

ISSUES IN THE DESIGN & DELIVERY OF INTERVENTIONS TO IMPROVE RURAL DIETS IN LOW- AND LOWER-MIDDLE-INCOME COUNTRIES

ISSUE IV: SCALE



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

SUMMARY

The Global Alliance for Improved Nutrition (GAIN) and Wellspring Development designed and hosted a series of in-person and online consultations with partners of the Dutch Ministry of Foreign Affairs to examine challenges in improved the quality of the diets of population groups living in rural areas of Low and Lower-Middle Income countries. These groups still largely consume unhealthy or even nutrient inadequate diets and face heavy burdens of malnutrition. This fourth paper looks specifically at the challenges of delivering impact *at scale*. The aim of the discussions was to gather examples of successful project interventions, to understand the decision processes of different organisations, and to identify important points of convergence in conceptualisation and action.

The bulk of the discussion reflected in this paper is from an online meeting held on 1st November 2024, with the participation of Bopinc, CARE Netherlands, the Netherlands Food Partnership, and One Acre Fund.

KEY MESSAGES

- Given the magnitude of the problem of poor diets of rural households in Low and Lower-Middle Income Countries, there need to be many more projects operating at scales of at least one million individuals benefitting. Currently, with a few notable exceptions, partner organisations of the Ministry of Foreign Affairs of the Kingdom of the Netherlands implement mostly small- or medium-scale projects.
- This meeting—one in a series of six—explored case studies of *large-scale* projects, defined as those reaching at least one million individuals in rural areas of Low- and Lower-Middle Income Countries. Participants were from partner organisations of the Ministry of Foreign Affairs of the Kingdom of the Netherlands, but case studies were not limited to these organisations.
- Participants explored the defining features of smaller- and larger-scale projects in these contexts and sought to identify enablers and inhibitors of successful delivery of projects at scale.
- Participants noted common challenges in delivering projects at scale and committed to examining their own work in the light of the meeting conclusions over the course of the coming year.

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.

Topic IV: operating at scale

This paper is one of a series of six, covering each of the abovementioned topics. It examines the challenge of operating at scale.

With so many people affected by the problem of poor diets in rural areas of low- and lower-middle-income countries, development projects tackling this issue run the risk of irrelevance if they do not have a clear pathway to scale. Many projects are designed to impact populations of say 10,000 people, but it would take 100,000 such projects to impact all of the world's "bottom billion" people. There is a clear need for more projects to operate at scales of one million people or more.

Many initiatives have focused on the challenges of scaling, including the Global Community of Practice on Scaling Development Outcomes (10), ExpandNet (11), and others. Much less has been written on foundational questions, such as, what does 'scale' even mean, and how should it be categorised? How is it related to other critical dimensions such as time since inception and sustainability? Harrison and colleagues (12) reviewed some of these issues but found little research and less consensus. The fourth topic-specific convening thus focused on debating these issues in depth.

INSIGHTS FROM THE MEETING

How Big is 'Big'?

In the absence of any standardised descriptions of project size, the meeting facilitators proposed a three-level categorisation, which seemed to resonate with participants:

- **Small-scale projects** typically reach only a few thousand beneficiaries. These pilot projects are highly contextual and, while effective in their immediate environment, face significant challenges in scaling up to reach larger populations.
- **Medium-scale projects** can reach hundreds of thousands of people. These initiatives are characterised by context-specific approaches and multiple touchpoints within their communities. However, their complexity often makes it difficult to scale beyond the (sub-national) regional level.
- **Large-scale projects** aim to reach millions of people. These initiatives typically require government leadership and diverse financing approaches. They demand standardised approaches that can transcend geographical and cultural barriers. Implementation usually requires many years to achieve full scale and impact.

Examples of large-scale projects

Facilitators and participants contributed diverse examples of projects that successfully reached millions of people and were aimed at dietary or nutritional improvement in rural populations. They included¹:

1. The scale-up of **Orange-Fleshed Sweet Potato**. A 30-year effort (13) that benefited from sustained support from the Consultative Group on International Agricultural Research (CGIAR) and government engagement. Its success was driven by effective market integration and building upon an existing familiar crop (white-fleshed sweet potato) to promote adoption of varieties that had higher content of Vitamin A, and thus to help reduce Vitamin A deficiency. It served as a template for other biofortification programmes. Although reliable tracking of reach is not available, it is clear that orange-fleshed sweet potatoes are now consumed by millions of consumers across multiple countries in Africa.
2. Brazil's **Bolsa Família** social protection programme. Started as a municipal project in Brasília, the national programme merged first-generation programmes focusing separately on education and nutrition (*Bolsa Alimentação*). Despite the complexity of coordinating across over 5,000 municipalities and multiple federal entities, the programme achieved significant poverty reduction throughout Brazil, and also

¹ Although not a rural initiative, another interesting experience was shared by the Netherlands Food Partnership, which had led an initiative in Accra to improve the city's food environment.

impacted diet quality (14). The key to success was effective navigation of overlapping organisational mandates and coordination with synergistic interventions.

