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SUSTAINABLE SCHOOL FEEDING IN TOGO: GOVERNANCE, COMMUNITY AND DEVELOPMENT IMPLICATIONS

Madjouma Kanda¹, Wouyo Atakpama^{1*}, Nankpakou Sama², Bilouktime Badjare^{1,3}, Bruno Kokouvi Kokou^{1,4}, Hyacinthe Brandao Alao⁵, Komi Attivi⁶, Ayira Korem⁷, Mamatchi Melila⁸, Koffi Kpotchou⁹, Kperkouma Wala¹ and Komlan Batawila¹

¹Laboratoire De Botanique Et Ecologie Végétale (LBEV), Université De Lomé, Togo

¹Laboratoire De Botanique Et Ecologie Végétale (LBEV), Université De Lomé, Togo, Email: wouyoatakpama@gmail.com

²Laboratoire D'analyse des Mutations Politico-Juridiques, Économiques Et Sociales (LAMPES), Université De Lomé, Togo

³Institut De Recherche Sur La Biodiversité Aux Monts Nimba (Ireb-MN), Commune Urbaine De Lola, Guinée

⁴African Centre of Excellence in Neglected and Underutilised Biodiversity (ACENUB), University of Mzuzu, P/Bag 201, Luwingu, Mzuzu, Malawi

⁵Agence Nationale d'Appui Au Développement À La Base (ANADEB), Ministère Du Développement À La Base Et De L'économie Sociale Et Solidaire, Lomé-Togo

⁶Centre d'Excellence Regional Sur Les Sciences Aviaires (CERSA), Université De Lomé, Togo

⁷Centre De Recherche En Économie Appliquée Et Management Des Organisations (CREAMO)

⁸Laboratoire De Génie Des Procédés Et Des Ressources Naturelles (LAGEPREN)

⁹Laboratoire Dynamiques Sociales Et Intégration Régionale (Ladysir)

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Corresponding Author: Wouyo Atakpama
(wouyoatakpama@gmail.com)

ABSTRACT

School feeding programs have emerged as strategic interventions to address these multidimensional challenges by simultaneously improving child nutrition, educational outcomes, gender equity, and local agricultural development simultaneously. This systematic review, conducted under the PRISMA framework, analysed global, region-al, and national literature on school feeding programs, with a particular focus on Togo. Data were retrieved from multiple databases (Google Scholar, PubMed, Scopus, Web of Science, ResearchGate, Crossref, and Google) as well as grey literature, covering the period from 1960 to 2026. The results highlight significant disparities in coverage: while 25% of school-aged children worldwide benefited from school feeding in 2022, Sub-Saharan Africa lagged behind with coverage of 19% coverage. In Togo, school-feeding initiatives began in 1967 with Catholic Relief Services and have since evolved into a nationally coordinated program run by the Agency for Grassroots Development (ANADEB). Despite this progress, challenges persist, including financial dependence on external donors, logistical constraints, and limited institutional capacity. The review concludes that the sustainability of school feeding programs depends on coherent integration of institutional governance, stable national financing, and strong community participation.

KEYWORDS: Food and Nutrition Security, School Feeding, Food System Resilience, Togo.

1. INTRODUCTION

Food security and nutrition remain major global challenges. According to estimates from the World Health Organization (WHO), 8.2% of the world's population approximately 673 million people experienced hunger in 2024. Acute food insecurity and child malnutrition affected more than 295 million people across 53 countries worldwide, as reported in the Global Report on Food Crises (ONU Infos 2025). This situation threatens the achievement of Sustainable Development Goal 2 (SDG 2), which aims to "end hunger, achieve food security, improve nutrition, and promote sustainable agriculture". It also represents a pressing public health concern, since food insecurity constitutes a significant barrier to healthy diets, an essential factor for maintaining health, and preventing certain chronic diseases (Bérubé et al. 2023; Raine 2005).

In Africa, malnutrition is not solely linked to food scarcity but rather to a multifactorial imbalance combining poverty, inequality, climate crises, conflicts, diseases, and systemic failures (Fondation Française de l'Ordre de Malte 2025). If this situation persists, it will jeopardize the Sustainable Development Goal target of halving the number of children suffering from stunted growth, as well as the World Health Assembly's objective of reducing low birth weight by 30% by 2025 (OMS 2019). According to the World Food Programme, more than 100 million children suffer from hunger every day in low-income and lower-middle-income countries (PAM 2022). The majority attend school on an empty stomach, and hunger undermine their ability to concentrate and learn. Ensuring regular and nutritious meals for pupils therefore contributes to several Sustainable Development Goals, including SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), SDG 5 (Gender Equality), SDG 8 (Decent Work and Economic Growth), SDG 10 (Reduced Inequalities), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action) (FAO et al. 2024; Fesenfeld et al. 2023).

School feeding refers to the provision of meals, snacks, or food rations to pupils during school hours (canteens, breakfasts). It is a major strategic lever for improving children's nutrition, health, and learning, while simultaneously supporting local agriculture. It represents a response to widespread hunger and poverty among school-aged children in today's world (Watkins et al.

2024). School feeding programs have demonstrated their effectiveness, particularly in alleviating food insecurity and promoting healthy diets among young children (Bérubé et al. 2023; Cohen et al. 2021; Colley et al. 2018; Gearan et al. 2020). School canteens improve attendance, reduce dropout rates, and serve as an essential safety net for children from disadvantaged backgrounds (PAM 2022). Beyond stimulating education and improving health and nutrition (Fortin 2017), the implementation of these programs fosters the empowerment of girls by encouraging school enrolment and delaying early marriage and pregnancy (MDBESS 2017). Additional benefits also emerge, notably the strengthening of local economies by supporting smallholder farmers, promoting school meals based on local products, and establishing climate-smart food systems that reduce supply chain emissions and advance sustainable agriculture (Retière et al. 2014; Sumberg and Sabates-Wheeler 2011). These initiatives benefit local economies and contribute to the development of more sustainable and better-designed food systems that integrate gender and climate considerations.

In Africa, school canteens have been successfully implemented in many countries, driven both by their documented impacts and by the ambition to advance towards the African Union's Agenda 2063, the Continental Education Strategy for Africa 2016-2025 (CESA 16-25), and the Sustainable Development Goals (SDGs) (Union africaine 2018). They enable states to address key challenges such as reducing persistent social inequalities, promoting healthier dietary habits, and raising youth awareness of environmental and civic issues (Bérubé et al. 2023; Lange 2014; Segbedji 2025).

In Togo, school canteens were first introduced in 1967 through Catholic Relief Services (CRS-Catwell), supported by the U.S. government via USAID (Kodjo et al. 2024). For decades, partners such as the World Food Programme (WFP), Catholic Relief Services (CRS), and the French international NGO Aide & Action, now "Action Education", sustained them. Since 2018, the National Agency for Grassroots Development (ANADEB) has led a more structured national strategy, based on endogenous supply and community participation (Kodjo et al. 2024). In recent years, school feeding has emerged as a strategic instrument at the intersection of educational, nutritional, agricultural, and social protection policies. However, despite the

abundance of publications and institutional reports, available knowledge remains fragmented, sometimes heterogeneous, and highly context-dependent. Outcomes vary according to governance models, financing mechanisms, the degree of community involvement, and local socio-economic dynamics. In this context, conducting a comprehensive literature review responds to both scientific and strategic imperatives, as it consolidates existing knowledge, identifies achievements and gaps, and informs Togolese policymakers on reforms and innovations likely to strengthen program effectiveness, sustainability, and resilience. This review is guided by the following main research question: To what extent does the scientific and institutional literature allow for an assessment of the sustainability and optimization prospects of the school feeding program in Togo considering global dynamics?

From this central question, arise three specific research questions:

- (i) What governance, financing, and supply models structure school feeding programs worldwide, and how does Togo align with these models?
- (ii) What achievements and limitations of the Togolese program are documented in terms of coverage, nutritional quality, integration of local producers, and institutional coordination?
- (iii) What recurrent structural challenges are identified in the literature, and which optimization levers are considered critical for ensuring a more sustainable and resilient school feeding program in Togo?

The overall objective of this review is to analyse international dynamics of school feeding in order to assess the achievements, limitations, and strategic perspectives of the Togolese program. Specifically, (i) to examine governance, financing, and supply models of school feeding at the global level; (ii) to evaluate, based on available sources, the performance and constraints of the school feeding program in Togo; and (iii) to identify structural levers likely to strengthen the institutional, financial, and community sustainability of the Togolese program. The main hypothesis of the study, derived from the central research question, suggests that the sustainability and performance of school feeding programs depend primarily on the coherent integration of institutional governance, stable national financing, and community anchoring. In Togo, these dimensions appear only partially consolidated,

which limits the program's optimal alignment with international standards. The hypotheses linked to the specific research questions are (i) the most sustainable school feeding programs are those integrated into national budgets and supported by strong institutional coordination; (ii) local sourcing enhances socio-economic impacts but requires adequate organizational capacity; and (iii) in Togo, the partial consolidation of these dimensions explains the progress observed while simultaneously limiting full alignment with international standards.

2. MATERIALS AND METHODS

2.2. *Prisma Method*

PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) provides standardized guidance for reporting systematic reviews and meta-analyses in social, ecological, and policy-related research. It includes a 27-item checklist and a four-stage flow diagram designed to improve transparency in reporting, such as clearly describing the study scope, quality of included studies, any changes made during the review process, evaluation of potential biases, and assessment of outcomes (Asar et al. 2016). This framework was applied in the present review to enhance methodological rigour and ensure reproducibility.

