

# The power of public food procurement to deliver for climate



School feeding in Brazil. Credit: Ministério do Desenvolvimento Social/U. Machado

## Key Messages

- Public food procurement, including school meal programs, is increasingly recognized by governments and international organizations as a powerful policy to deliver social protection while also improving environmental outcomes, such as biodiversity, climate adaptation, and mitigation.
- Countries use different approaches to public food procurement, with some designing them to achieve multiple positive benefits — environmental, social, and economic.
- Brazil and Indonesia are two countries with emerging approaches for public food procurement based on their intentionality to expand reach of feeding people, mostly children, and to address other positive environmental, social, and economic outcomes.

“ When rooted in sustainability, school meals have enormous potential to advance climate mitigation and adaptation – and to promote biodiversity. COP30 in Brazil offers us a chance to move school meals from a climate blind spot to a climate solution. ”

UN Deputy Secretary-General, UNFSS+4,  
Ethiopia, 29<sup>th</sup> July 2025

Over the last decade, countries across all income levels have adopted public food procurement (PFP) initiatives that leverage government purchasing power to promote sustainable development. When effectively designed, PFP can drive multiple policy priorities — nutrition, education, climate action, and biodiversity — through structured demand for food.

These initiatives — often also referred to as institutional food procurement, including school meals programs (SMP) and purchase of food for public hospitals, prisons, universities, public building cafeterias, and other social programs — have increasingly been recognized as an important entry point to trigger shifts to more sustainable food systems and healthy diets. It also supports SDG target 12.7<sup>1</sup> on sustainable public procurement.

PFP frameworks determine what food will be purchased (e.g., local, diverse, nutritious etc.), from whom (e.g., local smallholder farmers, women, youth etc.), in what condition (e.g., safe, quality graded, fortified etc.), at what cost, and with consideration for sustainable production methods. These decisions must balance short-term needs with long-term goals like building healthy, low-carbon food systems.

Given the scale of public sector demand, PFP has considerable potential to shape norms around food, to influence both food consumption and food production patterns and to deliver multiple social, economic, and environmental benefits, including climate resilience, for a multiplicity of beneficiaries. Its role was emphasized during the [UN Food Systems Summit](#) as a key entry point to improve access to diverse, nutritious foods from small-scale producers.

## Food procurement, school meals, and the COP30 agenda

Previous COPs have already identified the crucial role of PFP for climate<sup>2</sup>. This year [Brazil's Presidential Action Agenda for COP30](#) is expected to highlight school meals as a climate-smart strategy to combat malnutrition, strengthen local food systems, and promote sustainable diets. PFP and school meals cut across three of the six thematic axes of this Action Agenda<sup>3</sup>.

Furthermore, the Global Alliance Against Hunger and Poverty launched by the Brazilian G20 presidency in November 2024, aims to align with the COP30 objectives. At the heart of the Alliance is the [Policy Basket](#), a menu of rigorously evaluated policy instruments and programs that can be tailored to specific national or subnational contexts, and which includes as examples policy instruments related to [school meal programs](#) and [institutional markets including public food procurement](#).

## Existing and emerging evidence

According to the School Meal Coalition, SMP reach around 466 million children daily with a total public investment of around USD 84 billion. While the evidence on the effectiveness of school meals across education, health, nutrition, and equity outcomes is well established, less is known about the potential agricultural and environmental effects, including for climate change adaptation and mitigation. Figure 1 below provides a high-level systems framework linking investments in school meals to outcomes

<sup>1</sup> Target 12.7 of the SDGs: “to promote public procurement practices that are sustainable in accordance with national policies and priorities”.

<sup>2</sup> The [COP28 UAE Declaration on Sustainable Agriculture, Resilient Food Systems and Climate Action](#) stated the explicit objective of “promoting food security and nutrition by increasing efforts to support vulnerable people through approaches such as social protection systems and safety nets, school feeding and public procurement programs”.

