
Reach Alliance
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SMART+: Revolutionizing Nutrition Assessment
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# The Reach Alliance

The Reach Alliance is a consortium of global universities — with partners in Ghana, South Africa, Mexico, Canada, United Kingdom, Australia, and Singapore — developing the leaders we need to solve urgent local challenges of the hard to reach — those underserved for geographic, administrative, or social reasons. Working in interdisciplinary teams, Reach's globally minded students use rigorous research methods to identify innovative solutions to climate, public health, and economic challenges. The UN's Sustainable Development Goals (SDGs) provide inspiration and a guiding framework. Research is conducted in collaboration with local communities and with guidance from university faculty members, building capacity and skills among Reach's student researchers.

The Reach Alliance was created in 2015 by the University of Toronto's Munk School of Global Affairs & Public Policy, in partnership with the Mastercard Center for Inclusive Growth.

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*Note:* Authors are listed alphabetically with the faculty mentors listed last.

*Cover photo:* A child being measured as part of the SMART+ nutrition assessment. (Action Against Hunger Zambia)

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Reach Alliance

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**Figure 1.** Reach Alliance researchers, Minh Nguyen, Molly Graham (centre), and José Arsenault-Moriel (far right) with Moni Kim (2nd from left) Reach Alliance senior research program and engagement officer and Leo Mukonka, Action Against Hunger Zambia Monitoring, Evaluation, Accountability, and Learning (MEAL) (2nd from right) manager at the country office in Lusaka

## Executive Summary

> SMART+ data has informed decision making. It's also informed program implementation, forecasting, and planning for the government.
>
> —Survey manager

The El Niño weather phenomenon, intensified by climate change, has caused severe droughts across Southern Africa, with devastating consequences for food security. In February 2024, Zambian President Hakainde Hichilema declared a national emergency in response to the worst drought in 60 years, urgently calling for immediate action. Zambia faced a significant rainfall deficit, affecting nearly half of its 2.2 million hectares of maize production and resulting in a 50 per cent reduction in agricultural output.[1] This crisis left millions of households food insecure and malnutrition rates were projected to triple within the year.

Despite the urgent need for intervention, Zambia's response was hampered by outdated and insufficient data sources, including its 2018 Demographic Health Survey. These traditional, paper-based methods lacked the accuracy, speed, and granularity required to inform timely policy decisions during rapidly evolving crises.

To address the critical gap in reliable data for evidence-based decision making, a network of organizations and humanitarian practitioners introduced SMART+ (Standardized Monitoring and Assessment of Relief and Transitions). Convened by Action Against Hunger Canada, SMART+ is a transformative, open-access digital platform that integrates the entire data lifecycle — survey design, data collection, analysis, and reporting — into a seamless ecosystem. Building on the established SMART methodology,

1 Valentin Hategekimana, "Climate Catastrophe Leaves Millions Malnourished in Zambia," FIAN International, 20 November 2024.

SMART+ offers real-time, reliable data that informs evidence-based policymaking, resource allocation, and program implementation. The government of Zambia conducted a SMART+ survey in early 2024, collaborating with Action Against Hunger Canada and UNICEF as core implementing partners.

This research provides a comprehensive evaluation of SMART+ through interviews with 28 multi-level nutrition, health, and governance experts in Zambia. We identified four essential components of successful implementation that provide a roadmap for replicating SMART+ in other settings: government buy-in, cross-sector collaboration, local capacity building, and data utilization. The implementation of SMART+ demonstrates how timely, disaggregated data can guide targeted interventions, especially for vulnerable populations such as rural women and children. However, challenges remain, particularly around funding. While the software is free, field operations and training costs require sustainable financing. The dual focus of this research — highlighting the enabling factors for SMART+ implementation while addressing its challenges — informs a suite of strategic recommendations for enhancing survey sustainability and future scalability.


**Figure 2.** The impact of quality data

## Context: Climate Change, Malnutrition, and the Need for Data

> Zambia has experienced extremely low rainfall this year, culminating in the worst drought the country has experienced since records began. Climate change is now upon us, bringing increased frequency and intensity of extreme weather events.
>
> — President Hichilema quoted in the Emergency Drought Declaration, 29 February 2024

> For the past four or five years or so, we were unable to use the nutrition data to make decisions because the approach or methodology at which nutrition data is collected … [was] not very convincing in terms of the quality.
>
> — National Food and Nutrition Commission (NFNC) official

The recent drought in 2024, considered the worst in 60 years, devastated Zambia and neighbouring countries like Zimbabwe and Malawi. Food insecurity skyrocketed across the region where maize (the primary staple crop) suffered significant production losses. In Zambia alone, approximately 1 million hectares of planted maize were affected across 84 of the country's 116 districts. At the outset of the crisis, the president estimated that 9.8 million Zambians would be affected, with 6.6 million requiring emergency humanitarian assistance.[2]

Zambia's response to the drought was impeded by limited human capacity and financial resources, which delayed preparedness and implementation efforts. These challenges were exacerbated by a lack of reliable and actionable

2 National Health Strategic Plan, Republic of Zambia Ministry of Health, 2022.

data to measure and improve the quality and efficiency of interventions.

While Zambia has proactively committed to improving public health and nutrition through initiatives like the Zambia Digital Health Strategy (2022–2026) and the National Health Strategic Plan (NHSP) (2022–2026), systemic gaps remain. One of the goals of these initiatives is to strengthen the national nutrition information system to inform decisions at all levels (NHSP Strategy ID 7.08). Specifically, goal 7 of the NHSP focuses on improving the nutritional status of the Zambian population, particularly for children, adolescents, and women of childbearing age, aligning with the Global Nutrition Targets 2030. Despite these efforts, operational challenges such as incomplete health records and underused community health data limit the Ministry of Health's (MoH) ability to manage and analyze data effectively. This is compounded by the lack of interoperability among existing systems and fragmented information solutions, an issue common in African health systems. To respond effectively to the drought, the MoH required external financial and technical support as well as validated and high-quality data to guide decisions and justify resource allocation.

The absence of quality, reliable data undermines the development and implementation of effective policies and interventions. When data are unavailable, the default may be to distribute interventions evenly across all districts. As a result, some areas receive excess resources while regions in need are overlooked and underserved. Without data surveillance and monitoring, officials and practitioners will struggle to identify the extent of a malnutrition crisis because it is not always visibly apparent. Malnutrition is interconnected with broader issues like education, economic development, and healthcare, and data are needed to link these sectors and coordinate interventions. This challenge is compounded by Zambia's evidence-based approach to policymaking: the government requires robust data to justify decisions.

Rural women and children disproportionately suffer from malnutrition and food insecurity, highlighting the intersection between the United Nations Sustainable Development Goals: SDG 2 (Zero Hunger) and SDG 5 (Gender Equality). National data collection efforts, such as monthly nutrition measurements at local health facilities, exist and underscore Zambia's commitment to addressing malnutrition. However, these systems require significant upgrades to ensure timeliness, accuracy, and inclusivity. Current paper-based data collection systems often do not include house-to-house visits, and risk the exclusion of less mobile individuals, such as pregnant women. Paper-recorded data are prone to tearing or loss during transit, especially over long distances, putting data from remote regions at a higher risk of being lost.