2.2.1. *Pre-Search Expert Consultation*

At the beginning of the review process, consultations were conducted with stakeholders involved in education, nutrition, and agricultural policy in West Africa, particularly in Togo. These stakeholders included researchers, education officers, representatives of NGOs, and policy actors. Discussions focused on the scope of school feeding programs, their historical evolution, and their impacts on nutrition, education, and local agriculture. These exchanges helped refine the search terms and contextualize the review within both global and regional perspectives.

2.2.2. *Search Strategy*

Following expert consultations, a comprehensive literature search was conducted across multiple databases: Google Scholar (organized with Harzing's Publish or Perish software), PubMed, Scopus, Web of Science, ResearchGate (<https://www.researchgate.net/>), Crossref (<https://www.crossref.org/>) and google (<https://google.com/>). Grey literature, including reports from international organizations,

government agencies, NGOs, and unpublished theses, was also included to capture practical and local perspectives (Ahlidja *et al.* 2024). The search covered publications from 1960 to 2026, with 1960 marking the beginning of the international expansion of school feeding programs. Keywords included combinations of: Core terms: “school feeding” OR “school canteens” OR “school meal programs” OR “resilience of school food systems” OR “challenges” OR “perspectives” Geographic scope: “world” OR “Africa” OR “West Africa” OR “Togo”. Boolean operators were applied to combine search terms and ensure comprehensive retrieval. The search strategy was iterative, refined after initial screening, to include relevant synonyms and context-specific terms.

2.2.3. Inclusion And Exclusion Criteria

Inclusion Criteria

Studies included in this review were selected according to predefined inclusion and exclusion criteria following the principles of the PRISMA guidelines. Only publications written in English or French were considered. The review included studies conducted worldwide, with particular emphasis on Africa, West Africa, and Togo, focusing on school feeding programs and their implications for nutrition, education, agriculture, food systems, and resilience. Peer-reviewed articles, institutional reports, theses, conference papers, and official documents providing empirical evidence, evaluations, analyses, or recommendations related to school feeding initiatives were retained. Studies discussing the challenges, innovations, sustainability, and future perspectives of school feeding programs were also considered. In addition, only accessible full-text publications were included in the analysis.

Exclusion Criteria

Studies were excluded if they focused exclusively on child nutrition or health without a

direct relationship to school feeding or school environments. Publications addressing agriculture or rural development without explicit linkage to school feeding initiatives were also excluded. Opinion papers, editorials, commentaries, newsletters, and other non-scientific documents lacking methodological rigor were not retained. Duplicate records identified during the screening process were removed, and studies with incomplete methodological information or inaccessible full texts were excluded. The selection process involved an initial screening of titles and abstracts, followed by a full-text assessment of potentially relevant studies, with reasons for exclusion documented to ensure transparency and reproducibility of the review process.

2.2.4. Screening And Selection

The retrieved literature was first screened based on titles and abstracts, followed by full-text assessment to verify eligibility. Duplicates were removed, and inclusion criteria were strictly applied. A PRISMA flow diagram (Fig. 1) was constructed to illustrate the number of records identified, screened, excluded, and finally included in the review (Ahlidja *et al.* 2024).

2.2.5. Data Extraction and Synthesis

For each included study, details such as author names, publication year, source types (journal article, report, and thesis), objectives, variables, methodologies, and findings were documented in a Microsoft Excel sheet. A content-based analysis was then performed to identify common themes, differences, and nuances among the studies. This process involved recognizing recurring patterns, categorizing information into relevant topics, and deriving meaningful insights. Results were synthesized through narrative description, tables, and visual illustrations to effectively communicate findings.

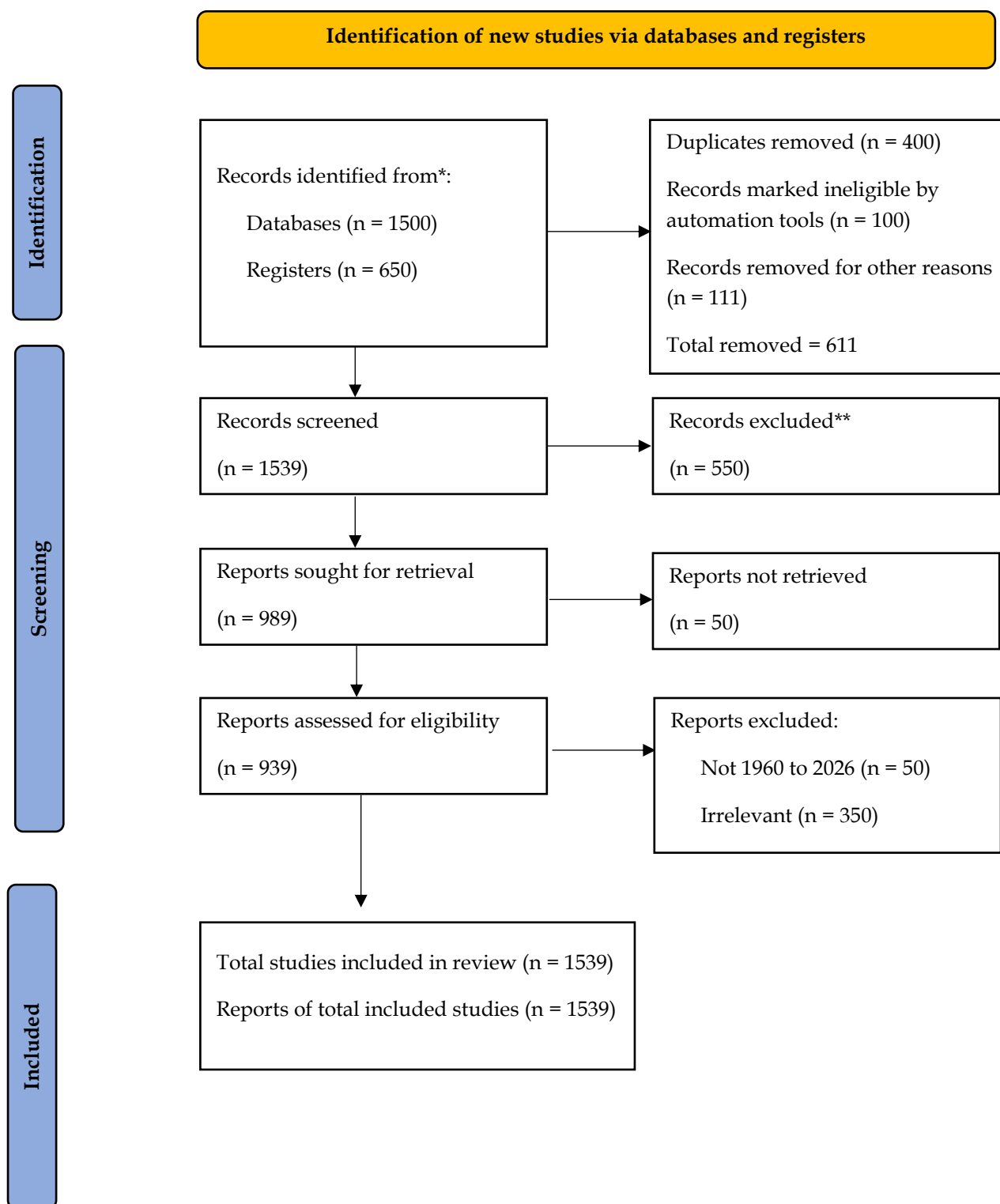


Figure 1: PRISMA Diagram with Explanation.

3. RESULTS & DISCUSSION

3.1. Content-Based Analysis

Studies evaluating school feeding programs across diverse regions including sub-Saharan Africa, South Asia, Latin America, and high-income

countries have employed systematic and context-specific methodologies to assess impacts on nutrition, school attendance, and educational outcomes. In African settings such as Ghana, Tanzania, and Nigeria, these evaluations have predominantly relied on school attendance records, enrollment statistics, and anthropometric measures

(e.g., height-for-age and weight-for-age) to capture both educational and nutritional effects (Nti et al. 2024). By comparison, evaluations in Asia, including India's midday meal scheme and Lao PDR's national program, frequently employ household surveys and dietary recalls to measure nutrient intake and caloric adequacy (Jeong et al. 2021). In higher-income settings such as the United States and Canada, studies often integrate policy analysis and cost-effectiveness frameworks, reflecting concerns about equity, sustainability, and dietary quality (Carrillo-Alvarez et al. 2025).

A critical conclusion from the literature demonstrated superiority of locally adapted, context-specific program designs over generalized models for achieving sustainable outcomes. While global frameworks offer important benchmarks, evidence from local food systems research shows that programs designed in alignment with local agricultural practices and culturally appropriate diets are more effective in improving both nutritional outcomes and school attendance. Integrated planning that considers the nexus of climate, biodiversity, health, and social justice further enhances the relevance and sustainability of these interventions (Glaros and Newell 2025). This has stimulated considerable research to develop and validate Home-grown School feeding programs that link school meals to smallholder farmers and regional food systems, contributing to nutrition-sensitive policy objectives in sub-Saharan Africa (Asirvatham et al. 2022 63).

The most robust and widely applied evaluation frameworks incorporate multi-sectoral indicators, aligning with global best practices. This approach is exemplified by mixed-methods studies in Ghana and Tanzania, which combine quantitative attendance data with qualitative stakeholder interviews to optimize program design. Similarly, innovative methodologies have been developed to assess sustainability, including systematic reviews of climate-resilient menus and cost-benefit analyses of procurement models (dos Santos et al. 2024).