<sup>3</sup> Namely: Transforming Agriculture and Food Systems; Fostering Human and Social Development; and the final cross-cutting axis of Unleashing Enablers and Accelerators, including on Finance, Technology, and Capacity Building which specifically references climate-integrated public procurement.

and benefit streams that can guide ongoing efforts to test assumptions and improve evidence generation on SMP<sup>4</sup>.

Existing evidence shows that strategic use of SMP has the potential to contribute to government efforts on climate change mitigation<sup>5,6</sup>, biodiversity conservation<sup>7,8</sup>, deforestation<sup>9</sup>, and adoption of organic and agro-ecological practices<sup>10,11,12</sup>. This also shows how the relationship between PFP and environmental sustainability encompasses various dimensions and interconnected pathways.

### Box 1: Key findings from the GCNF global survey of school meal programs

- In the Bahamas, compostable materials were used for food packaging, while certain types of packaging, such as plastics and non-recyclables, were prohibited to minimize waste. Additionally, the national government implemented a ban on Styrofoam products.
- In Rwanda, uneaten food was composted on-site to reduce food waste. Schools used anaerobic biodigesters to treat waste, and the biogas produced was often used for cooking at the school.
- In Morocco, produce from school gardens was used in an environmental education program.
- In Romania, educational materials distributed through the school meal program presented information about healthy eating habits, agriculture, supply chains and local products, organic production, sustainable production, and combating food waste.

The third [Global Child Nutrition Foundation Global Survey of School Meal Programs](#)<sup>©</sup> (conducted in 2024) captured data regarding large-scale school meal programs in the 2022 school year from 144 countries. The results indicate, for example, that while 81% of programs reported taking steps to reduce food waste, only 22% reported composting uneaten/unusable food, and just 6% use anaerobic biodigesters. Two thirds of programs (67%) reported taking steps to limit packaging waste and 79% have tried to

reduce food miles. Just 38%, however, target climate-smart foods, and 58% of programs reported relying on firewood or charcoal stoves for meal preparation (though most are taking steps to reduce reliance on those energy sources). Less than half (48%) of programs reported providing complementary environmental/climate education, and just 18% of countries reported having a national law/policy related to school feeding and the environment.

These findings illustrate both progress and gaps: PFP has proven capacity to reduce waste, cut food miles, and shift demand toward climate-smart foods, but systemic barriers persist. According to ongoing research and multi-stakeholder consultations led by UNEP and FAO, embedding environmental outcomes requires enabling legal frameworks, stronger multi-level governance, and integration of procurement into fiscal and climate policies. At the operational level, a set of levers or actions such as awarding criteria linked to effective procurement verification systems, and nutrition-based menu standards that integrate environmental and social outcomes, for example, are essential to move from ad hoc practices to systemic change.

School meals and public food procurement can serve as a lever to align food, climate, and social policies, turning sustained and structured demand into an instrument that simultaneously advances human development, resilient local economies, and low-carbon, biodiversity-friendly agriculture. This requires sustained investment in capacity building: procurement officers need training and peer networks to adopt new practices, while smallholders and SMEs require support to meet environmental standards and access markets.

Current data only begin to reveal the potential of school meal programs and PFP to drive needed changes and to ensure that climate finance is directed for maximum effect. More evidence is needed including a theory of change for how climate finance, and associated policy dialogue, can deliver adaptation and mitigation through school meals<sup>13</sup>. Development partners have also identified priority evidence gaps, such as comparative analyses of different procurement models using environmental metrics<sup>4</sup>, and strategies for designing menus that balance multiple priorities, such as cost, supply capability, nutrition, cultural acceptability, and sustainability. Further research is needed on the effectiveness of school meals in promoting sustainable diets, reducing food waste, and encouraging acceptance of planet-friendly meals – especially in higher-income contexts.

4 Gelli, A., Bell, W., Bliznashka, L., Eustacchio-Colombo, P., Heirman, J. et al.. 2025. School meals in the 21st century – key evidence gaps and future directions. IFPRI Discussion Paper, forthcoming.

5 Cerrutti, A. K., Ardente, F., Contu, S., Donno, D. and Beccaro, G. L. 2017. Modelling, assessing, and ranking public procurement options for a climate-friendly catering service. *International Journal of Life Cycle Assessments* 23:95-115.