Much of Africa lacks centralized electronic databases so sourcing reliable health data is a regional challenge. Funding is particularly limited in developing regions like Zambia, where competing priorities stretch government resources. The African Union estimates that only about 1 per cent of health expenditures in Africa are allocated to data surveillance and related expenses, despite the continent shouldering 24 per cent of the global disease burden.[3]

Data collection and surveys are costly, requiring substantial funding for large teams to conduct fieldwork over extended periods. Consequently, Zambia often relies on external donors to fill the gap. For national data to be effective, it must achieve domestic ownership and international validation, ensuring trust and actionable insights.

3 "Strengthening Cross-Border Surveillance and Information Sharing in Africa," African Union Centre for Disease Control and Prevention, 30 October 2024.


**Figure 3.** The four integrated components of the SMART+ tools available on the platform

**SDG 2 Zero Hunger** — aims to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture worldwide.

**SDG 5 Gender Equality** — focuses on achieving gender equality and empowering all women and girls by eliminating discrimination, violence, and barriers to equal participation.

## Introducing a Digital Revolution: SMART+

> SMART+ data is A+ in terms of quality and reliability.
>
> —UNICEF survey manager

SMART+ is the digitization of the paper-based Standardized Monitoring and Assessment of Relief and Transitions (SMART) methodology widely recognized as the gold standard for malnutrition data collection since its launch in 2002. SMART was developed by multiple agencies, drawing from several methodologies with continuous updates from best practices from the malnutrition field.[4] It ensures that survey data are collected consistently and reliably and then analyzed using a standardized methodology. It has been used extensively in sub-Saharan Africa and has been instrumental in harmonizing assessments and responses to emergencies while forming the backbone of nutrition surveillance and early warning systems.

SMART+ facilitates actionable insights across four interconnected components: the SMARTcollect App, Platform, Aggregator, and Dashboard.

### SMARTcollect Mobile App

To deal with what a SMART manager called "the headache that comes with managing paper-based data collection tools," the SMARTcollect

4 "About SMART+."

application replaces the traditional paper-based collection method. After recording data in the field, survey teams input all data onto the app downloaded on tablets provided by Action Contre la Faim (ACF or Action Against Hunger). The recorded data get uploaded to a single digital database, simplifying access and location of data by eliminating the need for consolidating paper records. The measurements recorded are the same as the routinely collected data at local health facilities and WHO reporting standards, ensuring familiarity and ease of use for nutritionists and community health volunteers while improving the efficiency and accuracy of data collection.

## Centralized Platform

The centralized survey management platform allows coordinators to plan, monitor, and administer surveys in real-time. Data collected via the mobile app are automatically uploaded, allowing continuous supervision of field teams and dynamic tracking of results. This real-time management ensures survey high-quality collection and eliminates delays caused by manual data entry and consolidation.

## Data Aggregator

The aggregator acts as a central repository for global SMART survey data. Consolidating data sets from multiple sources into one location allows for comparison between districts and countries which leads to the identification of the most vulnerable areas. It visualizes results by geographical area and supports broader analyses for initiatives like the Integrated Food Security Phase Classification (IPC) and Humanitarian Nutrition Overview (HNO). It can also contribute to AI-based famine-prediction models, leveraging standardized, multi-sectoral data for early warning systems.

## Interactive Dashboard

The SMART+ dashboard provides a live, visual representation of malnutrition data at global, national, and subnational levels. Decision makers can view trends and hotspots in real time, facilitating evidence-based planning and targeted resource allocation. The dashboard's accessibility ensures that governments, NGOs, and public health organizations can collaboratively design and prioritize interventions.

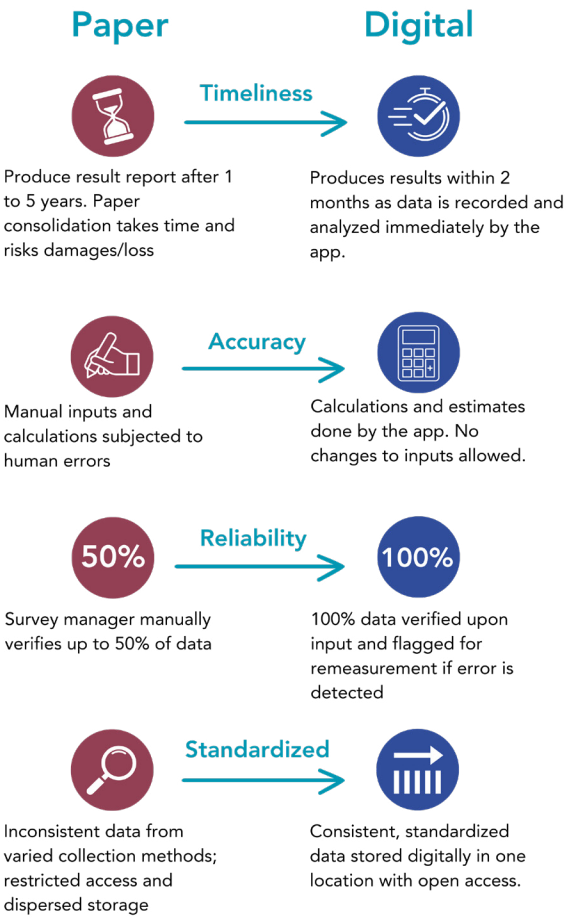


**Figure 4.** Benefits of transitioning from paper-based methods to digitization

## Key Innovations and Novel Features

**Timeliness.** SMART+ addresses the critical need for up-to-date data when crises require rapid responses. Unlike paper-based data-collection systems that can take one to five years to produce a report, SMART+ delivers final reports within two months of collection. According to a government official, "the latest Zambia demographic and health survey [collected data in] 2022, but the results are not yet released." Yet by consolidating and analyzing data through automatic programs, the government can receive information within two months, allowing them to adjust targets driving crisis response in time. For example, the tool identified vulnerable populations — such as lactating mothers or disproportionately affected regions.

**Accuracy.** The SMART+ app has built-in functions to make calculations required for data collection. According to a survey manager, the estimates and results are better than manual calculations. He described the tool as "an input as well as an output tool. It helps us to come up with the sample sizes. It helps us to do the calculation of the sample. It helps us to generate the basic reports to do the plausibility so it's something that makes our work much, much easier." After the data are entered into the app, the system prevents data changes or manipulation and protects data quality. Such features make policymakers trust the data.

**Enhanced reliability.** The SMARTcollect mobile app revolutionizes field data collection by integrating automated quality assurance mechanisms. Each data point entered into the app undergoes rigorous testing for biases and errors through built-in software features. For example, mid-upper arm circumference (MUAC) measurements are automatically validated against established quality benchmarks like SMART and WHO flags, and errors are flagged for immediate correction. When the system identifies patterns in data inputs that suggest measurement shortcuts — such as repeated rounding to weight measurements to whole numbers or 0.5 — it automatically flags the data as biased and prompts the enumerator to repeat the measurement. This real-time feedback ensures that 100 per cent of the collected data are reviewed for quality. By addressing errors during data collection, the SMARTcollect app minimizes inaccuracies, builds confidence in the data, and enhances the credibility needed for decision making. As one enumerator highlighted, "The system detects bias and ensures continuous quality assurance."

