUS actions are merged with the current food system, performing as a potential influencer in several areas of the system, such as the food production chain, the food environment, and food consumption, impacting health, the environment, and the economy.

SUS can be understood as a leading tool for sustainable development. Therefore, there is an urgent need to converge the existing policies, with greater integration between actions and dialogue between actors from different sectors, acting collaboratively. The advancement of planetary health, which also studies the actions of humans in the environment and their impacts on the health and sustainability of the planet, plays a critical role in promoting sustainability in public health policies. Also, with access to education, health, and agency on its rights and duties, people can exercise their role as citizens, demanding the realization of the human right to adequate food for all and access to healthier food environments. Thus, SUS can be the articulator to develop a fairer, healthier, and more sustainable food system.



**Figure 1.** Relationships between the Brazilian Unified Health System, food systems, and sustainable development.

Source: Author's elaboration.

### Collaborations

All authors participated in the study design, manuscript writing, and review and approval of the final version to be published.

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## **ERRATUM**

In the article **The role of the Brazilian Unified Health System in combating the global syndemic and in the development sustainable food systems**, DOI: 10.1590/1413-812320212610.11702021

**p. 4511,**

**where it reads:**

The role of the Brazilian Unified Health System in combating the global syndemic and in the development sustainable food systems

**reads up:**

The role of the Brazilian Unified Health System in combating the global syndemic and in the development of sustainable food systems

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