Research has also progressed towards region-specific applications. In Africa, home-grown models emphasize local procurement and community participation. In Asia, large-scale government schemes focus on caloric adequacy and enrolment. In North America and Europe, sustainability and dietary quality dominate, with emphasis on reducing ultra-processed foods and integrating farm-to-school initiatives. A particularly innovative strand of research focuses on inclusive program design, examining whether school feeding

adequately reaches marginalized groups such as children with disabilities or those in conflict-affected regions (FAO 2022). Persistent methodological challenges include the estimation of long-term educational impacts, as improvements in attendance do not always translate into measurable gains in academic performance. Financial sustainability remains a critical issue, with many programs dependent on donor funding or short-term government budgets. Studies highlight the need for integrated governance mechanisms that align education, health, and agriculture policies to ensure continuity and resilience (Olaewaju et al. 2025).

Collectively, the methodological evolution in school feeding research advocates for a tiered approach to evaluation. It prioritizes the use of locally adapted, multi-sectoral frameworks where available, but strategically applies global benchmarks as reliable defaults in data-scarce contexts. This paradigm ensures the precision necessary for national policy design and international development agendas, while providing a clear roadmap for future research on sustainability, inclusivity, and climate resilience.

3.2. State Of School Feeding Worldwide

3.2.1. Availability Of Documentation on School Feeding

The documentation on school feeding programs had expanded considerably over the past decades, reflecting the growing recognition of their role in nutrition, education, and social protection. At the global level, the evidence base was diverse, encompassing peer-reviewed articles, institutional reports, policy briefs, and grey literature produced by international organizations, governments, and NGOs. While this diversity enriched the knowledge landscape, it also introduced heterogeneity in terms of methodological rigour, thematic focus, and contextual relevance.

Large-scale surveys conducted by the World Food Programme (WFP) and the Global Child Nutrition Foundation (GCNF) had provided comprehensive data on program coverage, financing, and implementation modalities. These were complemented by country-specific studies that documented local experiences, successes, and challenges. In Africa, the documentation was relatively abundant but remained fragmented, with significant disparities across regions. Reports frequently highlighted persistent dependence on external funding, uneven program coverage, and the critical role of community participation. In Togo, the available documentation included historical

accounts of program initiation, institutional reports from ANADEB and partner organizations, and academic studies analysing governance, financing, and nutritional outcomes. Despite this abundance, the literature remained uneven: certain dimensions such as the socio-economic impact of local sourcing or the long-term sustainability of financing mechanisms were insufficiently explored. This fragmentation underscored the need for systematic reviews to consolidate existing knowledge, identify achievements and gaps, and provide evidence-based recommendations for strengthening the sustainability and resilience of school feeding programs.

3.2.2. Overview of School Feeding Programs in Togo, 2022–2023

During the 2022–2023 academic year, the Foundation Nutrition Child Global conducted a comprehensive school feeding program in Togo, reaching a total of 2,752,927 students across preschool and primary levels, with 3,008,252 meals distributed. The program-maintained gender parity among beneficiaries, with 51% girls and 49% boys, reflecting an equitable approach to targeting. The total budget amounted to USD 9,032,174, predominantly supported by international donors (69%), supplemented by contributions from the Togolese government (18%), other donors (11%), and the private sector (2%). This funding structure underscores the strong reliance on external support while highlighting the importance of national commitment to sustain such large-scale interventions. The nutritional composition of the meals provided was diverse and aligned with global dietary standards, ensuring a balance of macronutrients and essential micronutrients. Meals incorporated staple foods such as whole and milled grains, legumes, tubers, and roots, alongside protein sources including eggs, dairy, red meat, poultry, and fish. Fruits and vegetables were well represented, with dark leafy greens, orange tubers, cruciferous vegetables, and seasonal fruits included to provide essential vitamins and minerals. Fats and seasonings, primarily vegetable oils and salt, were used judiciously, while beverages included milk, yogurt, and 100% fruit juices, with limited availability of sweetened drinks to minimize added sugar intake. In addition, fortified foods and micronutrient supplements, including vitamins A, B6, B12, C, D, folic acid, iron, zinc, iodine, calcium, and niacin, were integrated into the meal program to address prevalent nutritional deficiencies and support obesity prevention. These interventions reflect a dual

focus on undernutrition and the promotion of healthy weight among school-age children.

Complementary health and hygiene services were closely integrated with the feeding program to ensure holistic child development. Students received deworming treatment, anemia testing and care, and eye and dental health support. Access to piped water, flush toilets, and handwashing facilities was improved, and menstrual hygiene management was provided, particularly benefiting adolescent girls. Educational activities were incorporated through school gardens, nutrition and climate awareness, agricultural skills development, and mental health education. The program also provided employment opportunities for 4,282 caterers and cooks, all women, emphasizing gender-focused employment. Nutritionists and program managers actively contributed to training, planning, and monitoring, ensuring both the quality and sustainability of the meals provided. A distinctive feature of the program was its emphasis on home-grown school feeding (HGSF), directly engaging smallholder farmers to supply schools with grains, legumes, vegetables, fruits, meat, fish, and cooking oil. Measures were implemented to reduce post-harvest losses, provide technical advice and seeds, and stabilize local food markets. Procurement procedures favored small-scale farmers, demonstrating a deliberate effort to enhance equity, support rural livelihoods, and promote local economic development. This approach not only strengthened local food systems but also created sustainable linkages between agriculture and nutrition. Enrollment and feeding coverage show a large gap, with only a fraction of students receiving meals (Figure 2). Budget composition highlights the heavy reliance on international donors, while expenses are dominated by labor costs. Finally, food sourcing is overwhelmingly foreign in kind, underscoring structural dependence on external supply chains.

Despite its achievements, the program faced several operational challenges. Temporary school closures, averaging 14 days, occurred due to inflation, price volatility, and sporadic conflict. High costs of protein-rich foods and fruits occasionally limited meal consistency, while infrastructural constraints in remote regions affected access to clean water, electricity, and adequately equipped school canteens. In some communities, concerns about fund misappropriation and local supply chain limitations were reported. To address these challenges, the program diversified suppliers, optimized transportation logistics, increased local food production, and adjusted feeding modalities to

maintain program continuity. The program demonstrated significant successes and sustainability outcomes. National policies and decrees supporting school feeding were adopted, contributing to the institutionalization of the program. Coverage increased, particularly within primary education, and the implementation of new HGSF models strengthened the link between nutrition and local agriculture. Recognition by the World Food Program SABER analysis validated Togo's progress in developing healthy school meal

programs. Environmental sustainability measures were also implemented, including campaigns to reduce food waste, hermetic storage and pest control, the use of compostable packaging, efficient fuel use for cooking, and the incorporation of student preferences into meal planning. These measures collectively demonstrate the program's long-term viability and provide a replicable model for integrated nutrition, health, and education interventions in low- and middle-income countries.

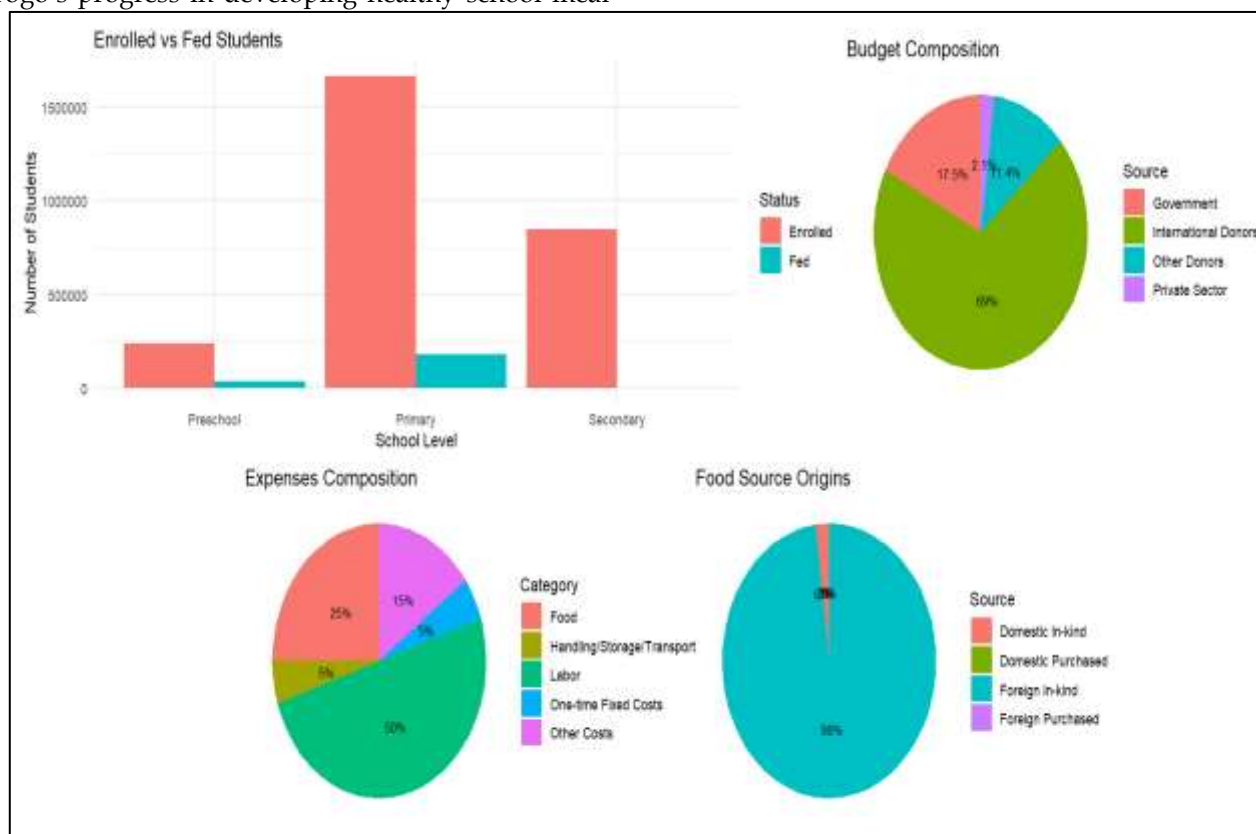


Figure 2: Overview of School Feeding Program in Togo (2022-2023).