6 Kluczkovski, A., Menezes, C. A., da Silva, J. T., Bastos, L., Lait, R. et al. 2022. An environmental and nutritional evaluation of school food menus in Bahia, Brazil that contribute to local public policy to promote sustainability. *Nutrients* 14(7), 1519.

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12 Valenica, V., Wittman, H. and Blesh, J. 2019. Structuring markets for resilient farming systems. *Agronomy for Sustainable Development* 39(25).

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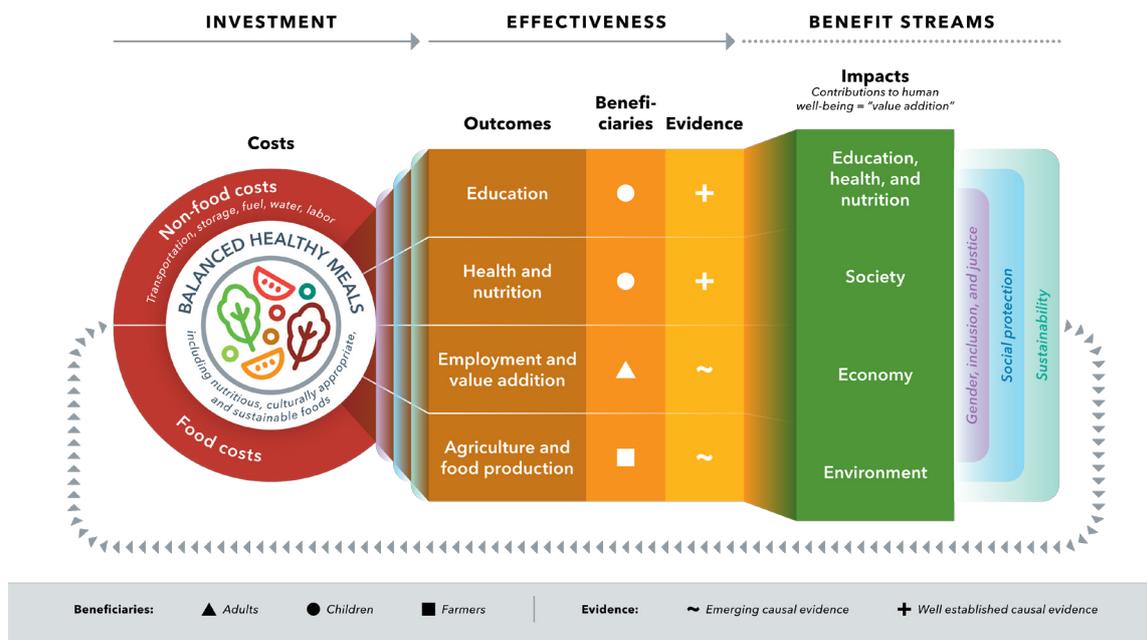


Figure 1: An evidence-based systems framework on linking investments in school meals programs to outcomes, impacts and benefit streams (Source: Gelli et al. forthcoming).

Evaluating short- and long-term impacts on health, climate, and biodiversity is also essential to help identify co-benefits and manage trade-offs. Methods are lacking for aggregating multiple benefits of school meal programs for economic evaluation, and on how to include externalities in true-cost accounting assessments. While human capital gains are substantial and well documented, better modelling is required to estimate returns on investments from agriculture, employment, and sustainability benefits. Addressing these gaps will enable policymakers assess the true value of school meal programs, ensuring investments deliver broad education, health, socio-economic and environmental benefits for communities.

**Brazil's National School Feeding Program (PNAE)** is a globally recognized initiative that combines food security, education, and support for smallholder farmers. It serves nearly 50 million meals daily in more than 150,000 public schools, with an annual budget of just under USD 2 billion. Its scale makes it a cornerstone of Brazil's food and nutrition security and a model for inclusive social development.

