

Issues In the Design & Delivery of Interventions to Improve Rural Diets in Low- and Lower-Middle-Income Countries



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All photographs included in this document have been taken with consent for use in publications.

SUMMARY

Improving the quality of diets for rural populations is a key priority for many organisations – such as donors, implementing NGOs, and governments – in the nutrition sector. However, success at scale has been elusive.

GAIN, with the support of the Dutch Ministry of Foreign Affairs, embarked on a project to improve understanding of how to succeed at scale in rural settings. Eight other organisations (see background) also joined in this effort to pool their knowledge and experiences. Wellspring carried out a literature review in April-May 2024 and facilitated an in-person workshop in Utrecht in May 2024. This was followed by six online calls that focused on deeper discussion on six key topics identified based on the learning until then: dietary quality; segmentation; markets; scale; orchestration; and trade-offs.

Each topic has been covered under a separate GAIN convening paper. This overview aims to provide a short summary of each of the six topics.

KEY MESSAGES

When intervening to improve diets in rural areas, implementers should:

- Clearly define the target segments using a range of characteristics.
- Set a realistic goal for dietary improvement for these segments considering their full context.
- Include all relevant markets – input, output & retail – in project design.
- Design for scale from the beginning
- Ensure strong internal coordination amongst different components of the programme – devote necessary resources to this.
- Assign senior person(s) to ensure sensible orchestration with other relevant actors / projects working in the programme geography.
- Be explicit about trade-offs involved and record the choices made and the rationale behind these.

BACKGROUND AND OBJECTIVE

THE CHALLENGE OF IMPROVING THE DIETS OF RURAL POPULATIONS IN LOW- AND LOWER-MIDDLE-INCOME COUNTRIES

Despite decades of rapid urbanisation, it is still the case that 42% of the world's population—3.4 billion people—live in rural areas (1). In lower-middle-income countries, this proportion is somewhat higher (56%), and in low-income countries, nearly two-thirds of the total population live in rural areas. There are 2.4 billion people living in rural areas in these two groups of countries.

Healthy diets are the foundation of all nutrition outcomes—from undernutrition and micronutrient deficiencies to obesity. Many rural households struggle to access a nutritious diet, even though they live close to the land. Globally, and in almost all regions, rural households are more likely than urban households to report severe or moderate food insecurity (2). In Sub-Saharan Africa, the average prevalence of severe/moderate food insecurity is 60% in rural areas (2) and the cost of a healthy diet is no cheaper (or barely cheaper) in rural compared to urban areas (3). Throughout Sub-Saharan Africa, the value of food consumed from own production never exceeds 50% for rural households (4). As a result, African rural households are vulnerable to high food prices, perhaps counter to common perceptions. And in the 85 countries around the world for which the Global Diet Quality Project has collected data on dietary patterns (5), the average percentage of rural dwellers consuming all five major food groups on a given day is just 30%. Indicators of malnutrition in children are consistently worse in rural than in urban areas (6).

Over the last few decades, there has been a renewed focus on the critical role of agriculture and rural development in supporting adequate nutrition by way of promoting healthier diets. In the wake of the food price crisis in the early 2000's (7), 'community development' and 'integrated rural development' agendas both mobilised significant funding over many years. 'Food and nutrition security' has been an important theme, and 'nutrition-sensitive agriculture' (8) has become a recognised priority for development. At the same time, many governments have developed national multi-sectoral nutrition plans, policies, and strategies that include or prioritise rural populations, and numerous international development partners have supported project and programme implementation in these areas.

Today we have a better understanding of what works for improving rural diets (9). However, while these approaches have achieved notable nutrition outcomes, evidence of large-scale, sustainable improvements in rural diets remains limited. Looking ahead, large-scale development projects may benefit from placing greater emphasis on dietary outcomes, rather than focusing solely on downstream health metrics for specific target populations.

