

Next-generation school feeding: Nourishing our children while building climate resilience

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At the start of 2020, 388 million children, or one in every two schoolchildren in more than 160 countries, were receiving a school meal every day, making school feeding the largest social safety net in the world (WFP, 2020a). Between 2013 and 2020, the number of children receiving school meals jumped almost 10 percent, reflecting the increased institutionalization of such programmes as part of government policies for national development.

Furthermore, governments have increasingly recognized the multiple benefits of an approach known as home-grown school feeding (HGFS). This builds on existing school feeding programmes by sourcing food for school meals locally from smallholder farmers in an effort to boost agricultural development, strengthen local food systems and move people out of poverty (FAO and WFP, 2018).

We believe HGFS approaches provide an important framework for mainstreaming climate-smart agriculture (CSA) and innovation for scaling up climate action to strengthen programming approaches that enable cross-cutting action to transform nutrition. They simultaneously facilitate multiple-duty actions and programme options that address malnutrition in all its forms, while helping to achieve global climate, food and biodiversity goals.

Home-grown models assume that households and local smallholder farmers benefit from guaranteed school-market demand, while schoolchildren benefit from more diverse diets that include culturally appropriate, nutrient-rich

indigenous foods. There are positive multiplier effects for other groups of people along the value chain, such as local catering businesses – many led by women – traders and transporters, and rural small and medium-sized enterprises (SMEs), which achieve higher incomes (FAO and WFP, 2018). We believe that guaranteed demand and the focus on local livelihoods that HGFS embraces are an important pull strategy for the often research- and supply-driven approaches of CSA.

To meet food demand and secure the long-term impact of HGFS interventions, procuring directly from individual smallholder farmers is often impractical and best addressed through farmer organizations or cooperatives (WFP, 2014). Farmer organizations help overcome the barriers to market entry that smallholders often face by facilitating the aggregation of small quantities, easing access to services (such as inputs, credit and transport), reducing transaction costs and enhancing bargaining power and the capacity to negotiate contracts and tenders. Farmer organizations provide effective platforms for delivering technical support and training and improving management, organizational, marketing and entrepreneurial skills.

Well-established training and learning-by-doing approaches through farmer organizations, such as farmer field schools and business schools, can enable smallholders to improve their technical knowledge and business management skills (FAO and Procasur, 2021). An adapted farmer business school approach was recently used in Kenya to strengthen

farmers' organizational, negotiation, entrepreneurial and market skills, as well as to deliver agroecology training to produce more crop diversity for school meals. It also addressed farmers' limited knowledge of the nutritional value of African indigenous vegetables, as well as post-harvest handling, quality and food safety, and long-term biodiversity conservation (Borelli *et al.*, 2021).

Acknowledging the need for more climate change-responsive approaches to school feeding (FAO and WFP, 2018; WFP, 2020b) and finding ways for school procurement and menus to emphasize more climate-resilient foods (Gelli and Aurino, 2021; GCNF, 2021; Singh and Conway, 2021) makes HGSF platforms a good strategic entry point for a stronger climate-resilience component in school feeding, especially when integrated with national CSA actions and other national agricultural support efforts linked to nutrition-sensitive agriculture that better harness the use of agrobiodiversity (Singh, 2021). Such HGSF platforms would promote innovation and behavioural change with regard to climate-sensitive agriculture, influencing how smallholders and communities and other actors along the HGSF value chain respond and adapt to climate change.

Incorporating the experience and lessons learned from the work of the CGIAR Research Programme on Climate Change, Agriculture and Food Security (CCAFS) and partners in co-designing innovation platforms such as climate-smart villages and local technical agro-climatic committees, would make HGSF platforms a focus for scaling up adaptation options in agriculture, supporting the production of climate-resilient foods (Aggarwal *et al.*, 2018; Loboguerrero *et al.*, 2018a; Andrieu *et al.*, 2019; Osorio-Garcia *et al.*, 2019). Including climate-smart agricultural value-chain approaches would broaden the focus to other value-chain actors, including SMEs, and create awareness of the impacts of climate change along the different stages of the HGSF value chain and reveal additional opportunities for adaptation (Mwongera *et al.*, 2019). Better linkages to climate services, including climate forecasting, tailored agro-advisory services and innovative insurance, would further underpin HGSF, making more climate-resilient farmer organizations, cooperatives and SMEs bankable and investible when it comes to school food provision.