3.3. Annual Scientific Publication

The temporal analysis of publication output demonstrated clear fluctuations across the period 1960-2026, with a gradual increase from the early decades followed by pronounced peaks in more recent years. Publication activity had remained relatively modest until the mid-1980s, after which a steady upward trend was observed, culminating in sharp increases during the 2000s and 2010s. The most notable surge had occurred between 2009 and 2021,

with peak values recorded in 2020 (79 publications) and 2021 (76 publications). After this period of expansion, output had declined, with 2026 showing a markedly lower number of publications (21) (Figure 3). Overall, the results indicated that scientific productivity had intensified substantially over the past three decades, reflecting both the expansion of research activities and the growing visibility of scholarly output, before experiencing a recent downturn that suggested either a saturation effect or external constraints on publication dynamics.

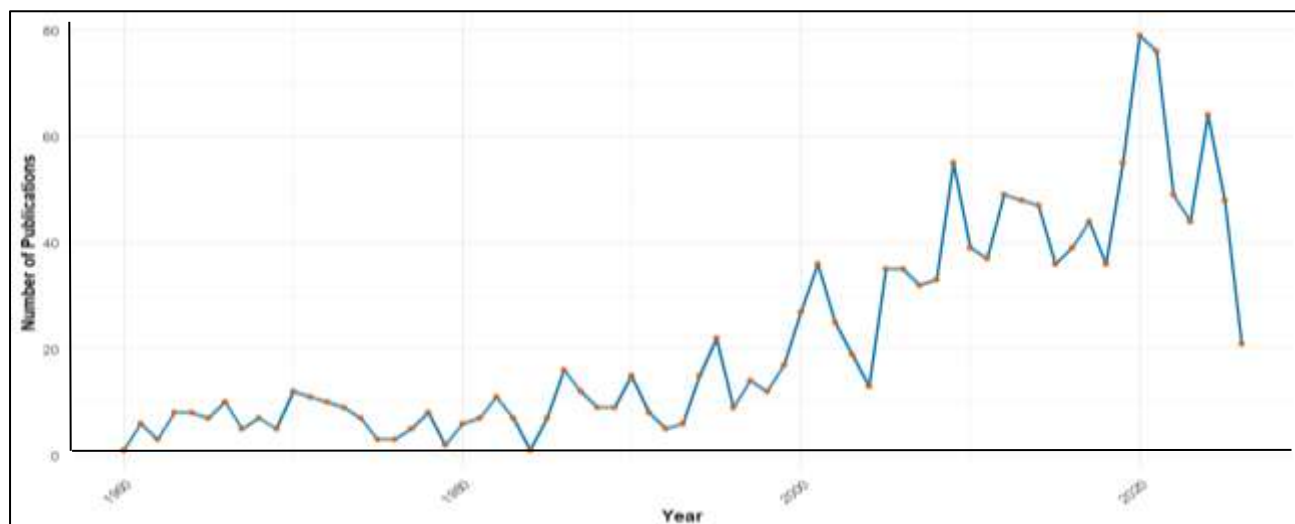


Figure 3: Annual Scientific Publication Output (1960 - 2026).

3.4. Coverage Of School Feeding Programs

School feeding programs were highly diversified worldwide. According to the Global Child Nutrition Foundation (GCNF), 167 countries had participated in the Global Survey of School Meal (Global Child Nutrition Foundation (GCNF) 2025). More than 408.2 million children, representing approximately 25% of school-aged children, had benefited from school meals during the 2022 academic year (Global Child Nutrition Foundation (GCNF) 2024). Coverage rates of school feeding programs revealed significant regional disparities, reflecting differences in economic and social development levels as well as political commitment. Implementation had been most extensive in Latin America and the Caribbean (51%), while Europe, Central Asia, and North

America had reported a combined coverage of 42%. In contrast, Sub-Saharan Africa (19%), South Asia, East Asia and the Pacific (22%), and the Middle East and North Africa (21%) had remained comparatively underdeveloped in terms of school feeding provision. A clear correlation had emerged between national income levels and social investment. High-income countries had demonstrated the strongest coverage (48%), supported by consolidated education systems and stable domestic financing. Upper- and lower-middle-income countries had shown intermediate levels (26% and 24%, respectively), reflecting ongoing but limited progress. Low-income countries had exhibited the lowest coverage (13%), constrained by limited resources and a heightened reliance on international assistance (Figure 4).

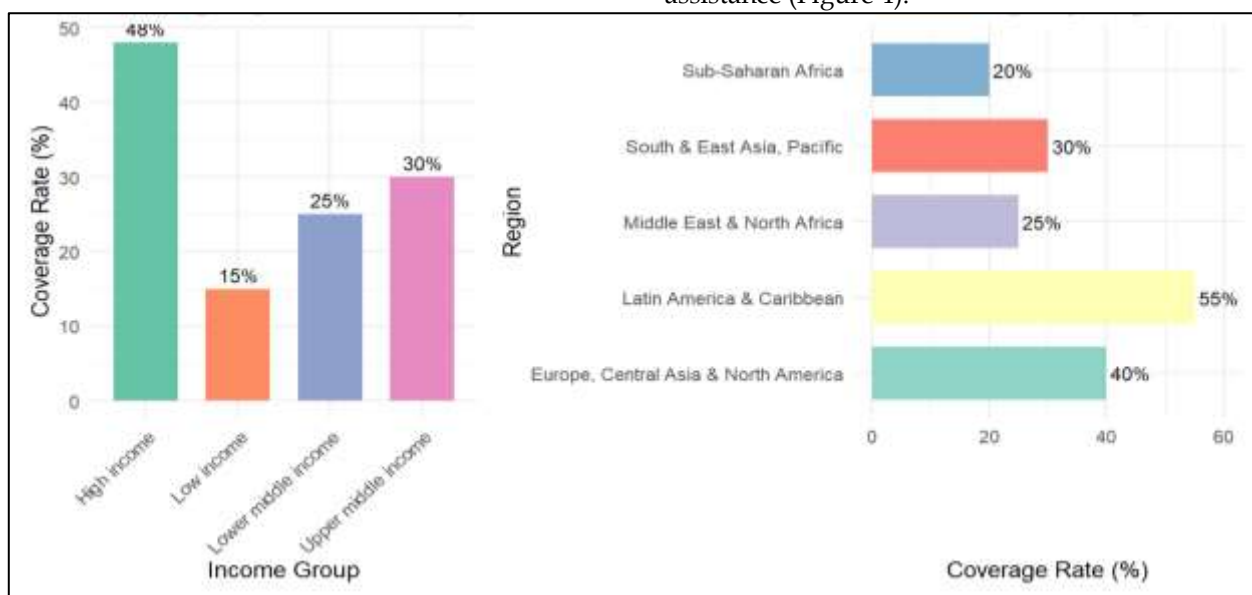


Figure 4: Global Coverage Rate of School Feeding by Income Groups and Regions.

Source: Global Child Nutrition Foundation (GCNF) (2024).

According to the World Food Programme (WFP), in 2024 a total of 174 countries reported having implemented a national school feeding policy, enabling more than 466 million children to benefit from school meals. This represented an increase of 48 million compared to the 418 million recorded in 2022 (PAM 2024a). The same report indicated that between USD 65.6 and 84 billion were invested in school feeding programmes in 2024, with the majority of resources originating from national budgets. Upper-middle-income countries (21) and high-income countries (32) financed their school canteens entirely through public funds. Lower-middle-income countries (33) covered their programmes with 73% public funding, 13% from public donors, and 14% from other sources. Low-income countries (18) financed their school feeding initiatives with 42% public funds, 42% international donor contributions, and 2% from other sources.

3.5. Types Of School Feeding Programmes Worldwide

According to reports from the World Food Programme (WFP) and the Global Child Nutrition Foundation (GCNF) (GCNF, 2022; WFP, 2024a), several models of school feeding programmes were adopted globally, reflecting local contexts, available resources, and policy objectives. Among the most widespread were hot meals served directly at school, commonly referred to as school lunches. This model was implemented across most regions of the world, particularly in Asia, Europe, Africa, and Latin America, and it promoted both improved child nutrition and increased school attendance. In 2021, meals served at school accounted for approximately 80% of all school feeding programmes worldwide. For instance, in Brazil, the National School Feeding Programme (PNAE) provided hot meals to millions of children on a daily basis. The programme integrated locally produced foods, thereby supporting family farming and contributing to the establishment of food systems that reinforced national food security (Retière *et al.* 2014). This approach was increasingly adopted, particularly in sub-Saharan Africa, where the World Food Programme (WFP) reached 6.9 million children across 45 low-income countries in 2022, despite the disruptions caused by the COVID-19 pandemic.