CONVENING SERIES WITH PARTNERS OF THE DUTCH MINISTRY OF FOREIGN AFFAIRS

The Global Alliance for Improved Nutrition (GAIN), supported by Wellspring Consulting, designed and hosted a series of in-person and virtual meetings with a range of partners of the Dutch Ministry of Foreign Affairs, including: Bopinc, CARE Netherlands, East-West Seeds, the Netherlands Food Partnership, One Acre Fund, and Wageningen University & Research. The aim of these meetings was to share experiences and insights on the most

pressing issues that complicate the design and implementation of initiatives to improve rural diets and thereby to guide more impactful and sustainable project design and implementation in the future. The in-person meeting was held in May 2024 in Utrecht. The list of topics to be explored was developed by GAIN and Wellspring based on a preliminary non-systematic literature review and the initial in-person meeting; topics for which the evidence is weak or non-existent were prioritised for exploration. The selected topics, all of them referring to rural populations in low- and lower-middle-income countries, were:

1. ***Dietary quality.*** What does improving quality of diets mean in practice; specifically, what constitutes a meaningful increment in dietary quality in this context?
2. ***Segmentation.*** How can we define and understand the needs of different segments / groups of rural populations?
3. ***Markets.*** What are the different types of markets and their role in improving incomes, supply of nutritious foods, and quality of diets?
4. ***Scale.*** What does large-scale mean, and what is the role of financial viability / sustainability in such large-scale efforts?
5. ***Orchestration.*** Why is coordination (or orchestration) of different programme components and multiple partners so critical? How can it be done better?
6. ***Trade-offs.*** What are the synergies and trade-offs involved in combining different programme components? How can these be managed?

At least one detailed case study was presented in each meeting, and participants were invited to share other case studies and references. There was no attempt to force consensus around pre-determined or emerging conclusions. To produce the resulting convening papers, the transcripts of the discussions were synthesised and analysed using Artificial Intelligence (Claude 3.5), with output subsequently checked and editorialised by the paper's authors, who take responsibility for the final content.

The convenings (one in-person workshop and six calls) were all previously reported in detail in a series of convening papers. This briefing paper provides an overview of the key messages emerging from them on how to improve the design and implementation of interventions to improve the quality of rural diets. Readers are encouraged to delve deeper into the areas they are interested in by reviewing the six individual papers.

KEY MESSAGES

THEME 1 – DIETARY QUALITY IMPROVEMENT TARGETS

The first convening paper, [Convening Paper 14](#), discussed challenges in improving rural diets in low- and lower-middle-income countries, focusing on setting appropriate dietary quality targets. Two case studies from GAIN projects in Kenya and Mozambique provided useful basis for discussion for this topic.

The paper noted that despite proximity to agriculture, rural populations (3.4 billion people globally) struggle to access nutritious diets, with only 30% consuming all five major food groups daily. There are multiple pathways to improving diet quality, including:

- The 'Rising Tide' approach: broadly improving dietary diversity through reducing economic and/or social constraints
- Adding new food groups to existing diets
- Increasing quantities of familiar foods in diets
- Promoting small-quantity additions of nutrient-dense foods to diets

The paper offered five main recommendations:

1. Use clear, explicit descriptions of target healthy diets, preferably aligned with national dietary guidelines
2. Set realistic incremental goals, as single projects cannot transform diets completely
3. Choose specific pathways based on feasibility and national priorities
4. Set evidence-based targets considering available resources and beneficiary input
5. Implement robust measurement methods tailored to project aims, considering both frequency and quantity of consumption.

THEME 2 – SEGMENTATION

Rural populations are not homogeneous. Not everyone is a farmer, and not all rural areas are remote. Having clearly defined groups helps all stakeholders work from a common understanding and avoid talking at cross purposes. The second paper, [Convening Paper 15](#), examined the challenges of segmenting rural populations for diet improvement interventions in low- and lower-middle-income countries.

The paper offered a framework for defining rural population segments based on sequential use of certain characteristics: primary income source (farming vs non-farming), remoteness from markets, types of farming households, and income levels. It emphasised that while segmentation is crucial, it must balance precision with practicality: segments that are too broad may miss key subgroups, while over-segmentation can make implementation prohibitively expensive and make projects difficult to scale.

Key recommendations on segmentation for development partners include:

1. Consider remoteness explicitly in program design. This includes not just geographic distance but access to input markets, output markets, and retail food markets. Different solutions may be needed for remote versus more accessible areas.
2. Balance segmentation complexity with implementation practicality: create segments detailed enough to be meaningful but simple enough to implement at scale. Start with segments that are ready for engagement before expanding to more challenging ones that need greater levels of support before they can be included.
3. Use both economic and behavioural factors in defining segments and choosing priority targets within these. For example, combine quantitative measures like income with qualitative factors like community perceptions and household vulnerability.
4. Design adaptable frameworks and solutions that can be customised for local contexts while maintaining core programme elements. Build in flexibility to adjust

to changing circumstances and local needs.

5. Address the coverage-adequacy trade-off explicitly in social protection work by carefully considering whether to prioritise reaching more people with smaller benefits or providing more substantial support to fewer beneficiaries.