**Standardization.** Many different actors in Zambia advise on government policies and use data to support their work. However, previously collected data were inconsistent because they were collected by different parties who use different collection methods. Consequently it was challenging to compile or compare data. Some data sets have restricted access for confidentiality, making them difficult for stakeholders to access and use. It takes time to locate data because they are stored in different places with different organizations. SMART+ ensures that all data are collected using the same method, with enumerators conducting the same procedures. SMART+ allows open access for multiple parties to use the data for research and study which allows the data to be used internationally (such as data being uploaded to the IPC). Standardization builds trust in data quality among international stakeholders. According to a government health official, SMART+ data were used to "beef up whatever little or scanty data" Zambia had, and helped persuade international organizations to give funds specifically for emergency and nutrition purposes.

**Holistic indicators.** SMART+ enhances traditional malnutrition surveys by integrating additional indicators, capturing data on nutrition, WASH (water, sanitation, and hygiene), dietary diversity, food consumption, mortality, and general health,

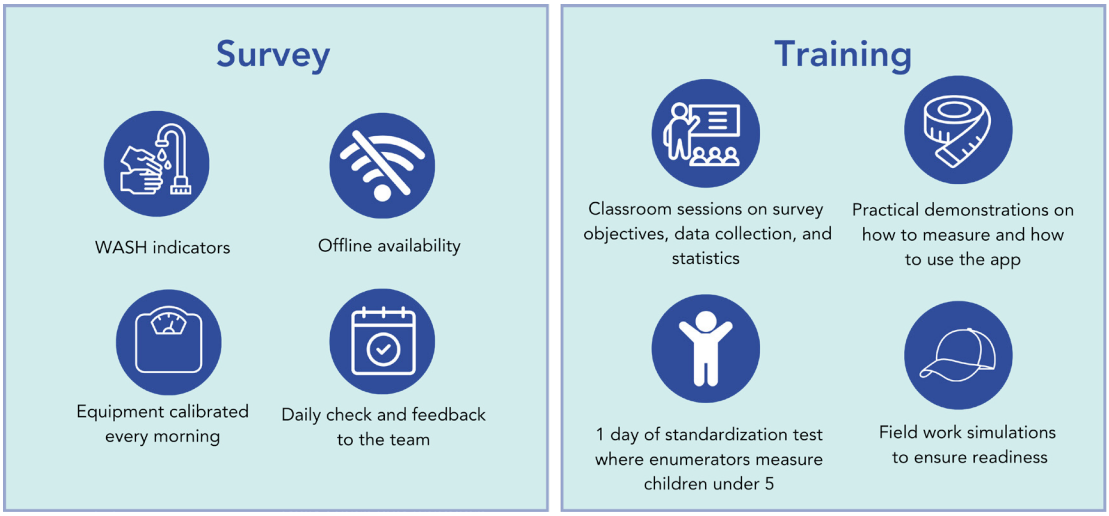


**Figure 5.** SMART+ innovations

offering a more comprehensive understanding of malnutrition's root causes. Such comprehensive data enable the design of long-term, preventative interventions that address systemic drivers of malnutrition rather than relying solely on short-term relief efforts.

**Offline availability.** SMART+ introduces a ground-breaking solution to one of the most significant barriers to adopting e-health tools in the WHO African Region: weak internet connectivity. Survey teams can input data onto the app in remote regions without internet access. The app automatically uploads data to the system when there is stable connectivity. By sidestepping the dependency on continuous internet access, SMART+ empowers remote communities to participate in modern data systems and positions itself as a scalable, equitable e-health solution for the region.

**Daily calibration and feedback.** For anthropometric measurements, enumerators use standardized tools such as scales and UNICEF height boards (portable measuring devices used to record a child's height or length). These tools ensure precise measurements of body size, which are critical for assessing malnutrition.

SMART+ methodology requires daily calibration of measuring instruments to ensure consistent accuracy in anthropometric measurements. This is particularly important in rural areas because travelling across challenging terrain can easily disrupt tools.

Field supervisors provided on-site oversight, ensuring protocol adherence, and verifying random sampling processes for household selection. Through phone calls, survey managers were also available to discuss issues if enumerators encounter problems with the tool. Teams shared feedback each evening to address discrepancies and refine data collection processes. This iterative feedback loop was critical to maintaining high data quality throughout the survey.

**Comprehensive training program.** To address challenges in consistent and accurate data entry, SMART+ requires all new users to attend a robust week-long training. Survey team members are recruited locally. The National Food and Nutrition Commission (NFNC) contacts local health clinics or relevant organizations (such as within the NFNC itself, or other government entities and NGOs) to find those who are trained on nutrition and directly ask them to become an enumerator or ask

