

# Planet-friendly school meals: opportunities to improve children's health and leverage change in food systems



Food systems are facing a global crisis. Most countries are falling behind rather than progressing toward achieving the seven global nutrition targets set for 2030,<sup>1</sup> while unsustainable food production and consumption patterns have contributed to depletion and pollution of natural resources and climate change, further compromising food security and nutrition.<sup>2</sup> Children are disproportionately affected with 1 billion children at high risk of food insecurity.<sup>3</sup> Low-income countries will be the most affected by these changes despite having contributed the least.

Planet-friendly school meals, defined as programmes delivering equitable and healthy foods for children, produced in ways that do not pollute or overexploit natural resources and protect biodiversity, are a platform to tackle some of these food system challenges. School meals, mostly state-funded, reach 418 million children every day worldwide<sup>4</sup> offering an opportunity to improve diet quality, and ultimately nutrition and health, and act as a catalyst for food systems transformation contributing to meeting global climate, food, and biodiversity goals.<sup>5</sup>

There is increasing recognition of the importance of good nutrition in the healthy development of school-aged children.<sup>6</sup> Regular provision of school meals improves school enrollment, attendance, and attainment, and lowers dropout rates, especially for girls, reduces socioeconomic disparities, and in low-income settings and households acts as a social safety net by reducing food insecurity and supporting family budgets.<sup>4</sup> Combined with holistic food education, planet-friendly and nutritious school meals can foster healthier and more sustainable food practices.<sup>7</sup> Planet-friendly school meals can create demands for systemic changes to food systems, including more ecological, agrobiodiverse, and equitable food production, regenerating land and protecting biodiversity.<sup>5</sup>

In 2021 at the UN Food Systems Summit, the recognition of the societal value of school meal programmes as a response to the COVID-19 crisis led to the creation of the School Meals Coalition, a multilateral coalition aiming to improve and scale-up national school meal programmes by 2030. Increasingly, governments want these programmes to be planet-

friendly and climate-resilient. To that end, the evidence-gathering initiative of the Coalition, the Research Consortium for School Health and Nutrition (RCSHN) published a white paper, *School Meals and Food Systems: Rethinking the Consequences for Climate, Environment, Biodiversity and Food Sovereignty*,<sup>5</sup> co-authored by 86 organisations and launched at the 28th Conference of the Parties UN Climate Change Conference, which has been endorsed by several countries. This Comment will be part of a collection of papers in a forthcoming issue of *The Lancet Planetary Health* that disseminate RCSHN findings, showcase case studies and highlight barriers, opportunities, and evidence gaps in planet-friendly school meals programmes and complementary policies.

Multiple stakeholder collaborations are required to move towards planet-friendly school meals. This entails changes directed at two sets of policies as outlined in the Planet-friendly school meals conceptual framework (figure): those making immediate changes to school meal programmes; and those developing demand-driven planet-friendly procurement policies that promote ecological farming and develop sustainable regional food systems.

For school meals programmes and policies, the framework highlights four components needed to facilitate planet-friendly school meals: healthy and sustainable menus, clean energy for cooking, reduced food waste, and action-oriented and holistic food education.

To be more sustainable and nutritious, school menus should include diverse, predominantly plant-based whole foods, which are climate resilient, and locally relevant.<sup>8</sup> A key step is to develop context-specific national nutrition and food standards, aligned with national food-based dietary guidelines, where they exist. Menu planning tools, integrating nutrition standards, environmental constraints, and local procurement can support environmental targets are planned for and met.<sup>5</sup>

Globally, 2·3 billion people do not have access to clean, efficient, safe, and affordable cooking solutions, and thus remain exposed to the negative health, environmental, and socioeconomic impacts of traditional cooking.<sup>9</sup>

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For more on the **School Meals Coalition** see <https://schoolmealscoalition.org/>