The paper concluded that, while no universal segmentation solution exists, understanding different approaches is essential for developing effective, targeted interventions to improve rural diets.

THEME 3 – ROLE OF MARKETS

The food system is mainly a market-based system. The third paper in the series, [Convening Paper 16](#), explored three types of markets: for inputs for food production, for selling output from the primary production stage, and retail food markets where consumers buy food for consumption. Each type faces specific challenges:

- **Input Markets** (for production): Face challenges of accessibility, affordability, and quality of farming inputs. Solutions include farmer education, better regulation enforcement, and targeted subsidies.
- **Output Markets** (for farmers' produce): Struggle with issues like poor storage capacity and unfair pricing. Solutions proposed include improving post-harvest technologies, implementing quality standards, and better market information systems.
- **Retail Markets** (consumer-facing): Limited by poor food variety and inconsistent availability. Solutions include targeted subsidies for nutritious foods and regulations on unhealthy processed foods.

Projects often consider only one or two of these three types of markets but should look more broadly. Key recommendations for development partners include:

- Conduct a thorough market analysis before interventions, considering local context and existing structures
- Avoid isolated interventions; instead build partnerships across government, private sector, and development actors
- Focus on commercially viable models that can survive without ongoing support
- Work with governments to improve the enabling environment and address market failures
- Leverage digital platforms for market linkages to improve pricing transparency and quality control
- Facilitate technical knowledge transfer to local partners developing digital solutions for effective delivery

The paper emphasised that successful interventions require understanding the entire value chain, with integrated approaches being more effective than isolated solutions. Digital solutions were highlighted as being increasingly important in overcoming traditional market challenges.

THEME 4 – SCALE

This fourth paper, [Convening Paper 17](#), examined the challenges of operating at scale when improving rural diets in low- and lower-middle-income countries. Despite 2.4 billion people living in rural areas in these countries and facing significant dietary challenges, there are few examples of large-scale, sustainable projects that have successfully improved rural diets.

Through case studies including One Acre Fund, orange-fleshed sweet potato promotion, Brazil's Bolsa Família, and others, the paper identified three main pathways to scale:

1. Government-led large-scale programmes
2. Market-based approaches (including institutional innovations, incremental scaling through existing products, and collective approaches)
3. Hybrid approaches combining emergency relief with market-based solutions

Key success factors for scaling included long-term commitment and sustained financing, building on existing infrastructure and systems, strong local leadership with community engagement, flexibility to adapt during implementation, and international connections combined with local expertise. Main challenges identified were funding gaps, rigid planning tools, top-down approaches lacking community representation, affordability barriers, and complex coordination requirements.

Key recommendations for development partners included:

1. Greater scrutiny of small-/medium-scale projects that lack scaling potential
2. Clear definitions and measurement systems for tracking reach
3. Focus on ambitious vision while maintaining implementation flexibility
4. Building lasting partnerships
5. Securing long-term resources
6. Taking an incremental approach while maintaining clear scaling vision

The paper emphasised that scaling is 'more art than science' and requires balancing ambitious vision with practical constraints.

THEME 5 – COORDINATION & ORCHESTRATION

The fifth paper in the series, [Convening Paper 18](#), focused on the two management and leadership challenges faced by large-scale programmes with several components that address the multiple issues involved in improving quality of rural diets:

1. **Coordination** - internal collaboration among programme implementers, characterised by clear management control, shared objectives, and formal control mechanisms
2. **Orchestration** - external collaboration with third parties (government, institutions, businesses), relying on influence and relationship building rather than direct control

The main recommendations ensuing from the discussions included:

- Resource allocation for coordination roles is often challenging, as these positions are sometimes viewed as overhead by donors. Allocate dedicated resources and capacity for coordination during programme design.
- Different skills are involved in internal coordination and external orchestration, and this needs to be considered in resourcing and recruitment.
- Ensure continuity of senior leadership for effective orchestration
- Balance top-down and bottom-up approaches, engaging communities meaningfully.
- Invest in local expertise to maintain relationships and build capacity.
- Build flexibility into programme design to adapt to changing circumstances.
- Use research and evidence to influence policy decisions and demonstrate programme effectiveness

The paper emphasised that both coordination and orchestration are fundamental to programme success but require dedicated resources and skilled leadership to be effective.