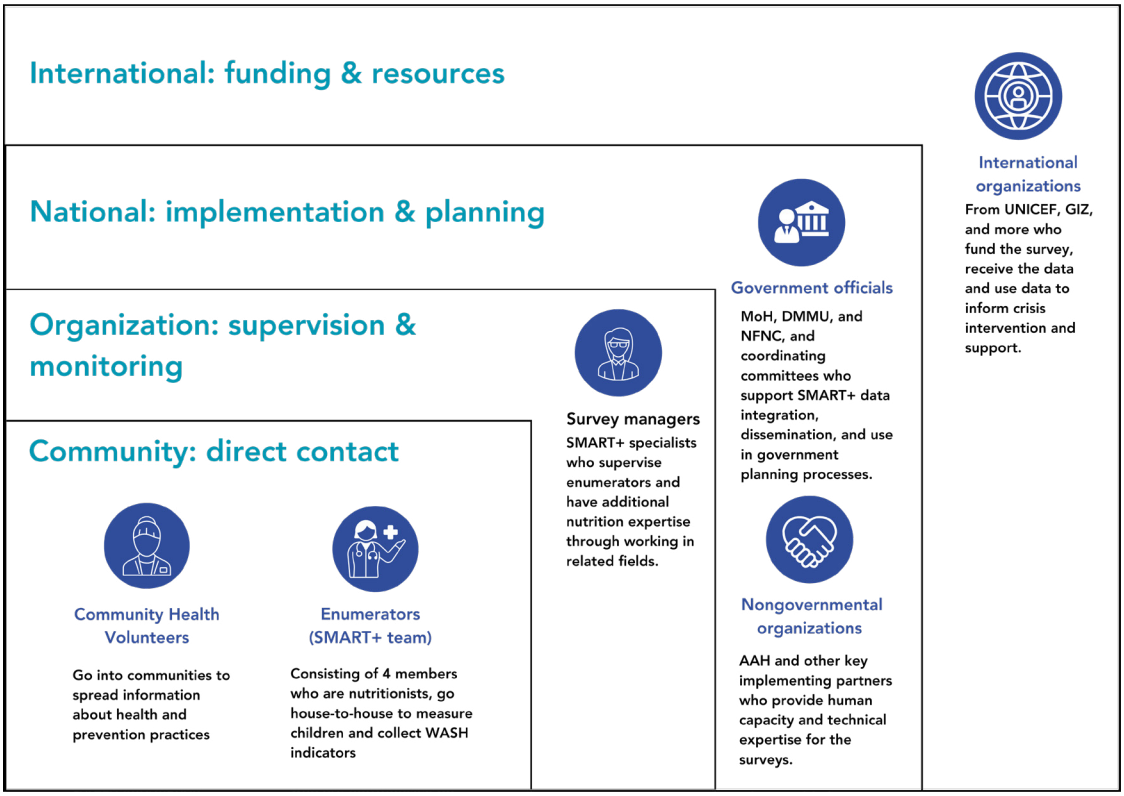


**Figure 6.** Stakeholder roles and responsibilities in the implementation of SMART+

for volunteers. This approach has been adopted since SMART was implemented in Zambia, ensuring that local resources and expertise were used. Enumerators completed a five-day training program covering the technical aspects of data collection, including standardization tests on anthropometric measurements, administering surveys, and using digital tools. Survey managers completed an eight-day training program focusing on advanced methodologies, including household selection, cluster sampling, and using SMARTcollect for digital data collection. Sessions emphasized team management, problem-solving, and supervision techniques.

To improve the quality of data, practical training involved practice sessions where enumerators take measurements with volunteer children. Each team's composition was determined by performance during training, ensuring that teams included experienced measurers and supervisors. Training was held at both urban and rural locations, depending on where enumerators were located, to minimize travel burdens for participants. Multiple managers mentioned that the tool is simple and straightforward to use, which minimizes confusion and challenges with using new technology.

# Conducting the SMART+ Surveys: Process, Priorities, and Stakeholder Roles

## Survey Priorities and Target Provinces

The May 2024 SMART+ survey was conducted in response to Zambia's national drought emergency, which affected over half the country's 116 districts and seven provinces. Six provinces — Lusaka, Western, Eastern, Southern, Central, and Northwestern — were prioritized for the surveys. The selection was guided by the


**Figure 7.** SMART+ survey team structure in the field

Zambia Vulnerability Assessment Committee (ZVAC) report, which identified high levels of food insecurity and malnutrition, particularly in regions experiencing AFI (acute food insecurity) phase 3 and 4 conditions, according to the IPC (Integrated Food Security Phase Classification). These provinces, facing severe crop losses and escalating malnutrition rates, became the focal point for intervention planning.

While the provincial-level insights are valuable, district-level disaggregated data are critical for tailoring responses to local conditions. National stakeholders, including UNICEF, emphasized the need to transition from periodic, emergency-focused surveys to routine SMART+ data collection.

By increasing the frequency of SMART+ surveys — ideally every two to three years — and ensuring data are disaggregated at the district level, Zambia could strengthen its capacity to monitor progress, identify underperforming regions, and respond effectively to emerging shocks. These improvements would complement existing demographic health surveys conducted every four years, bridging critical data gaps and ensuring that nutrition programming remains evidence-based and responsive to local realities.

## Data Collection

The first data collection using SMART+ in Zambia was conducted from 1 to 11 May 2024. Processes differed between rural and urban areas, given logistical challenges and specific contextual factors. In urban areas, surveys were completed in four days, facilitated by higher population density and easier accessibility. In rural areas, surveys took up to five days, hindered by difficult terrain, dispersed householders, and weather conditions, which increased travel time and complicated access to vulnerable communities.

The SMART+ survey has two key features:

1. **Engagement with the community.** Enumerators approach community leaders

before conducting the survey to get their approval. Leaders assist in mapping and segmenting clusters since they usually have a list of all houses in the community. The SMART+ survey's house-to-house approach allows enumerators to observe living conditions directly.

2. **Two-stage cluster sampling.** Since the number of houses to measure is large and it is not possible to visit every house, SMART+ included the two-stage cluster sampling method to ensure correct statistical representation of the population. Clusters (the group of houses selected to be measured and visited by enumerators) were selected using a probability-proportional-to-size (PPS) approach. The number of houses to be visited by surveyors reflects the size of the area to ensure geographical and demographic representation. This methodology ensured the representativeness of the data, enabling district- and provincial-level analysis.

## Challenges and Recommendations

Interviews with enumerators, survey managers, and supervisors revealed several operational and contextual challenges during the implementation of the SMART+ survey in May. Specifically, they told us about time constraints in completing surveys, community engagement and trust, geographical constraints reaching hard-to-reach locations, and regional heterogeneity.

**Time constraints.** Interviewees consistently highlighted constraints in completing the surveys within allocated time, for both rural and urban settings. In rural areas, challenging terrains — such as sandy or mountainous regions — and dispersed households significantly increased travel time.

Enumerators frequently began their days early, departing from district centres at first light to reach remote areas. When clusters could not be completed in a day, teams sometimes stayed overnight in the field. One survey manager explained, "When teams could not finish the required data collection of a cluster, they stayed overnight in the community and completed it the next day."

The time constraints placed immense strain on survey teams, often at the expense of their well-being. As one interviewee noted, "It was very challenging and, to some extent, stressful for the teams to get around to that time that we wanted to." Timing constraints were compounded by the pre-survey preparation activity known as listing. This requires enumerators to walk through the entire survey area, count the number of houses, and input the data into an app that calculates the number of houses they need to visit to ensure the sample is proportional to the population. In rural areas with dispersed houses listing can consume an entire day of the allocated field time. Some clusters marked on maps turned out to have few or no households, requiring enumerators to walk around to search extensively for households.

**Figure 8.** Taking a child's measurement for SMART+ assessment done by the community surveyors in Zambia (Photo by Action Against Hunger Zambia)

Time constraints are also driven by limited funding: extending fieldwork increases costs, making it unaffordable for enumerators to spend additional days in the field.

## Recommendations to Address Time Constraints

1. **Enhance pre-survey preparation.** Allocate a full day for household listing and cluster identification before the data collection process begins. According to an enumerator who conducted a survey at a rural area: "If the listing is done for you, then you need less days, but if you're the one listing … I think you need more days."

2. **Extend survey timelines.** Allow for additional time to accommodate logistical challenges, especially in rural areas with dispersed households and challenging terrains.

**Community engagement and trust.** Building trust within communities emerged as a significant challenge during survey data collection, particularly in urban areas. Enumerators reported encountering skepticism and resistance from community members who did not fully understand the survey's purpose. Their distrust was exacerbated by a lack of feedback loops, where survey findings do not always reach the local level, leaving communities unclear about the tangible outcomes of their participation. Currently, survey findings are shared with only high-level stakeholders such as at the TWG working groups or enumerators. However, there is no standardized method to translate the findings back to local health facilities or community members the data were collected from. Survey participants often expressed confusion about why survey teams measured malnutrition but offered no direct relief, such as food or other forms of support, which led to frustration and reduced cooperation.

Urban areas, especially in Lusaka, posed additional challenges with expectations of compensation for participation. Enumerators often had to invest significant time explaining the survey's purpose to gain consent, although resistance generally decreased once community members understood the objectives. One enumerator noted, "It gave us a challenge because some people were very skeptical about the survey … but we explained, and at last, we got what we wanted." In contrast, rural communities were less likely to expect remuneration, but logistical barriers, such as limited community engagement during the preparation phase, contributed to initial resistance.