3. Ethiopia's **Seqota Declaration**. An initiative to eliminate childhood stunting by 2030, starting with 40 districts (*woredas*) reaching 4.7 million people, with plans to expand to 77 million people in the first half of the expansion phase. The innovation phase tested twelve interventions, which achieved very high rates of coverage (15). While it secured initial funding of \$13-20 million annually, scaling was hindered by a significant funding gap, requiring \$1.9 billion for planned expansion (16).
4. **Africa Improved Foods** in Rwanda: A food manufacturer with upstream and downstream linked operations serving 1.6 million consumers daily through a coalition of development finance institutions, government, and large companies. While successful in Rwanda (17), replication has been slow, as shown by decade-long discussions about expanding to Ethiopia.
5. India's **Midday Meal Programme**: A government-led nutrition initiative with extensive reach and some (mixed) evidence of impact on nutritional status (18), but faces several challenges including limited coverage (missing 40% of children in non-government schools, for example), corruption concerns, and quality-control issues. The programme benefits from comprehensive monitoring mechanisms and demonstrates the importance of government leadership in large-scale initiatives.

The main case study discussed during the meeting was that of the smallholder farming organisation One Acre Fund. This case is described in **Box 1**, with further information in One Acre Fund's own analysis (19).

BOX 1. THE SCALING JOURNEY OF ONE ACRE FUND.

One Acre Fund operates as a nonprofit social enterprise with a clear primary mission of helping farmers grow more food and earn higher incomes, directly supporting Sustainable Development Goal 2 (Zero Hunger). The organisation has established itself as a crucial service provider for low-income farmers in remote areas of ten African countries, with a particular focus on supporting women agriculturalists. The foundation of One Acre Fund's work is its core service model, which provides life-improving technologies to farmers on credit, including improved seeds, storage bags, and fertiliser. The model operates through asset-based financing, where farmers can access these resources through a comprehensive system that includes extensive distribution channels and a global procurement team. Throughout the growing season, farmers receive continuous training and market facilitation support. This core programme maintains financial sustainability through a hybrid funding approach, with farmers contributing 70% of the costs while donor support covers the remaining 30%. One Acre Fund has expanded its impact through several complementary programmes, including agroforestry and rural retail shops.

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One Acre Fund's journey to scale has been remarkable, expanding from serving just 38 farmers in 2006 to reaching 4.8 million farmers by the end of 2023. Their success in scaling has been driven by three fundamental elements. Their business model has proven highly effective, built on treating farmers as clients rather than beneficiaries and implementing the hybrid funding approach described above. Their operational approach maintains a strong field presence, providing comprehensive services through multiple distribution channels while validating effectiveness through rigorous impact assessment. Finally, their adaptability has proven vital for scaling, diversifying into complementary programmes, and adapting their approaches to country-specific contexts.

One Acre Fund has faced several significant challenges in their scaling journey. Financial sustainability remains an ongoing challenge as they balance scaling objectives with financial constraints, requiring continued donor support of \$37 per farmer. Despite their proven impact, fundraising remains difficult. They also face significant operational challenges in adapting to different contexts, including fragile states and conflict zones, and must navigate technological barriers, cultural differences, and market adoption challenges across regions. Their experience demonstrates that successful scaling requires a strong core model, operational excellence, and the ability to adapt to local contexts while maintaining financial sustainability.

One Acre Fund's experience with nutrition interventions demonstrates an evolution from intensive to more scalable approaches. Initially, they conducted trials of intensive nutrition programmes that showed impressive results in improving dietary diversity, micronutrient deficiencies and ultimately reducing stunting. However, these programmes proved too resource-intensive and expensive to scale, at approximately \$150 per child. In response, they shifted their nutrition strategy to focus on: 1) improving access to nutritious food and 2) improving consumption of these foods through Social and Behaviour Change approaches. This revised approach includes setting targets for nutritious crop adoption across different countries, introducing nutritious processed products like fortified wholegrain flour in Rwanda, and implementing mass media campaigns. Their experience also reveals the importance of adapting to local contexts: radio campaigns work well in Rwanda when government-endorsed, while Kenya's tech-savvy farmers are better reached through social media, and Burundi requires direct interaction through field officers due to low phone penetration. They also embrace a mix of traditional and new varieties, especially for vegetable cultivation, in order to maximise farmer adoption and nutrition benefits. Overall, their nutrition strategy now focuses on finding cost-effective interventions that can be implemented across their entire portfolio while leveraging their existing operational model and capabilities.

None of these cases offer perfect examples of impact or of sustainability, but all of them have grown over time until they reached millions of vulnerable rural consumers, have enjoyed multi-stakeholder support, and have shown some evidence of impact on diets.

Pathways to scale

The discussion revealed several distinct pathways to scale in programmes aiming to improve the diets of poor, rural populations, each with enabling factors and challenges.