THEME 6 – TRADE-OFFS

Large and complex programmes required to improve rural diets at scale often face difficult choices between competing goals; they may also have to accept a negative consequence of the programme. The final paper in the six-part series, [Convening Paper 19](#), examined the trade-offs involved in programme design and implementation. Typical trade-offs include between income generation and household nutrition and between lower environmental impact and increased food production. Whilst better coordination and orchestration or sequencing can help to mitigate the impact from some trade-offs, not all can be avoided entirely; this is fine as long as it is recognised and made explicit.

Key recommendations include:

- At the strategic level, prioritise goals without trying to achieve everything simultaneously. Acknowledge and plan for an inevitable reduction in effectiveness when scaling up.
- During programme implementation, sequence interventions rather than introducing all at once. Start with primary objectives, then move to address secondary goals. Use pilot programmes to identify potential trade-offs. Implement effective monitoring systems for early detection of unintended consequences.
- When managing stakeholders, ensure vulnerable groups have a voice in decision-making, maintain open communication with affected communities, develop specific mitigation plans for known negative impacts, and use coordination among implementing partners to ensure synergy and coherence across programme components.

CONCLUDING REMARKS

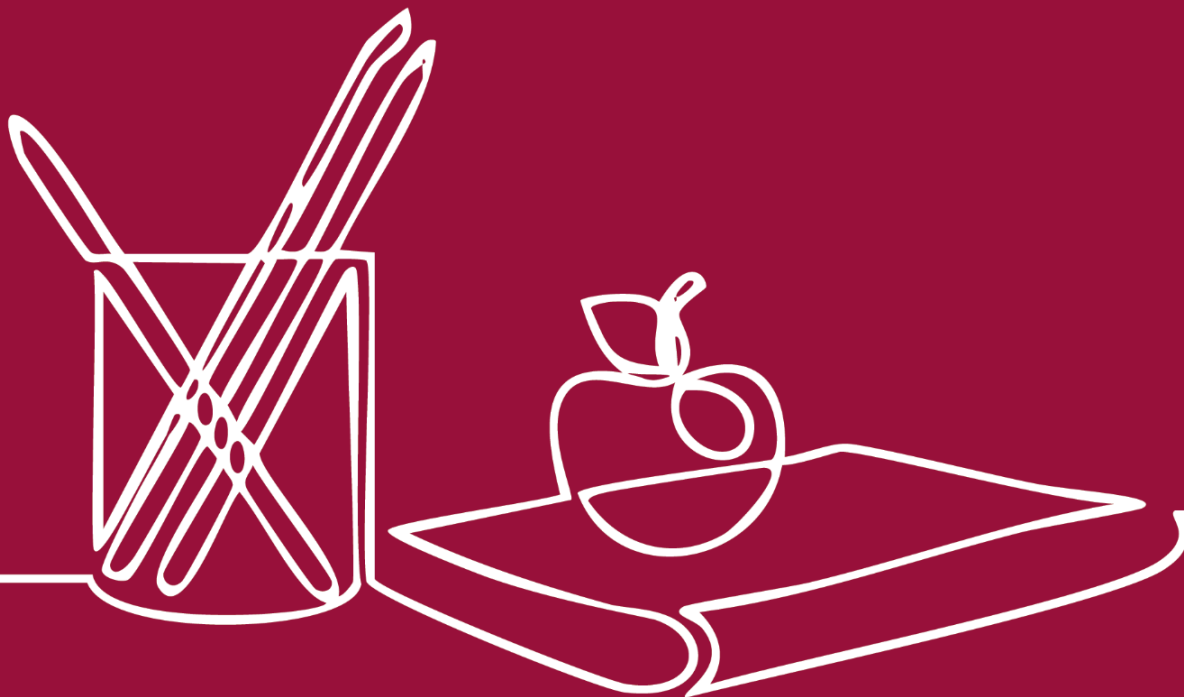
The authors of the papers in this series hope that individuals and organisations interested in improving the diets of rural populations in low- and lower-middle-income countries will

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find the papers of value in clarifying their thinking and designing better programmes and other types of solutions for improving diet quality.

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ABOUT GAIN

The Global Alliance for Improved Nutrition (GAIN) is a Swiss-based foundation launched at the UN in 2002 to tackle the human suffering caused by malnutrition. Working with governments, businesses and civil society, we aim to transform food systems so that they deliver more nutritious food for all people, especially the most vulnerable.

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GAIN Briefing Papers provide essential information in a succinct, accessible form to support informed decision making by stakeholders in the food system to improve the consumption of nutritious, safe food for all people, especially the most vulnerable. The full series may be accessed at <https://bit.ly/gainpub>

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