## Recommendations for Community Engagement

1. **Share survey findings with communities.** Present survey results to communities to enhance transparency and build trust. Sharing insights helps communities understand the value of their participation, fosters inclusion in decision making, and reduces resistance to future surveys.

2. **Engage local leadership.** Involve district commissioners, chiefdoms, community health volunteers, and other respected community leaders in survey planning and announcement. Their endorsement can help address community-specific concerns and establish credibility. Their local knowledge can help convey information in ways that are most familiar to the community, and identify which insights are most important to communicate among all the collected data and findings.

3. **Increase survey frequency**. Conduct SMART+ surveys regularly to establish a routine health data collection initiative that will reduce skepticism over time.

**Navigation challenges.** Navigating remote or geographically complex areas posed significant challenges for enumerators during data collection. Maps.me provides enumerators with offline GPS navigation to locate remote households and communities during data collection. While useful in urban settings, this tool

was inaccurate in rural regions, leading to delays and inefficiencies. Survey managers often opted to engage local guides who had knowledge of the area to address these navigation difficulties. This approach was especially necessary in locations with distinct accessibility challenges, such as reaching island communities by boat or encountering wildlife on the road. Despite this measure, the uniform allocation of resources across all survey teams — due to the emphasis on consistent data collection and limited resources — meant that some teams encountered unforeseen geographical challenges upon arrival, for which they were unprepared.

## Recommendations to Address Navigation

1. **Collaborate with the DNCC for local coordination.** Survey teams should work closely with the District Nutrition Coordination Committee (DNCC) who has established networks with community leaders and local stakeholders. This can streamline coordination, ensuring that the survey process aligns with community dynamics and logistical realities.

2. **Engage local guides and wildlife officers.** Leverage local guides to navigate challenging geographic terrain safely and efficiently in regions with human-wildlife conflict risks.

3. **Tailor solutions to region-specific challenges.** Given the diversity of accessibility issues, planning region-specific logistics (e.g., securing boats or off-road vehicles) well ahead of time is crucial for timely and accurate household identification.

**Contextual gaps in data.** While the SMART+ methodology focuses on quantitative data, contextual social factors such as cross-border food trade and specific cultural practices were not adequately captured, limiting a comprehensive understanding of the drivers of malnutrition. For instance, a survey manager in Chipata, in eastern Zambia near the Malawi border, highlighted a significant challenge related to food availability in the region. Although the area experiences relatively good harvests, much of the food is transported across the porous border to Malawi. This depletes local food stocks, leaving households with insufficient reserves despite adequate harvests.

While capturing these social dynamics would enhance understanding of malnutrition drivers, stakeholders at the National Food and Nutrition Commission (NFNC) highlighted the need to maintain SMART+ as a streamlined quantitative tool for rapid assessment to not risk overcomplicating the tool. They noted, "We do not want to overload the SMART+ methodology. That would take longer to get things analyzed. But I know qualitative data can be subjective sometimes." They further argued for maintaining the tool's focus on quantitative data, which they described as "more objective, something you can't argue."

## Recommendations to Address Context-related Issues

1. **Post-survey focus groups.** Conduct structured feedback sessions with enumerators to capture their informal knowledge of localized causes of malnutrition, enhancing the contextual depth of SMART+ reports.

2. **Complementary qualitative data systems.** While keeping SMART+ streamlined for rapid assessments, integrate findings with external qualitative research studies in the final report to provide a richer understanding of malnutrition drivers without burdening the survey process.

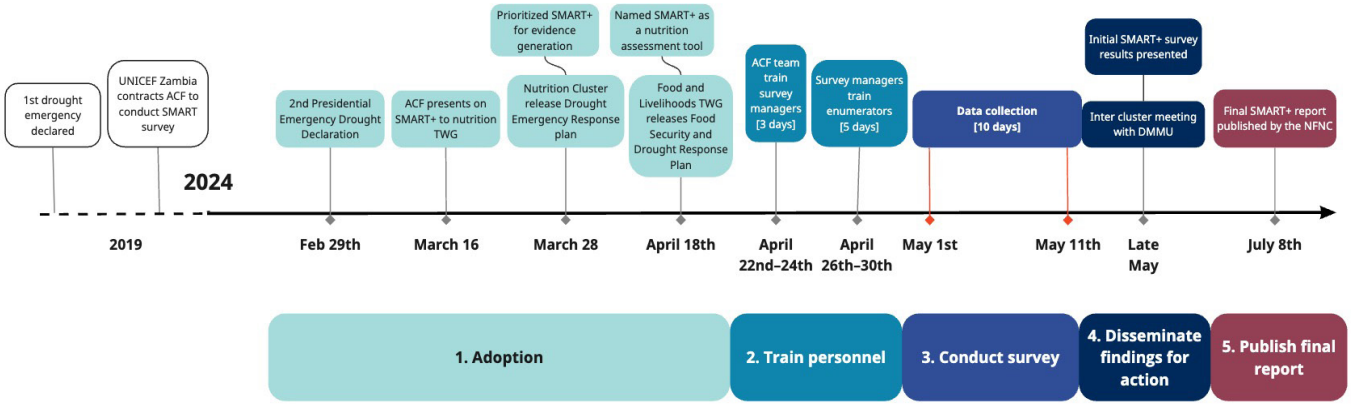


**Figure 9.** Timeline of SMART+ adoption and implementation in Zambia

## From Global Collaboration to Local Ownership: Adopting SMART+

> We feel that this [SMART+] is our program.
>
> —Ministry of Health official

The deployment of Standardized Monitoring and Assessment of Relief and Transitions ( SMART+) in Zambia was a coordinated effort across multiple government structures and technical working groups (TWGs) mobilized in response to overlapping crises, including a cholera outbreak and a drought emergency declared by the president in February 2024. After the drought declaration, UNICEF and Action Contre la Faim (ACF or Action Against Hunger) introduced the novel SMART+ tool, prompting a shift toward its adoption to enable faster, more comprehensive data collection and analysis. Key actors in the decision-making process included ACF, UNICEF, the National Food and Nutrition Commission (NFNC), and the DMMU, which oversaw the TWGs. Coordinated by the DMMU, TWGs acted as crisis response mechanisms, made up of stakeholders from government, UN agencies, NGOs, and private-sector actors such as mining companies. ACF was a crucial stakeholder across two TWGs: Nutrition, led by UNICEF, and Food Security and Livelihoods, chaired by the NFNC.

During these discussions, ACF delivered a critical presentation advocating for evidence-based responses, emphasizing the need to replace outdated 2018 survey findings with real-time data. However, this proposal initially faced resistance when stakeholders prioritized immediate crisis responses over data collection. Through negotiations and lobbying, including leveraging the NFNC's position within the Office of the Vice President, ACF secured approval for SMART+ by ensuring minimal costs to prioritize direct aid.