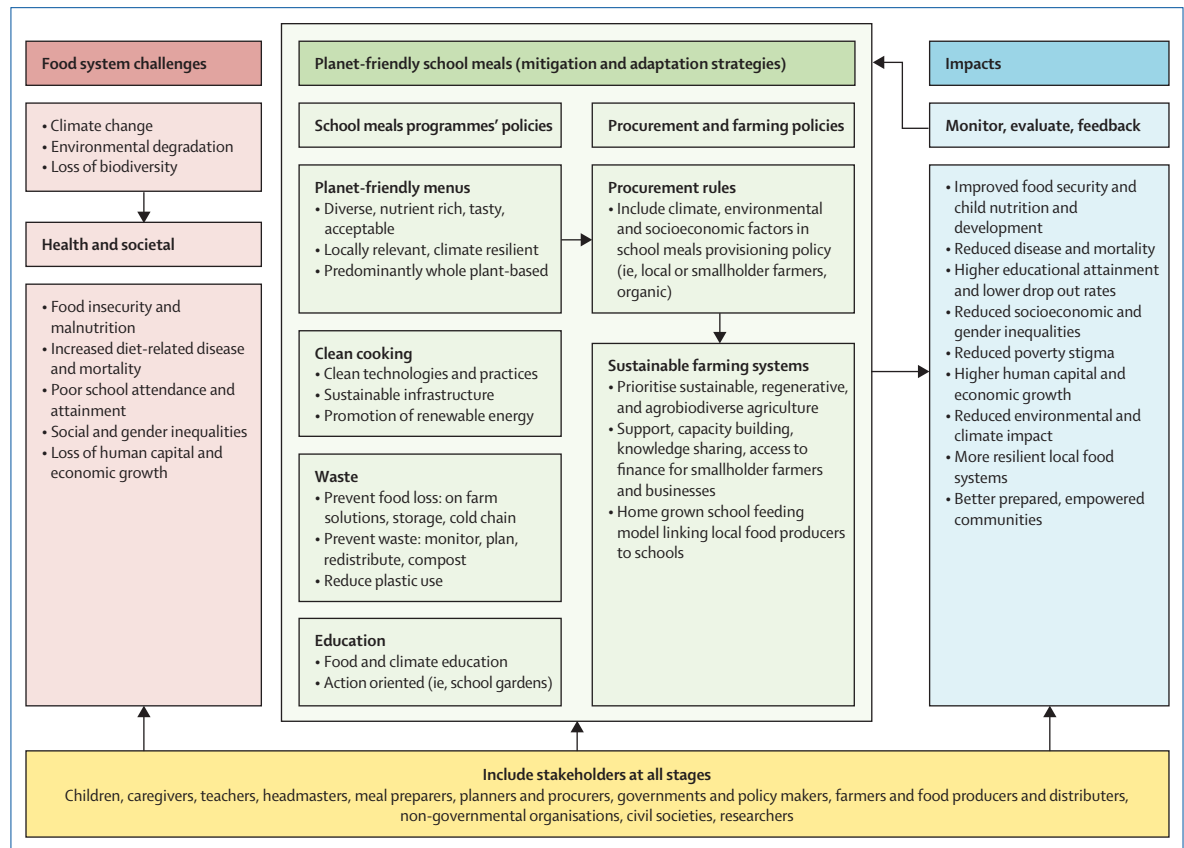


Figure: Planet-friendly school meals conceptual framework

Resilient school infrastructure can adapt to and withstand climate impacts, and access to sustainable energy services has several benefits, including refrigeration to reduce food spoilage and water pumping for food gardens. In low-income countries, investing in sustainable infrastructure, clean, and preferably modern, energy cooking services for schools and renewable energy could reduce air pollution and deforestation, reduce food preparation time, and reduce costs in the long term.

Around a third of the world's food is either lost before it reaches retailers or wasted by retailers and consumers.<sup>10</sup> Reduction of food loss and waste within the school meal system can be achieved by better storage, preservation, monitoring, and planning, and by shortening value chains. Halving school food waste could reduce environmental impacts by 13%.<sup>5</sup> Climate-friendly food waste management methods, such as composting, would further reduce environmental impact of school meal provision.

Learning about the interconnectedness between food systems, health, and the environment and developing

the capacity to act on this information, is a key aspect of sustainable development.<sup>7</sup> This would require the integration of regular holistic and action-oriented food education (ie, whole person involvement, including the head [knowledge], heart [motivation], and hands [practical skills], and learning about the interaction between social and physical food environments) into national school syllabuses that would be available to all students. A whole school approach, which meaningfully links food education with the school meal system and the wider food environment would extend the benefits of holistic food education to the community.

Changes to national school meal programmes can create demand-driven planet-friendly actions in local and regional food systems, such as promoting ecological production and stimulating crop diversity. Incorporating social strategies, such as linking school food demand to local smallholder farming, such as home-grown school feeding approaches, can promote equitable economic growth, resilience, and food sovereignty and security. Policies that support capacity building of

small and medium enterprises, farmer organisations, cooperatives, and other actors involved in value chain to adopt planet friendly practices are essential to enable successful procurement strategies.

Climate adaptation measures, such as linking school menus to drought-tolerant or flood-tolerant foods, which adapt to local growing and environmental conditions, would help strengthen food security, especially in the most vulnerable areas.<sup>1,2</sup> This is best accomplished by incorporating principles of agrobiodiversity and agroecology acknowledging the traditional knowledge of indigenous populations to diversify diets while respecting nature and biodiversity.<sup>5</sup>

Planet-friendly school meals offer a unique platform to improve children's health, promote equitable economies, and transform food systems, contributing to multiple nutrition and environment goals. However, to achieve these goals, a multidisciplinary approach involving many stakeholders at all levels and from multiple arenas, including education, food production, and environmental sectors, will be key. We call on government, policy, and school actors, civil society, non-governmental organisations, and researchers to join forces to help transform school meals for a thriving future for children and the planet.

We declare no competing interests.

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