Take-home rations were also distributed in humanitarian contexts to strengthen school retention, especially among vulnerable families exposed to climatic shocks or conflict in Africa and Asia. These food transfers aimed to encourage

children to remain enrolled by supporting household food security. A notable example was the WFP programme in Niger, where the home-based school feeding approach was reinforced through the engagement of more than 600 smallholder farmers, who were identified and equipped with the necessary capacities to sustain the initiative (PAM Niger 2024). This approach was increasingly adopted, particularly in sub-Saharan Africa, where the World Food Programme (WFP) reached 6.9 million children across 45 low-income countries in 2022, despite the disruptions caused by the COVID-19 pandemic. Take-home rations were also distributed in humanitarian contexts to strengthen school retention, especially among vulnerable families exposed to climatic shocks or conflict in Africa and Asia. These food transfers aimed to encourage children to remain enrolled by supporting household food security. A notable example was the WFP programme in Niger, where the home-based school feeding approach was reinforced through the engagement of more than 600 smallholder farmers, who were identified and equipped with the necessary capacities to sustain the initiative (Global Child Nutrition Foundation 2022).

The Home-Grown School Feeding (HGSF) model, which consisted of purchasing food directly from local producers, gained increasing prominence and was supported by international organizations such as the WFP, FAO, and GCNF through the 2018 Resource Framework. This model recommended the integration of school feeding into agricultural value chains, thereby creating employment opportunities and strengthening both food and economic resilience. By 2024, the system was present in more than 60 countries, including several in Africa, Asia, India, the Philippines, and Latin America. School snacks, representing 29% of programme, constituted the third most common modality observed globally.

In Togo, four types of school canteens were identified: those financed by the WFP, those funded by the Government, those supported by CRS, and initiatives led by other structures, particularly NGOs. State-funded and WFP-supported canteens were characterized by the use of locally sourced products, whereas CRS canteens relied on imported commodities from the United States. In addition, several NGOs financed independent school feeding initiatives. State-funded canteens were in a phase of expansion (Figure 5). The number of beneficiaries increased from 97,518 students in 2020 to 152,495 in 2025, while the number of beneficiary schools rose from 315 in 2020 to 1,062 in 2025. These findings demonstrated both the diversification of school

feeding modalities and the progressive shift towards locally integrated models. The expansion of Government-funded canteens underscored national commitment to scaling up coverage, while the

reliance on local products highlighted the potential of HGSF to reinforce domestic food systems and promote resilience.

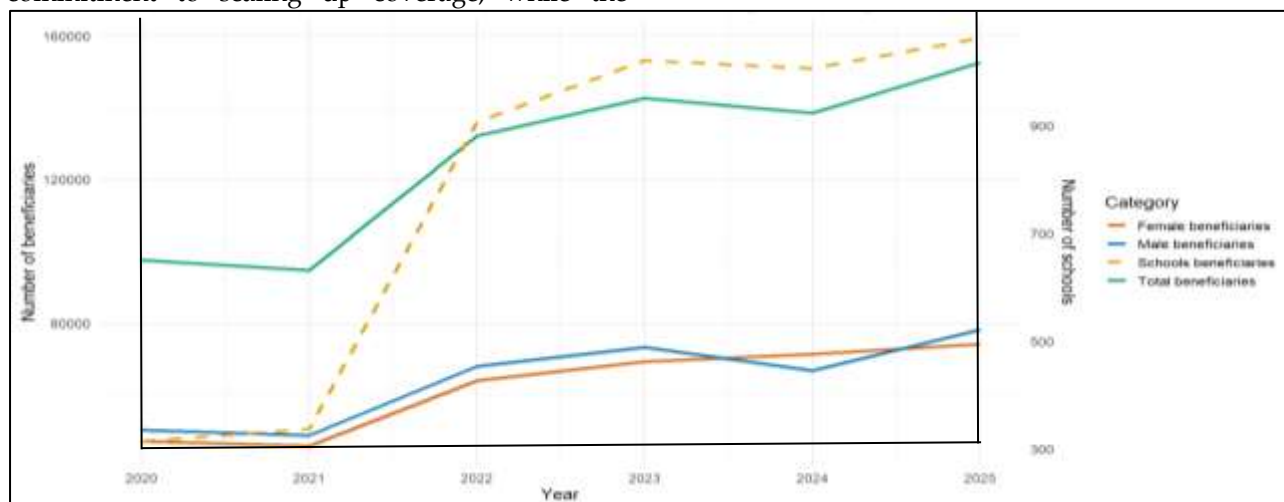


Figure 5: Evolution of the Number of Beneficiary Students in Government-Funded School Canteens From 2020 To 2025.

For WFP-funded canteens, in 2023 a total of 15,260 students (7,597 girls and 7,663 boys) benefited from the programme across 98 schools (Figure 6). In 2024, the total number of beneficiaries increased slightly to 15,718 students, with near-gender parity, while the number of schools remained stable. By 2025, the number of beneficiaries declined to 14,584 students, whereas the number of participating schools expanded markedly to 980. This trend indicated that

although the overall student coverage decreased in 2025, the geographical reach of the programme broadened substantially. The expansion in the number of schools suggested a deliberate strategy to extend access, even if per-school enrollment levels fell. The near parity between girls and boys across the years further highlighted the programme contribution to gender equity in school feeding coverage.

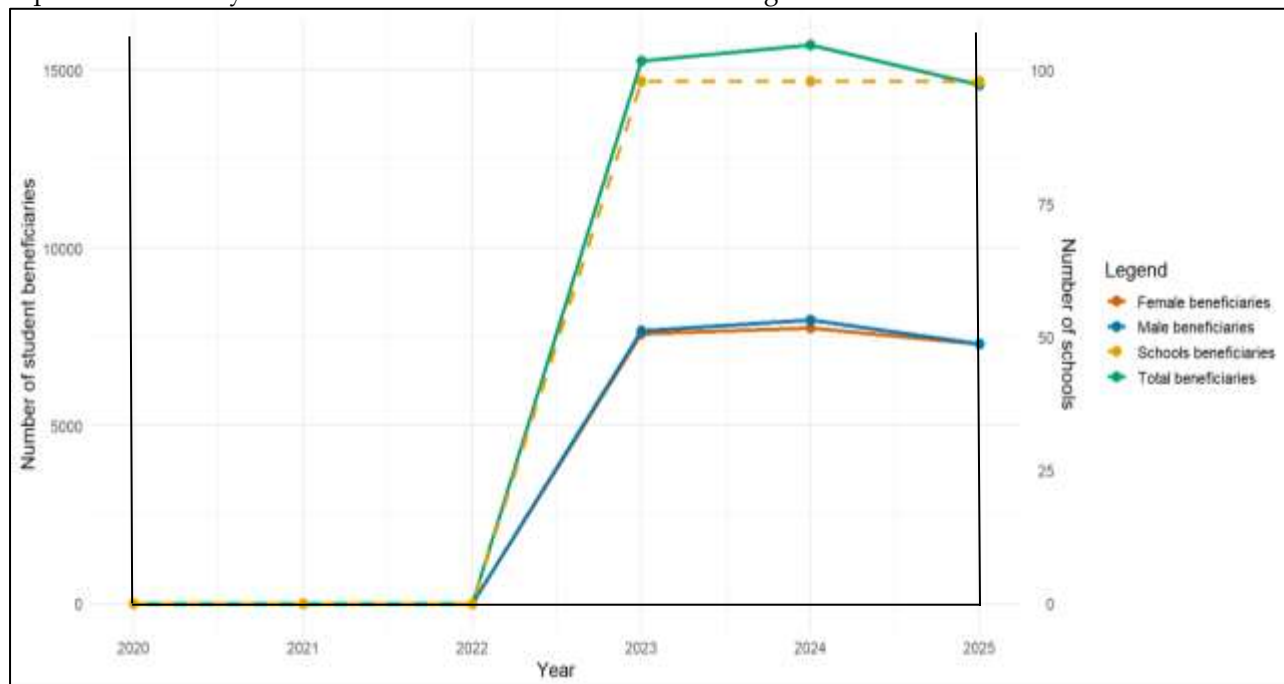


Figure 6: Evolution Of the Number of Beneficiary Students in School Canteens Funded by WFP From 2020 To 2025.

For CRS-funded canteens, the available data indicated that in 2021 a total of 37,589 students across 138 schools benefited from the programme, as data for 2020 were not available (Figure 7). The number of beneficiaries increased sharply in 2022 to 47,456 students and continued to rise in 2023 to 52,474 students, accompanied by an expansion to 202 schools. In 2024, the progression persisted slightly, reaching 53,161 students, while school coverage remained constant. By 2025, however, a marked decline was observed, with the number of beneficiaries falling to 41,852 students, although the

number of schools remained stable.

Throughout the period, the distribution between girls and boys remained broadly balanced, underscoring the programme's contribution to gender equity. The overall trajectory suggested that CRS canteens experienced a phase of rapid expansion between 2021 and 2023, followed by stabilization and then contraction in 2025. This decline in beneficiaries, despite stable school coverage, implied either reduced per-school enrolment or resource constraints, highlighting the need for sustained investment to maintain both scale and impact.