### Nutrition As a National Priority: A Catalyst for Adoption

In Zambia, malnutrition has remained a persistent issue. Pre-drought estimates indicate that over 40 per cent of children under age five suffered from chronic malnutrition or stunting, while acute malnutrition rates hovered around

4 per cent.[5] This underscores the pressing need for sustainable interventions to meet global nutrition targets, particularly as the country aspires to achieve middle-income status by 2030, as articulated in its Digital Health Strategy. The government called for urgent action, prioritizing food distribution while emphasizing the need to build resilience for future climate-related disasters.

The rapid adoption of SMART+ in Zambia demonstrates how leveraging government buy-in, aligning with national priorities, and fostering intersectoral collaboration can drive the successful implementation of innovative tools that reach the hardest to reach. This alignment made sure that SMART+ was regarded as a part of the country's development plans, rather than being viewed as a foreign solution imposed from external bodies.

A pivotal factor was the elevation of the NFNC to the Office of the Vice President in 2020. This strategic shift changed nutrition from a siloed issue within the MoH to a national priority, enabling the NFNC to secure funding, mandate cross-departmental collaboration, and engage traditionally unrelated sectors like defence. This institutional relocation broke down barriers to give the NFNC greater voice and access to various sectors. Their new status engages different sectors, facilitating a more integrated approach to addressing malnutrition because all health issues intersect. For instance, while initially skeptical, the Defence Ministry eventually recognized its role in addressing nutrition outcomes through activities like maize farming during droughts.

ACF and UNICEF leveraged this context to promote and support the implementation of SMART+. ACF highlighted the necessity of swift, high-quality data collection to address the drought crisis. Aligning SMART+ with Zambia's National Development Plan and key sectoral policies was crucial to its rapid adoption and ability to make influential and tangible impacts. This approach allowed the NFNC, a government entity, to directly coordinate the survey instead of relying on one NGO despite the tool's foreign origin. UNICEF emphasized that collaborative and practical planning with the government is crucial for sustainable development. Zambia's National Health Strategic Plan (NHSP 2022–2026) outlines a vision for fostering transparency, accountability, and fairness in health financing. The NHSP identifies shortcomings in real-time data collection and health information systems, underscoring the need to scale digital health technologies and incorporate them into healthcare delivery. SMART+ fits with these objectives, serving as a vital tool for real-time data collection to guide equitable resource allocation and targeted interventions.

Before conducting the survey, three main objectives were established to ensure all stakeholders were aligned on the survey's purpose:

1. Assess the nutritional status of children under five and women of reproductive age.
2. Collect data on food security, health, and WASH (water, sanitation, and hygiene) conditions.
3. Provide evidence for decision making on resource allocation and program interventions to mitigate the effects of drought.

The successful deployment of SMART+ depended on the alignment of government commitment, advocacy for evidence-based responses, and external technical support to facilitate cooperation among diverse stakeholders (including UN agencies, NGOs, and private-

5 "Immediate Action Required to Prevent Malnutrition Crisis Among Children in Zambia," UNICEF, 2024.

sector actors). By prioritizing nutrition as a cross-cutting issue and embedding it within broader national strategies, Zambia has demonstrated how intersectoral approaches can break down silos, secure budget commitments, and strengthen its capacity to address malnutrition sustainably. Such alignment ensured that SMART+ was not perceived as an externally imposed solution but as a natural extension of Zambia's development agenda.

## From Data to Action: Dissemination Pathways and Multi-level Impacts of SMART+

The dissemination of Standardized Monitoring and Assessment of Relief and Transitions (SMART+) malnutrition survey data has significantly influenced decision making across multiple levels in Zambia, from international stakeholders to local communities. As the central repository of this data, the National Food and Nutrition Commission (NFNC) plays a pivotal role in coordinating its flow. However, despite SMART+'s demonstrated impact in driving evidence-based interventions, a critical gap remains in ensuring the data effectively reaches and empowers community-level actors.

### Mapping the Data Flow

SMART+ data begins its journey at the NFNC, where it gains official validation by the Office of the Vice President. At the national level, NFNC coordinates with ministries, agencies, and international stakeholders by sharing findings through planning meetings, such as at the annual government planning cycle, which integrates evidence into the next fiscal year's strategies. This approach cascades downward to Provincial Nutrition Coordinating Committees (PNCCs) and District Nutrition Coordinating Committees (DNCCs), disseminating to subdistrict and local structures.

Because 80 per cent of funding for nutrition interventions comes from international NGOs and external partners, transparent and efficient data-sharing mechanisms are essential. Without external partners being able to integrate high-quality, timely data into their planning and interventions, the potential impact of SMART+ data remains constrained within government systems.

Key impacts relate to how the data move:

- *Upwards to international stakeholders:* SMART+ data inform global humanitarian organizations' efforts and resource allocations, such as UNICEF. The SMART+ findings prompted UNICEF to adjust its drought response by reallocating resources from the Eastern to the Southern Province, where malnutrition rates were highest. The World Bank also notes that they were leveraging data from SMART+ to further support projects designed to target malnutrition in Zambia.
- *Outwards to national and provincial levels:* SMART+ data give NFNC credibility in multi-stakeholder and cross-sector planning meetings to advocate for evidence-based resource allocation. This has strengthened NFNC's influence to prioritize nutrition over broader interventions.
- *Downwards to local actors:* At the district level, DNCC members are expected to disseminate findings within their respective departments and to local committees, including community health volunteers and community leaders. This decentralized approach aims to embed data-driven insights into grassroots action plans.