A more climate change-responsive approach to school feeding also provides opportunities to link to broader aspects of school education, especially through school garden-based learning. School gardens can serve as learning labs for children to better understand the risks and impacts of climate change and to demonstrate ways of adapting. This has been demonstrated in the Philippines,

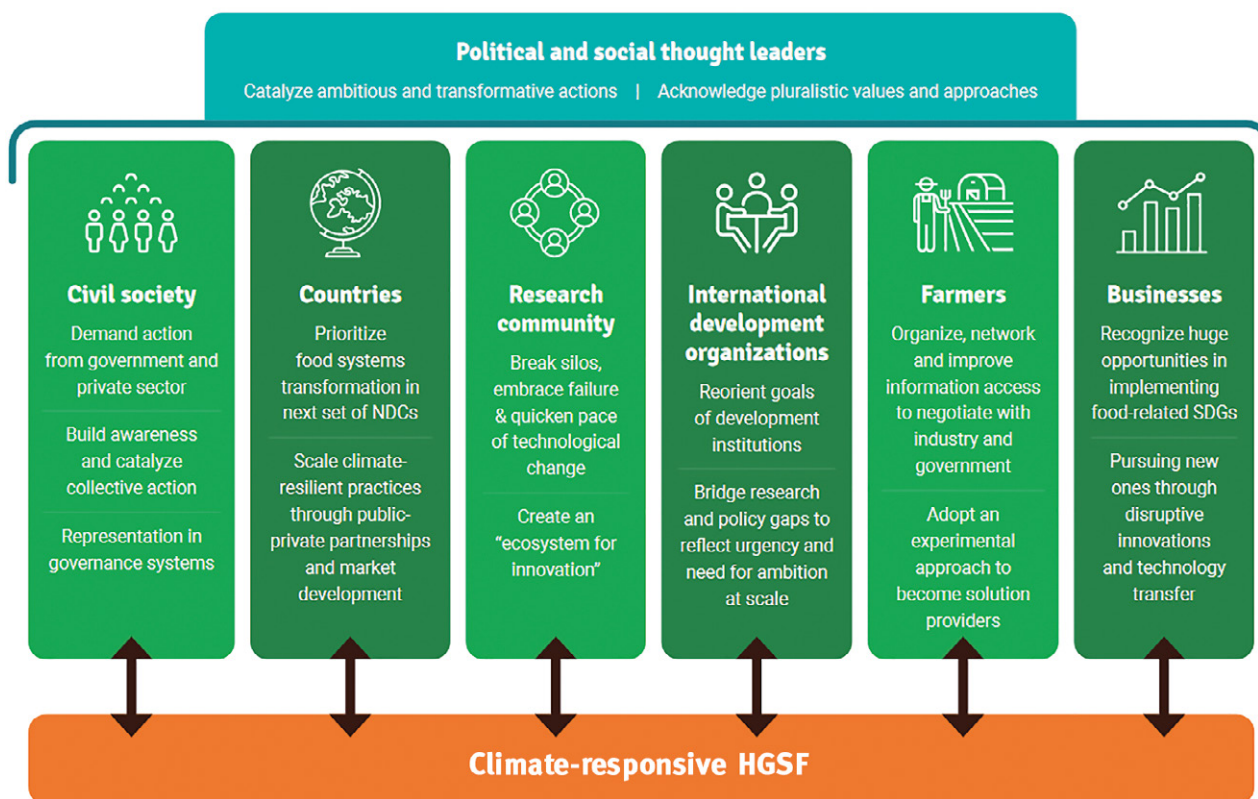
where regenerative gardening systems with climate-resilient practices have been widely promoted in schools (Gonsalves, Hunter and Lauridsen, 2020), and in Cauca, Colombia, where kindergarten teachers and children grow vegetables together while learning how weather influences plant growth and the importance of looking after soils as part of promoting CSA (Comfacauca, 2017).

Such actions change norms around school food and build consumer demand for culturally appropriate, climate-resilient foods. Planting diverse crops together with multipurpose trees on garden boundaries helps sequester carbon in tree biomass and soils, while promoting the greening of schools and cooler environments for learning and play. A holistic approach linking HGSF, the promotion of CSA and school garden-based learning would empower schoolchildren as future agents of change for climate action and healthy eating in their schools, homes and communities.

Improving the availability of climate-resilient, nutrient-rich foods would be transformational for school-aged children's nutrition. Integrated approaches linking the establishment of school gardens to awareness-raising on the nutritional value of locally sourced foods, the integration of agrobiodiversity benefits in school curricula and the use of garden produce to teach food preparation and healthy eating, combined with school feeding, would contribute significantly to reducing the burden of malnutrition among school-aged children (Hunter *et al.*, 2020).

Bringing together HGSF and climate action in a way that addresses the triple challenge of climate, food and biodiversity while nourishing school-aged children presents challenges and opportunities. Addressing these and catalysing action requires working with a range of stakeholders and actors (Figure 1, Box 1).

Figure 1. Stakeholder groups required for a more climate-responsive approach to HGSF



SOURCE: Adapted from Steiner, A., Aguilar, G., Bomba, K., Bonilla, J.P., Campbell, A., Echeverria, R. et al. 2020. *Actions to Transform Food Systems under Climate Change*. Wageningen, the Netherlands, CGIAR Research Programme on Climate Change, Agriculture and Food Security (CCAFS).