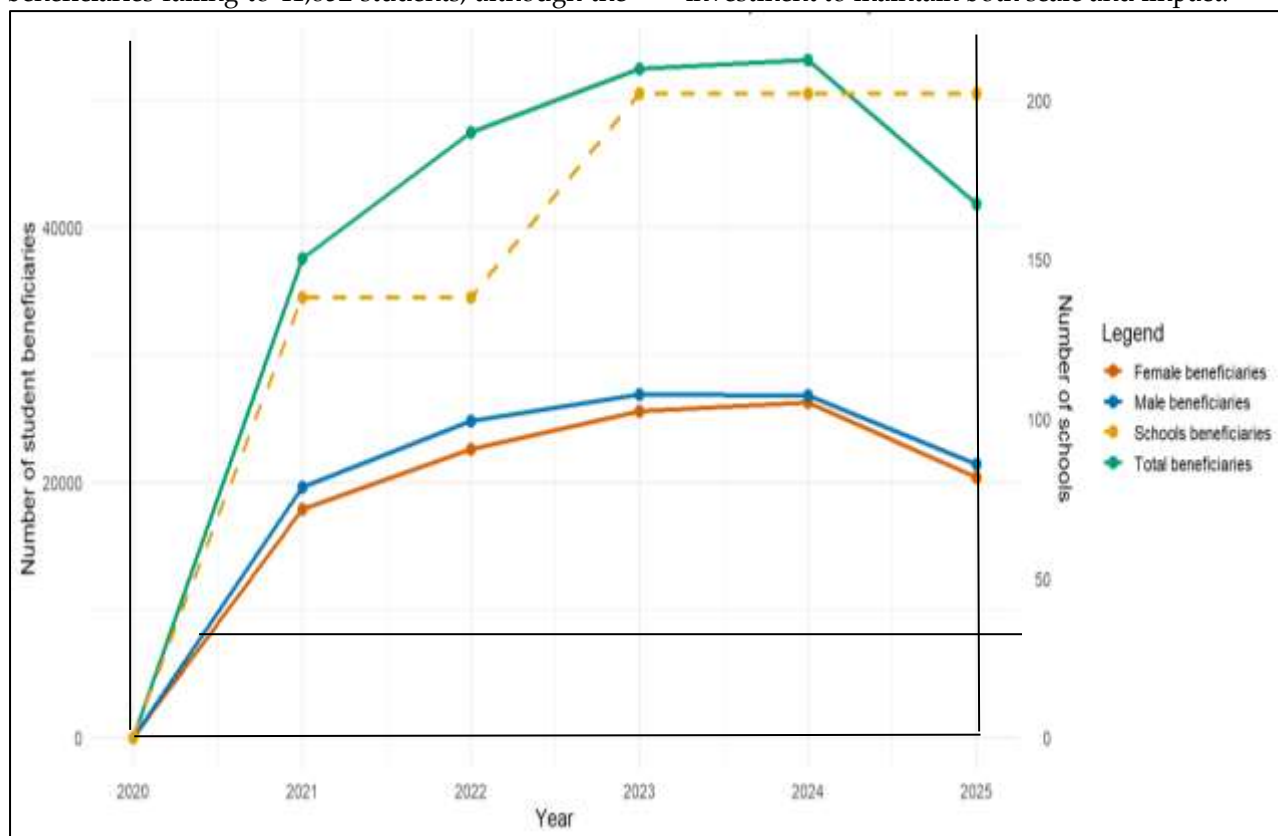


Figure 7: Evolution of the Number of Beneficiary Students in School Canteens Funded by CRS From 2020 To 2025.

Data on NGO-funded canteens were not available for 2020 and 2021. Records began in 2022, when 2,362 students across 12 schools benefited from the programme. In 2023, the number of beneficiaries rose sharply to 8,033 students distributed across 60 schools. In 2024, enrollment reached 11,506 students, although the number of schools decreased slightly to 54 (Figure 8). By 2025, the progression was substantial, with 20,479 students enrolled across 126 schools. The gender distribution remained broadly balanced throughout the period, reflecting the

inclusive nature of the programme. The trajectory demonstrated a rapid expansion of NGO-funded canteens after their introduction, with both the number of beneficiaries and the number of schools increasing considerably. The temporary decline in school coverage in 2024, despite rising enrolment, suggested possible resource constraints or organizational restructuring, while the strong rebound in 2025 underscored the capacity of NGOs to scale up interventions effectively and sustainably.

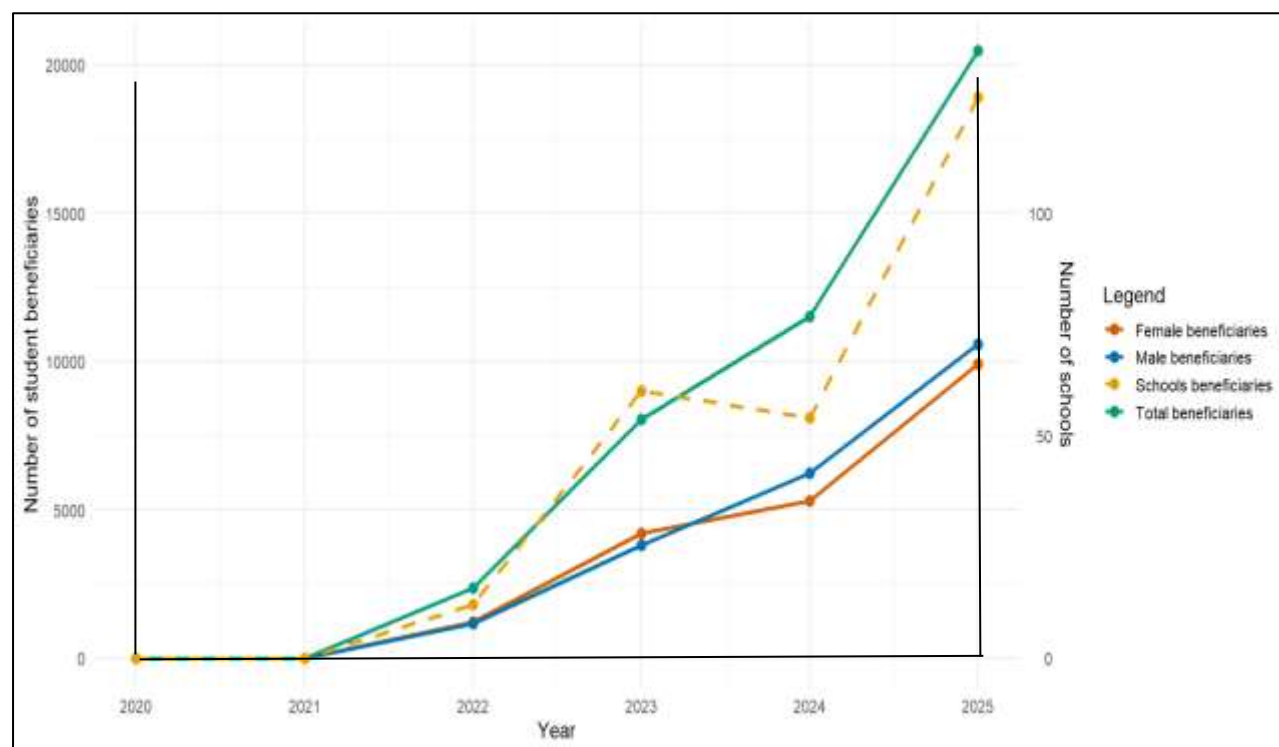


Figure 8: Evolution of the Number of Beneficiary Students in School Canteens Funded by Other Organizations (Ngos) From 2020 To 2025.

3.6. National Context and Programme Distribution in Togo (2025-2026)

The Sankey analysis revealed a highly uneven distribution of beneficiaries across regions and organizations, coupled with distinct orientations in food system approaches (Figure 9). The Savanes region emerged as the most supported, with 159,616 beneficiaries primarily through ANADEB Government (74,594) and the World Food Programme (43,939), while Kara followed with 77,991 beneficiaries dominated by the ANADEB Government (29,567) and CRS (27,852). In contrast, Centrale, Plateaux, and Maritime recorded intermediate totals ranging between 19,912 and 38,966 beneficiaries, and Grand Lomé remained marginal with only 500 beneficiaries provided by Chaîne de l'espoir. The flows highlighted a dual dynamic, large institutional actor such as ANADEB, WFP, and CRS ensured mass coverage but were mostly associated with centralized models ANADEB with classical centralization, CRS and AIME Afrique with centralized systems excluding local foods

whereas WFP stood out by adopting a decentralized approach integrating local foods. Smaller NGOs including Op LIFT_UP, ADRA, SOS, Code Utile, ADS, and Chaîne de l'espoir promoted local food systems, yet their quantitative contributions remained secondary compared to institutional flows. This structural pattern underscored the dependence of northern regions of Togo on large-scale centralized programs, while revealing limited diversification of support in southern and urban areas where local food promotion is less visible. From a scientific perspective, the Sankey visualization provided a transparent mapping of both quantitative distribution and qualitative orientations, emphasizing the prioritization of historically vulnerable northern regions but also exposing gaps in coverage and equity in Maritime and Grand Lomé. These findings imply that future interventions should not only maintain strong support in high-need northern areas but also expand decentralized and local food promotion in underserved coastal and urban regions, thereby ensuring a more balanced and resilient national food system.