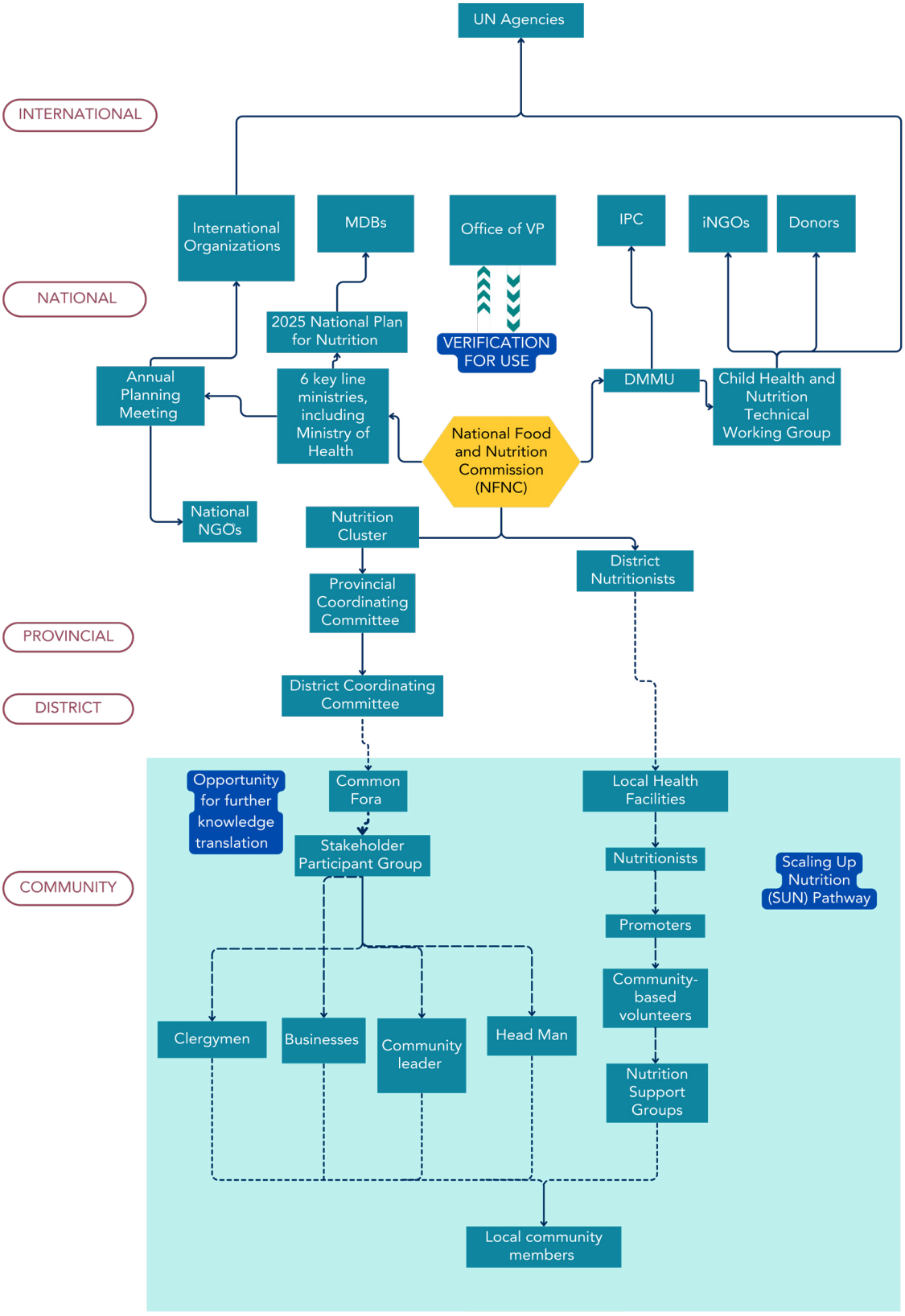


**Figure 10.** SMART+ data dissemination through five levels: international, national, provincial, district, and community

| International | National | Community |
|---|---|---|
| **Enhanced Resource Allocation**<br>SMART+ addressed a critical gap in the outdated 2018 ZDHS data. UNICEF leveraged SMART+ data to estimate wasting prevalence and allocate resources to the most affected areas.The World Bank uses SMART+ findings to enhance its malnutrition program targeting.<br><br>**Filling Knowledge Gaps**<br>SMART+ addressed a critical gap in the outdated 2018 ZDHS data. SMART+ reflects real-time challenges like drought, cholera, and COVID-19, enabling international actors to make precise, data-driven interventions. | **Improved Planning**<br>SMART+ data revised Zambia's emergency drought plan, adjusting Severe Acute Malnutrition (SAM) intervention targets from 51,000 to 43,000 children which optimized resources allocation based on actual needs.<br><br>**Strengthened Advocacy**<br>SMART+ findings empowered NFNC's persuasive power in cluster meetings (with private stakeholders) to keep nutrition a priority, boosted multi-sectoral collaboration, and strengthened national initiatives.<br><br>**Addressed Gender Disparities in Policy**<br>SMART+ identified a critical malnutrition crisis among pregnant and lactating women, with rates averaging 10% and reaching 15% in the hardest-hit regions (exceeding the global average by over 5%). This previously overlooked group is now monitored through MoH's nutrition performance indicators at annual planning meetings. | **Local Empowerment**<br>Engagement of community nutritionists as enumerators allowed them to gain contextual insights which enhanced relevance of local interventions to social and cultural malnutrition drivers.<br><br>**Localized Action Plans**<br>Community health workers used SMART+ findings to customize malnutrition prevention strategies by integrating cultural practices into local health facility programs. |

**Figure 11.** Impact of SMART+ from local to international levels

## Challenges and Recommendations: Strengthening Multi-level Knowledge Transfer

Despite its strengths, SMART+ faces significant challenges in ensuring its data empower stakeholders at the community level. An official at the Ministry of Health mentioned that "one of the challenges that we have is the reading culture," noting that Zambians are not inclined to read long documents or actively seek them out. They often need reminders about documents or prefer alternative methods of information dissemination. The ministry's previous attempts to spread important information included radio announcements, but this method is costly. SMART+ results' report contains statistical and technical information, making it difficult for those without training to understand. Connectivity is also an issue. An NFNC official noted "I can't get hold of an officer located within the community because it's in a poor network area." Zambia's widespread geography with 116 districts and corresponding district heads makes it difficult to coordinate and bring everyone together for knowledge-translation meetings.

As an NFNC representative noted, "We work well at the national level, but at the community level, the linkages are not strong. There's a gap there." Without addressing these disparities, SMART+ risks excluding the general population from its transformative potential, perpetuating inequities in community-level empowerment and action, particularly in rural areas. Local buy-in is needed for effective interventions.

Pathways to addressing this gap include:

**1. Leveraging existing structures**

- Use the Scaling Up Nutrition (SUN) pathway, which integrates community volunteers, promoters, and health facilities, to disseminate SMART+ data to local actors.
- Meet trusted community leaders such as headmen, church leaders, and business owners to provide them with translated insights from the report to share with the community to facilitate culturally resonant knowledge sharing.
- Involve community health volunteers by sending information to local health clinics.

These volunteers are more likely to reach vulnerable groups, such as pregnant women who do not officially register their pregnancy.

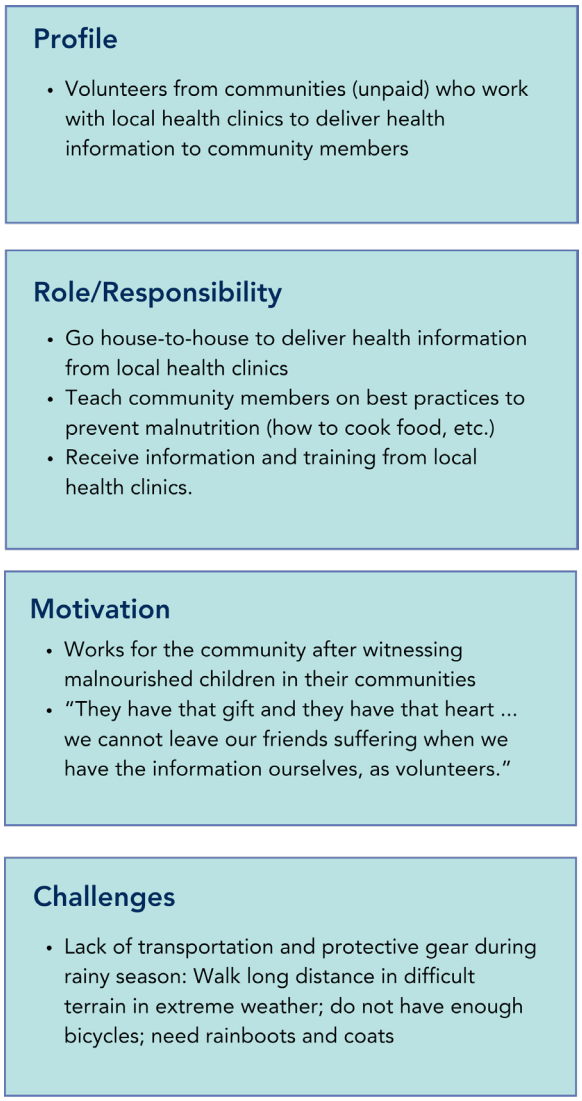


**Figure 12.** The profile of a community health volunteer

**2. Tailoring dissemination strategies**

- Create multiple methods of knowledge translation for different stakeholders.
- Develop simplified messages for mass media platforms (radio, television, and community gatherings) that focus on raising critical awareness about malnutrition and actionable steps rather than statistical details.
- Provide immediate feedback to communities during data collection to ensure understanding of how findings relate to them.