Key to achieving this is enabling stakeholders to work in a cross-sectoral way that acknowledges and embraces the intimate interrelationships between biodiversity, nutrition and climate outcomes. The guidance on mainstreaming biodiversity for nutrition and health that broadly encompasses the five critical steps identified in the *Global Nutrition Report 2018* for speeding up action to end malnutrition in all its forms is one example of a conceptual

framework that can help guide this process (WHO, 2020, Figure 9). For example, countries could prioritize and promote a more climate change-responsive approach to school feeding in their Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs) and long-term strategies under the United Nations Framework Convention on Climate Change (UNFCCC) (Box 1).

Box 1. Catalysing action on HGSF and climate: stakeholders and potential roles

Countries: Governments need to work cross sectorally and recognize the intimate interrelationships between climate, biodiversity and nutrition outcomes. Actions that promote a more climate change-responsive approach to school feeding should be prioritized in NDCs, NAPs and long-term strategies under the UNFCCC. These actions need to be based on context-specific needs and readiness for implementation. Opportunities include public-private partnerships to scale up HGSF and climate action, and providing the right incentives through appropriate policies.

Research community: The research community needs to break down silos between climate, biodiversity and nutrition expertise to provide end-to-end solutions that meet the needs of all stakeholders involved in HGSF. This includes promoting an environment for transdisciplinary work, where researchers are integrated with policymakers, the private sector and development practitioners, which is fit for purpose and goes beyond traditional comfort zones. Changes will be needed to incentivize structures, management and governance in public-sector agricultural research for development systems to scale up HGSF and climate action.

International development organizations: Non-governmental organizations, international institutions and donors need to reorient the goals of development institutions and bridge research and policy gaps to forge a combined agenda aimed at achieving global climate, food and biodiversity goals. Major opportunities include facilitating South–South, North–South and Triangular cooperation strategies to reach scale in relation to HGSF and climate action, as well as facilitating the development and deployment of public-private partnerships. International development organizations need to show leadership on emerging topics such as HGSF and climate action.

Farmers: Farmers remain on the front line of climate change, nutrition and biodiversity challenges, but these challenges could be turned into opportunities and farmers could provide the solutions. This will require farmers to strive to make their voices heard in decision-making processes. Development work with farmers needs to consider the priorities and opportunities of different farmer groups: small-scale farmers, women, youth, marginalized and indigenous farmers.

Businesses: Businesses should recognise the opportunities of participating in initiatives that can provide triple wins on climate, biodiversity and nutrition. Incentives need to be developed to catalyse businesses participation. Some of these actions include improving the transparency and accountability of finance and major commodity supply chains, and transforming procurement and supply-chain policies to incentivize climate-smart HGSF.

Civil society: The role of civil society in demanding climate action has been in the spotlight in recent years. Climate, biodiversity and nutrition challenges are a key concern for an increasing number of voters. Social movements need to continue demanding ambitious action from governments and the private sector, building awareness and fostering collective action among communities.

Political and social thought leaders: To promote HGSF and climate actions, we need strong leadership, both intellectual and political, to escalate the issue to the highest levels. There is a need for support from world leaders, but this leadership needs to catalyse ambitious and transformative action by private and public stakeholders, acknowledging pluralistic values and approaches. As immediate beneficiaries, young people and schoolchildren have an important role to play in galvanizing climate action in areas that require social change, such as HGSF.

SOURCE: Steiner, A., Aguilar, G., Bomba, K., Bonilla, J.P., Campbell, A., Echeverria, R. et al. 2020. *Actions to Transform Food Systems under Climate Change*. Wageningen, the Netherlands, CCAFS. <https://ccafs.cgiar.org/resources/publications/actions-transform-food-systems-under-climate-change>
 Hellin, J., Fisher, E. and Loboguerrero, A.M. 2021. Reflections on enhancing the impact of climate risk management through transformative adaptation. *Frontiers in Climate*, 3: 751691. <https://www.frontiersin.org/articles/10.3389/fclim.2021.751691/full>

School closures during the COVID-19 pandemic brought a decade's growth in school feeding programmes to a dramatic halt, leaving about 370 million school children without access to their one reliable meal a day. Global resolve to restore these critical safety nets has become even more of a priority, with a key focus on scaling up HGSF approaches (WFP, 2020a). To this end, a new Global School Meals Coalition was launched at the UN Food Systems Summit with the aim of nurturing future collaboration and innovation to help countries build back better. Moreover, the World Food Programme has launched a new 10-year school feeding strategy (2020–2030), which calls for more research, interventions and

design to foster a climate change-responsive approach to school feeding (WFP, 2020b).

We believe a more integrated approach to HGSF that empowers farmer organizations to take climate action by incorporating and building on CCAFS and partners' systematic research and evidence generation, experiences, innovation and practices on the ground over the last 10 years (Loboguerrero *et al.*, 2018b; Steiner *et al.*, 2020) could inform the decision-making, design and implementation of future HGSF in a way that not only facilitates local nutrition and food system transformation, but makes a significant contribution to the triple challenge of meeting climate, food and biodiversity goals.

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