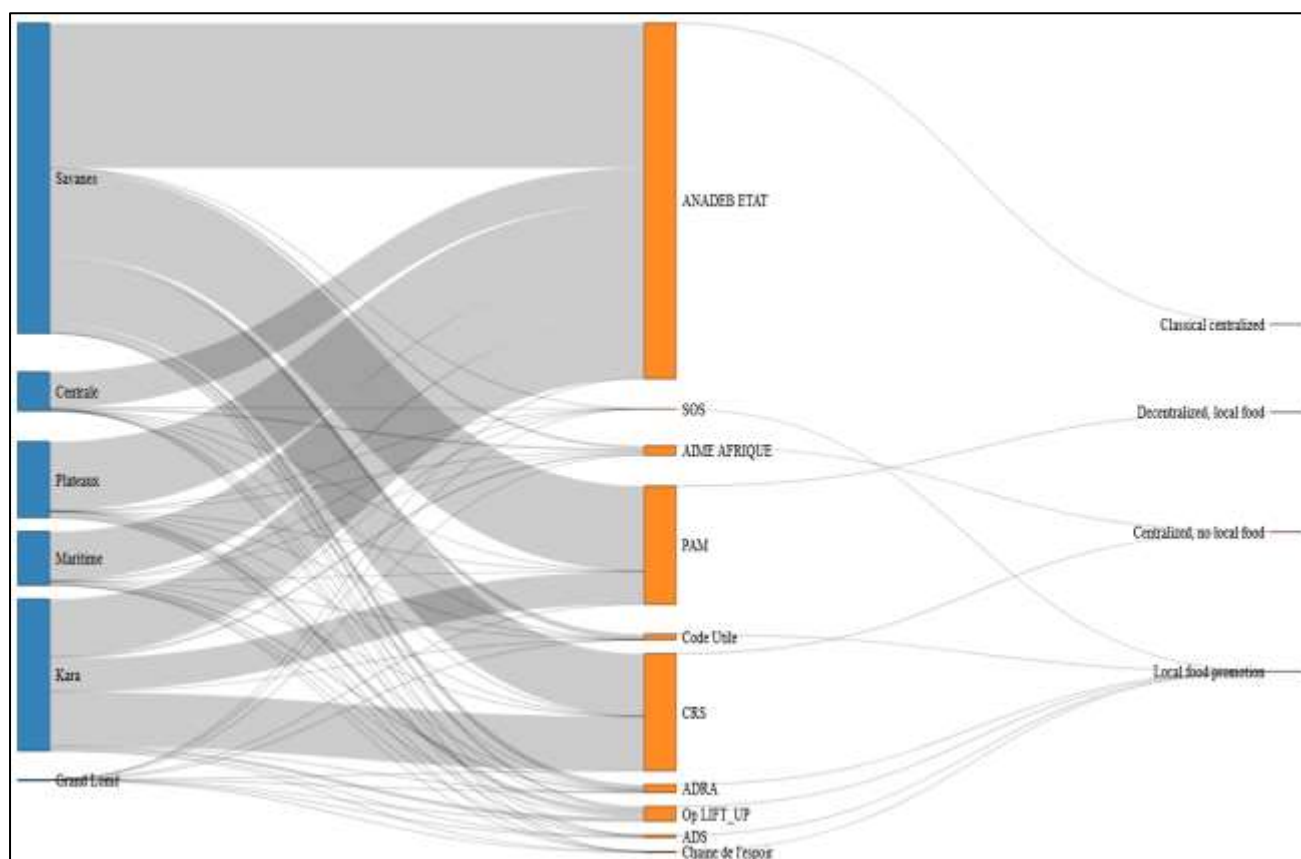


Figure 9: Organizational Contributions to Beneficiary Distribution Across Regions in Togo.

3.7. Performance And Constraints of the School-Feeding Programme in Togo

3.7.1. Institutional And Organizational Framework of the Togolese Programme

The experience of Togo with school feeding programmes dates back to 1967, initiated by Catholic Relief Services (CRS-Catwell) with support from the United States government through USAID, following a request from the Togolese authorities. This early engagement was later complemented by the French international NGO Aide & Action (currently Action Éducation), which implemented school feeding interventions between 1994 and 2002 (Kodjo et al. 2024). Government involvement in school feeding began in the early 21st century, reinforced by partnerships with international actors such as Plan International, the World Bank, UNICEF, and UNDP. Between 2002 and 2020, the State adopted a project-based approach through initiatives including the Basic Education Programme (EDB), the Integrated Rural Development Project in the Savanes Region (PDRIS), the Community Development Project (PDC), the Community Development and Social Safety Nets Project (PDC Plus), and the Social Safety Nets and Basic Services Project (FSB). These

interventions ensured the continuity of school canteens, particularly in disaster-affected areas, where school dropout, gender disparities, and inadequate infrastructure were most pronounced (Gonese et al. 2023).

In 2012, the Togolese government and the World Food Programme (WFP) signed a Project Development Action Plan (PAPD) to establish an integrated and sustainable school feeding programme (Allossunu and Kpotchou 2021). The programme aimed to guarantee sufficient and nutritious food for pupils, while addressing food and nutrition security challenges embedded in the Strategy for Accelerated Growth and Employment Promotion (SCAPE, 2013-2017), which explicitly supported the establishment of school canteens and gardens. School feeding was also recognized in the National Development Plan (PND, 2018-2022) as a pillar of social protection. The coordination of school canteens was entrusted to the National Agency for Grassroots Development Support (ANADEB). A multi-sectoral framework was progressively institutionalized, involving ministries responsible for education, grassroots development, agriculture, health, planning, social affairs, and finance. The adoption of Law No. 2020-007 on school feeding in

Togo, the elaboration of strategic frameworks, and the integration of school feeding into national education policies exemplified the institutionalization of the programme at the national level.

3.7.2. Documented Performance and Constraints of the Togolese School Feeding Programme

The performance of the school feeding programme in Togo was documented through several evaluations. The programme increased enrolment and retention rates, particularly in rural and vulnerable regions, and promoted gender equity by maintaining balanced participation of girls and boys. The integration of local agricultural products under the Home-Grown School Feeding (HGSF) model also strengthened food security, supported family farming, and stimulated local economic development (Kodjo et al. 2024). At the same time, important constraints were observed. Financial sustainability remained a major challenge, as the programme continued to rely heavily on external partners such as the World Food Programme (WFP), Catholic Relief Services (CRS), and other NGOs, despite increasing government commitment. Regional disparities also persisted, with interventions primarily concentrated in vulnerable northern regions such as Savanes and Kara, reflecting targeted approaches based on poverty and food insecurity mapping (WFP 2019). In addition, logistical and infrastructural constraints including limited storage capacity, weak transport systems, and inadequate school infrastructure continued to hinder effective programme implementation. Furthermore, although institutional coordination has been strengthened through the adoption of Law No. 2020-007 on school feeding, challenges remain in aligning stakeholders, monitoring outcomes, and ensuring equitable resource allocation across regions (WFP 2019).

3.8. Levers For Strengthening the Institutional, Financial, And Community Sustainability of the School-Feeding Programme in Togo

3.8.1. Institutional And Governance Challenges

School feeding in Togo, although formally institutionalized by Law No. 2020-007 of 30 June 2020 on school feeding, faced persistent institutional and governance challenges that limited its full effectiveness and long-term sustainability. The programme was embedded within national policy frameworks and coordinated by ANADEB, yet evaluations revealed that fragmented responsibilities

across ministries, overlapping mandates, and insufficient harmonization of strategies constrained operational efficiency. Weak monitoring systems and limited accountability mechanisms further reduced the capacity to ensure equitable resource allocation and consistent programme quality across regions.

3.8.2. Economic And Financial Challenges

Despite the progress achieved under the National School Feeding Programme (ProNAS), coordinated by ANADEB, economic and financial constraints continued to hinder the full effectiveness and long-term sustainability of school feeding in Togo. The legal framework stipulated that the majority of financial resources for school feeding should be provided by the state, with complementary contributions expected from beneficiary communities, local authorities, the private sector, and civil society. In practice, financing faced major challenges due to the limited availability of national resources and the historical dependence on external donors. Between 2008 and 2019, school canteens received 19.7 billion FCFA, of which 13.7 billion FCFA (70%) originated from the World Bank. The withdrawal of this partner in 2020 reduced the budget by more than half, leading to a decline in the meal cost from 165 FCFA to 125 FCFA, while the State's contribution reached 115 FCFA per child per meal.

Additional resources were mobilized, including 600 tonnes of food in 2020, 11 billion FCFA provided by CRS between 2019 and 2024, and 1 billion FCFA allocated annually by the government. Nevertheless, these contributions remained insufficient. In 2023, the official cost of a meal was 141 FCFA, of which 10 FCFA were paid by communities, whereas a recent study estimated the real cost at 186 FCFA, revealing a deficit of 45 FCFA per meal. Community contributions, amounting to 244 million FCFA in 2023, proved difficult to mobilize, particularly when families were required to pay a lump sum of 1,700 FCFA per child per year. Finally, projections indicated that achieving the target of 300,000 beneficiaries by 2025 would require more than 5 billion FCFA, leaving a financing gap of approximately 4 billion FCFA. Although the programme receives support from different actors, it remains financially weak and relies heavily on external funding, which raises concerns about its long-term sustainability and its ability to expand.

3.8.3. Logistical And Technical Challenges

Major logistical and technical constraints hindered the effective development of the school

feeding programme in Togo. On the one hand, the Home-Grown School Feeding (HGSF) model revealed persistent difficulties in supply management, particularly due to the lack of adequate storage infrastructure around schools. The absence of functional warehouses limited the efficient handling of food purchased from smallholder cooperatives (Kodjo *et al.* 2024). On the other hand, the physical infrastructure of school canteens was often inadequate, with significant gaps in equipment, including the absence of modern kitchens, improved stoves, and sustainable energy systems (PAM 2024b). Technical deficiencies were also documented in relation to food quality. A microbiological study conducted by Mizéhoun-Adissoda *et al.* (2022), identified contamination risks: more than 30% of meals analysed contained total coliforms, and 6.6% contained staphylococci, largely due to inadequate hygiene practices during cooking, food handling, and the use of inappropriate materials. The same study further revealed that the nutritional composition of meals was imbalanced, with insufficient levels of key micronutrients such as calcium, vitamin A, and vitamin C. These findings demonstrated that, despite the institutionalization of school feeding, the programme remained constrained by structural weaknesses in logistics, infrastructure, and food safety. Addressing these challenges was identified as a prerequisite for ensuring both the effectiveness and the sustainability of school feeding in Togo.