The first major pathway is through **government-led large-scale programmes**, exemplified by India's Midday Meal Programme, Ethiopia's Productive Safety Net Programme, and Brazil's *Bolsa Família*. These programmes benefit from strong government leadership and commitment, along with comprehensive monitoring mechanisms and the ability to coordinate across multiple jurisdictions. However, they often struggle with complex institutional coordination, corruption, quality control challenges, coverage gaps, and substantial funding requirements.

The second pathway consists of **market-based approaches**, which, according to Bopinc., can take three forms. Firstly, **large-scale institutional innovations**, such as Africa Improved Foods in Rwanda, leverage coalitions of development finance, government, and large companies, though they often face slow replication to new contexts. [Editor: One Acre Fund would also presumably fall into this category]. Secondly, **incremental scaling through existing products** builds on existing widely consumed food commodities and their distribution networks, such as is seen with Large-Scale Food Fortification. It tends to encounter challenges with compliance, quality control, and impact measurement. And finally, **collective approaches** working with networks of smaller players, like the Global Distributors Collective (20), benefit from network effects and last-mile reach but typically require longer timeframes to achieve significant scale.

A third pathway combines **emergency relief with market-based approaches**, as demonstrated by the World Food Programme's transition from food distribution to cash cards in Kenya. While this approach successfully builds market systems, there can be resistance to transitioning away from traditional distribution methods.

These pathways have tended not to be entirely mutually exclusive. Government-led programmes may require very significant market-based components and projects with a market centre of gravity still benefit from sustained government support.

Several common factors emerged as crucial for successful scaling across all pathways. Programmes benefit from long-term commitment, as seen in the orange-fleshed sweet potato's 30-year development, and from building on infrastructure (e.g., retail stores or government programmes) of foods that are found in existing system. Strong local leadership, community engagement, and flexibility to adapt during implementation also have proven vital. International connections combined with local leadership and sustained financing further support successful scaling.

Conversely, several factors consistently hinder scaling efforts. Programmes struggle with funding gaps, rigid adherence to planning tools and inflexible models, and top-down approaches that lack meaningful community representation. Affordability barriers, along with implementation and quality control challenges and complex coordination requirements across multiple stakeholders, can impede scaling efforts.

LEARNINGS FOR DEVELOPMENT PARTNERS

There are strong financial and political incentives for both funders and implementing organisations to launch projects that have little perspective of ever reaching scale. Much greater discipline is needed in scrutinising the case for small- or medium-scale projects, particularly when the organisations concerned do have the option of working on larger scale endeavours. Prioritising large-scale projects may require trade-offs on other dimensions, such as ownership/attributability of results, specificity of alignment to organisational mandates, and/or protection of intellectual property. Working at scale also requires robust systems for controlling quality and protection against malpractice.

A good starting point for working at scale would be greater clarity about: How big is 'big'? A working definition is suggested in this paper. Robust measurement systems are required to track direct and indirect reach, ideally using standardised indicators such as those developed by the Ministry of Foreign Affairs of the Kingdom of the Netherlands (21). The almost complete absence of academic or grey literature on the specific challenges of delivering projects at scale in rural areas of Low- and Lower Middle Income Countries is unfortunate and more exchange of experience should be encouraged.

The group discussion suggested that delivering impact at scale often requires:

1. Starting with an ambitious vision, clear goal and strong leadership
2. Maintaining flexibility to learn and adapt while sticking to the goal
3. Building lasting partnerships
4. Securing long-term resources, and
5. Taking an incremental approach while maintaining clear vision for scale

Participants emphasised that scaling is 'more art than science' and requires balancing an ambitious vision with practical implementation constraints.

As with the other discussions in this series, each participating organisation will be taking these ideas forward and reviewing implications for their own work over the coming months.

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ANNEX

Meeting agenda

1	Introduction and framing in the discussion	• Summary of where we have come from over the previous sessions • Introducing the need for large scale interventions • Frame the scale definition: what are small, medium & large initiatives? How do we design for scale?	Wellspring - 5 mins
2	Case studies of large nutrition interventions	• 'Born large' or 'grow large'? • How was funding mobilised? • Role of government • How was complexity managed • Sustainability	Wellspring/Saul 15 mins
3	Examples of large nutrition projects from the audience	• What are your thoughts on good examples of what works with getting scale?	Audience - 15 mins
4	One Acre Fund case study	• OAF's experiences in designing nutrition initiatives	OAF - 10 mins
5	Key Messages from the evidence	• Few examples of large-scale successes, so.... • Reasons Medium-Scale Projects Don't Reach Millions of Beneficiaries • Reasons that there are few Large-Scale Projects • Potential solutions	Wellspring - 10 mins
6	Feedback from the audience	• What does this mean for your organisation? • Can/will you look at designing interventions differently in the future?	Audience
7	Wrap up	• Summary of session + link to following session on coordination and orchestration	Wellspring - 5 mins



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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