Data from [the National Fund for the Development of Education \(FNDE\)](#) shows food purchases from family farmers have grown significantly in the last decade. In 2022, over 97% of municipalities bought from family farms, and over 70% sourced more than 30% of food this way. All public-school meals are free, partially federally funded, and served over 200 school days per year, with implementation monitored by local school feeding councils.

Evidence from [Brazil's Institute of Applied Economic Research \(Ipea\)](#) highlights PNAE's role in income generation for low-income farmers by guaranteeing a stable market and promoting sustainable, local, and

seasonal agriculture. As climate change intensifies, resilient, agroecological food systems — centered on family farming — are crucial. In this sense, PNAE plays a dual role: advancing social inclusion and supporting climate adaptation.

#### Indonesia's Free Nutritious Meal (Makan Bergizi Gratis) program can deliver for climate and environment

In 2025, President Prabowo Subianto launched the "[Makan Bergizi Gratis \(MBG\)](#)" program to provide nutritious meals to around 83 million people, targeting school-age children and those in the crucial first thousand days of life. Aimed at reducing the country's high child malnutrition rate (22% of under-five year-olds), MBG can also support human capital and rural development by revitalizing agriculture, boosting farmers' incomes, and strengthening local economies.

Less discussed is MBG's potential to support climate goals, biodiversity conservation and reducing land degradation, while reducing food waste. [Indonesia's Strategic National Pathway for Food System Transformation](#) identifies five priorities which MBG could support – though better alignment is needed. The [Convergence Action Blueprint-Indonesia](#) begins this process by promoting local produce and short supply chains to reduce carbon footprints and enhance dietary diversity<sup>14</sup>.

Inspired by global models, like Brazil's PNAE and programs in Japan and South Korea, MBG could accelerate climate and environment benefits. Integrating MBG into Nationally Determined Contributions, National Adaptation Plans as well as its National Biodiversity Strategy and Action Plan and National Action Program for Combatting Land Degradation could position Indonesia as a leader in climate-smart school meals.

14 These alignments with benefits for climate are also being increasingly articulated by [researchers at academic institutes](#).

## Call to action

1. More evidence is urgently needed to further characterize beneficial linkages between PFP and climate mitigation, adaptation, biodiversity, and resilience benefits. This should include testing and scaling promising practices that grow more nutritious and climate resilient crops.
2. Integrate sustainable PFP into national climate strategies (e.g., NDCs/NAPs), national biodiversity strategies, national food system roadmaps, and budgetary processes, ensuring procurement is recognized as a core instrument for delivering long-term resilience and sustainable development.
3. Align national climate and nutrition goals with procurement mandates at municipal and regional levels, supported by inter-ministerial coordination across environment, finance, agriculture, and education ministries. Local implementation can facilitate the integration of culturally appropriate foods that are more nutritious and climate resilient.
4. Invest in tools and training for procurement officers, menu planners, and suppliers, particularly smallholders, women, and youth, to achieve sector specific goals, meet sustainability criteria and access public markets. Peer-to-peer learning and regional platforms can accelerate this shift.
5. Establish structured dialogue between climate finance organizations and school meal program implementers to channel resources into policy reforms that both provide social safety nets and lead to measurable climate outcomes.
6. Promote coherence among environmental policies and broader food systems interventions, with public food procurement standing out as a key zone of policy convergence.

## Further reading

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CGIAR is the world's largest, publicly funded agrifood research partnership. Our ambition is a food and nutrition-secure future that leaves no one behind. We operate through 15 Research Centers and with 10,000 staff in more than 100 countries. Our impact is made possible by collaboration with over 4,000 partners.

Levels of hunger and malnutrition are at record highs. Without urgent action, many more lives and livelihoods will be lost. Many of the 500 million small-scale producers who provide a third of the world's food on 83% of the world's farms are affected. With science, we can co-design the innovations they need to produce more and better food with fewer resources, adapt to the changing environment, and protect natural resources.

Recognizing the central role of partnerships and collaboration within and outside of CGIAR Programs and Accelerators, a holistic approach to acknowledgment is important. In publications and other instances where boilerplate language is desired or appropriate, the following options can be used:

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