3.8.4. International Perspective and Climate-Resilient Local Agricultural Integration

The challenges faced by the school feeding programme in Togo, including limited financing, weak infrastructure, and logistical constraints, are similar to those observed in several African countries, where sustainability and dependency on external funding remain major issues (Drake *et al.* 2016). Similar patterns have been reported in Ghana and Nigeria, where institutional and financial instability affect programme performance (FAO 2020b). Despite these constraints, the Home-Grown School Feeding (HGSF) model in Togo offers important opportunities for strengthening climate resilience through local agricultural integration. By linking school feeding to smallholder farmers, the programme can support rural livelihoods, stabilize food demand, and reduce vulnerability to climate variability (Sumberg and Sabates-Wheeler 2011). The inclusion of climate-resilient crops and diversified local foods can further improve nutrition and adaptation to seasonal food insecurity (FAO 2020b).

However, seasonal production variability, poor storage infrastructure, and weak farmer-school coordination continue to limit the availability of diverse and nutritious foods throughout the year. Strengthening climate-smart agriculture and local supply chains is therefore essential to improve resilience and sustainability (PAM 2022). International experiences provide useful lessons. Rwanda demonstrates the effectiveness of strong local procurement systems and coordinated governance (PAM 2022), while Brazil's school feeding programme shows that legal frameworks and mandatory local sourcing significantly enhance sustainability (Sidaner *et al.* 2013). In India, school feeding has also improved gender equity through the involvement of women in programme implementation (Dreze and Goyal 2003).

3.8.5. Gender And Social Inclusion Challenges

Gender and social inclusion challenges remained pervasive, and the school feeding programme in Togo was not exempt from these structural constraints. Women constituted the operational backbone of canteens through meal preparation (School canteen mothers) and community mobilization, yet their contribution was largely unpaid, thereby reinforcing entrenched gender inequalities in the labour sphere (World Food Programme (WFP) 2021). Socio-economic and cultural barriers such as the disproportionate burden of domestic responsibilities, early marriage, and limited decision-making autonomy continued to affect girls' schooling and restricted the capacity of canteens to sustain their retention in education (Banque Mondiale 2018; UNICEF 2020). Children with disabilities and those from extremely poor households were also under-represented among beneficiaries, primarily due to inadequate school infrastructure and community contributions that were sometimes exclusionary (UNESCO 2022). Furthermore, local governance of Canteens were characterized by limited female participation in decision-making bodies, which reduced the integration of women's priorities into planning and management processes (Ministère de l'Action Sociale 2019; UNESCO 2022). Overall, these findings demonstrated that, despite the inclusive ambitions of the programme, persistent gendered and social barriers constrained its effectiveness. Addressing these challenges required deliberate strategies to enhance women's empowerment, promote equitable access for marginalized groups, and strengthen participatory governance at the community level.

3.8.6. Nutritional Challenges

The school feeding programme in Togo faced several major nutritional challenges that limited its capacity to improve the nutritional status of children. Meals served in canteens remained poorly diversified, dominated by carbohydrate-rich staples such as maize, rice, and cassava, with limited integration of protein sources and micronutrient-dense foods such as legumes, leafy vegetables, and fruits. This lack of dietary diversity was documented as a critical obstacle in West African school feeding systems, where menus tended to prioritize low-cost options over nutritional density. As a result, the programme struggled to meet recommended dietary requirements, particularly in terms of micronutrients essential for child growth and cognitive development. The lack of dietary diversity reduced the potential impact of school feeding on combating hidden hunger and micronutrient deficiencies, thereby constraining its effectiveness as a social protection and educational intervention (FAO 2020b; PAM 2024a).

In the Togolese context, the reduction in the meal value from 165 FCFA to 125 FCFA following the withdrawal of World Bank support further exacerbated this trend, restricting the inclusion of high-quality protein sources (Gonese et al. 2023). Canteens did not succeed in meeting the micro nutritional needs of children, particularly in terms of iron, zinc, and vitamin A, deficiencies that were already widespread in the region. According to UNICEF (2020), anemia among school-aged children remained high in Togo, compromising learning capacity and academic performance. The limited availability of fresh fruits and vegetables, combined with inadequate storage facilities, further reduced the intake of essential vitamins such as vitamin C. In addition, another challenge was the weak structuring of nutritional planning tools. Canteen management committees (COGEP/COGECs) did not have access to standardized menu guides aligned with WHO recommendations, nor to regular nutritional monitoring systems (FAO 2020a).

Moreover, the school canteen mothers, often recruited informally, did not systematically benefit from training in nutrition or food hygiene, a situation also reported in several francophone countries of sub-Saharan Africa (UNESCO 2022). The implementation of the Home-Grown School Feeding (HGSF) model in Togo was further constrained by seasonal availability. Local production of vegetables, legumes, and fruits remained highly dependent on climatic cycles, making it difficult to ensure a stable supply of nutrient-rich foods throughout the year (PAM 2024a). This absence of planning and oversight

mechanisms resulted in considerable variability in meal quality across schools, thereby undermining the programme's capacity to deliver consistent nutritional benefits.

This structural constraint led to monotonous menus and limited the dietary diversity essential for healthy growth. Chronic under-financing further compounded the problem: in 2023, the unit cost of a meal was officially estimated at 141 FCFA, whereas studies indicated that a nutritionally balanced meal required 186 FCFA approximately (Kodjo et al. 2024). This budgetary restriction pushed managers to prioritize the least expensive foods at the expense of nutritional density, a dynamic already observed in several low- and middle-income countries (World Bank 2018). These findings demonstrated that nutritional outcomes remained constrained by structural weaknesses in menu composition, resource allocation, training, and seasonal supply. Addressing these challenges required deliberate strategies to diversify meals, integrate locally available nutrient-rich foods, strengthen infrastructure for safe storage and preparation, and provide systematic training for canteen staff to ensure both food safety and nutritional adequacy.

3.8.7. International Perspective

The challenges identified in Togo such as insufficient financing, limited infrastructure, and heavy reliance on community labour reflected common issues observed across several West African countries. In Togo, the withdrawal of World Bank funding and inadequate public financing created a structural deficit, which reduced both the nutritional value and the coverage of school meals. This was manifested through reductions in per-meal costs and the imposition of mandatory parental contributions. Such fragilities aligned with regional dynamics, where national ownership remained incomplete and communities assumed essential responsibilities.

Despite these constraints, Togo demonstrated favourable potential for developing a sustainable Home-Grown School Feeding (HGSF) model. The relative richness of local agroforestry systems, the presence of active women's cooperatives, and the dynamism of rural communities constituted assets for structuring inclusive local supply chains. Recent evaluations of HGSF in Togolese regions highlighted possible gains in resilience, nutrition, and local economic impact, provided that supply, logistics, and quality were strengthened (PAM Togo 2024).

International experiences offered valuable lessons. Brazil's National School Feeding Programme (PNAE) secured sustainability by embedding school

feeding in constitutional law, guaranteeing stable public resources and enabling systematic procurement from local producers. This legal and financial security was identified as a key factor in long-term programme resilience. Ghana provided another example, where measures were taken to reduce politicization and mitigate the risks of budgetary allocations tied to electoral cycles, which otherwise undermined continuity and service quality (Mohammed (2022).

In Togo, the promulgation of Law No. 2020-007 on school feeding, which stipulated that “at least 40% of resources allocated to each school under the national school feeding programme must be used to purchase food directly from local agricultural producers”, represented a major step towards sustainability. A similar system was implemented in Rwanda, where strong territorial governance and integration of agricultural supply chains improved procurement, nutritional quality, and local economic impact. WFP evaluations of Rwanda’s HGSF programme underscored gains in food security and market strengthening when local governance was robust (WFP 2024). Gender-sensitive approaches also emerged as critical levers. In India’s Mid-Day Meal Programme, the recognition and protection of female canteen workers generated significant social benefits, including improved school attendance and retention of girls, thereby contributing to human capital development (Kaur 2021). For Togo, integrating gender equity into programme governance and operations was identified as a pathway to reduce inequalities and enhance the broader developmental

impact of school feeding.

4. CONCLUSIONS

School feeding in Togo represented a critical pillar for education, child health, and local development. Despite notable progress, persistent challenges constrained its full effectiveness and sustainability. The comparative analysis demonstrated that Togo would have benefited from adopting a hybrid approach inspired by international experiences: the stable financing framework of Brazil, the agricultural integration of Rwanda, and the decentralized governance mechanisms of Ghana. Ensuring sustainability required more than financial stabilization. The systematic integration of women, the strengthening of producer cooperatives and the institutionalization of predictable public financing emerged as indispensable conditions. These elements were not only essential for improving nutritional quality and programme coverage but also for reinforcing social equity and local economic resilience. Ultimately, the Togolese case highlighted that the durability of school feeding programmes depended on a triad of factors: robust governance, stable and diversified financing, and inclusive community participation. Embedding these dimensions within national policy frameworks and securing long-term public commitment were identified as decisive levers for transforming school feeding into a sustainable instrument of human capital development.

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