**3. Strengthening accountability and feedback mechanisms**

- Establish indicators to track dissemination efforts, such as the number of reports shared at DNCC and PNCC meetings, and monitor how these reports inform local planning.
- Incorporate dissemination requirements into performance appraisals for DNCC and PNCC members to ensure consistent follow-through.

SMART+ can achieve its transformative potential by bridging the gap between national systems and grassroots communities. By using existing structures, tailoring communication, and engaging local actors, it can serve as a model for multi-level, data-driven action against malnutrition.

# Securing Sustainability: Overcoming Funding Barriers to Ensure Longevity

## Funding Constraints: A Central Barrier to Sustained Impact

Zambia operates primarily in a development-focused context rather than a humanitarian crisis setting, which significantly shapes its approach to crisis preparedness and response. When the drought emergency was declared, the government activated response "clusters" coordinated by the Disaster Management and Mitigation Unit (DMMU). However, the predominance of a development-oriented

framework means that many partners in Zambia, including governmental and nongovernmental actors, are not specifically equipped for rapid emergency response. While climate-induced emergencies are becoming more frequent, the country's systems and partnerships remain better suited to long-term development rather than planning immediate crisis preparedness and intervention. This dynamic underscores the challenges and opportunities of implementing tools like Standardized Monitoring and Assessment of Relief and Transitions ( SMART+) in such a setting.

The SMART+ survey in May collected data during harvest season when food is more abundant. However, a nutritionist expert mentioned that health data require constant updates because it can change minute by minute. With the country transitioning into a lean season, it needs updated insights. Multi-stakeholder planning meetings held in July following the release of the SMART+ report identified the urgent need for a follow-up survey in October 2024 to enable pre- and post-analysis. Despite these plans, however, the follow-up survey was delayed to early 2025 because of resource constraints.

Stakeholders widely support the regularization of SMART+ but systemic challenges threaten its continuity. As a senior official at Action Contre la Faim (ACF or Action Against Hunger) Zambia explained, donor priorities often outweigh government interest in conducting regular surveys. With government resources stretched thin amidst overlapping crises, sustaining regular SMART+ surveys is contingent on securing external funding. This underscores a critical tension: while government buy-in is essential, the long-term success of SMART+ will depend heavily on addressing the broader systemic challenge of ensuring stable and diversified funding sources.

## Addressing Systemic Challenges Through Strategic Evidence Generation

Prior to the disaster, nutrition surveys were not prioritized in government budgets due to funding constraints. According to MoH representatives, the increased attention to nutrition accompanying the emergency drought response was an opportunity to engage resources from various partners. It took the worst drought in 60 years to unlock funding for nutrition surveys within international systems, despite the ministry's intention to translate long-term government intentions into action.

Considering the evidence landscape at the time of the emergency declaration, the Zambian government's rate of response during the disaster was constrained by two interlocked forces: human capacity and a "limited basket" of financial resources. According to government officials, these constraints elongated preparation, making implementations "quite slow." Regarding personnel, the Zambian government leveraged foreign expertise from cooperating partners, without whom the disaster response "would be challenging."

Zambia had to rely on financial and technical support from international donors such as UNICEF, GIZ, and the World Bank. To successfully obtain this funding, national bodies must present rigorous data that meet international standards. Beyond the Zambia Demographic Health Survey, malnutrition data are routinely collected at local health facilities through the Growth Monitoring and Promotion (GMP) program, a key component of the Scaling-Up Nutrition (SUN) movement in Zambia to end malnutrition. Because it is a regular method of data collection at a granular level, GMP data are credible for government purposes. However, government officials mentioned that there is still a need for SMART+ because international bodies do not

always consider GMP data to meet international standards.

The value of SMART+ lies at this critical inflection point by providing a baseline that aligns both government and external donors. By overcoming barriers to a timely and effective response, SMART+ facilitates the flow of international resources, accelerating response efforts.

## Recommendation: Building Local Capacity for Long-Term Resilience

Strengthening Zambia's internal capacity to conduct SMART+ surveys is crucial for reducing reliance on external funding and enhancing long-term resilience. Two complementary strategies have emerged to address this need: localizing survey implementation at the district level and institutionalizing SMART+ training in higher education programs.

**Localizing survey implementation at the district level.** UNICEF is exploring a new model to train district-level cadres of SMART+ nutritionist enumerators who can be rapidly deployed for surveys when needed. This strategy decentralizes survey responsibilities, shifting from the current provincial approach to district-specific surveys. For example, instead of requiring enumerators to travel between districts and incur significant allowances, local enumerators could conduct surveys while receiving minimal logistical support, such as a daily meal allowance. A UNICEF representative noted that this approach reduces costs and enhances the effectiveness of data use by ensuring district-specific insights are available for planning and decision making.

This model also promotes sustainable capacity building by creating a pool of district-level professionals who can execute surveys more frequently, moving beyond the current ad hoc and emergency-driven use of SMART+.

**Institutionalizing SMART+ training in higher education programs.** The second strategy focuses on embedding SMART+ training into Zambia's higher education curricula. Equipping students with foundational knowledge in digital data collection and nutrition assessments will provide a steady pipeline of skilled professionals. Informal initiatives at institutions like Levy Mwanawasa Medical University have already introduced students to SMART+ tools through nutrition assessment modules and encouraged them to apply for national enumerator recruitment. Expanding and formalizing these efforts across universities and colleges could significantly bolster Zambia's human resource capacity for nutrition data collection. This would particularly benefit critical government units, such as monitoring and evaluation and the DMMU, by ensuring a steady supply of graduates with the necessary expertise to conduct surveys and analyze data.

An MoH official highlighted the urgency of this approach, noting the severe shortage of SMART+-trained personnel within government institutions. By institutionalizing SMART+ expertise, Zambia can build a homegrown capacity to monitor and respond to malnutrition and other crises, reducing dependency on external consultants. Nutrition training in Zambia is still in its early stages. Programs integrating SMART+ will build on ongoing efforts to develop nutrition education while cultivating local expertise to strengthen the national SMART+ management team. By increasing local expertise, SMART+ can continue to evolve into a Zambian tool. With more Zambians managing the program, the tool's local identity will grow, bolstering lobbying efforts for its adoption as a regular national survey and strengthening advocacy for malnutrition relief.

## A Collaborative Path Forward

The sustainability of SMART+ hinges on balancing national ownership with international collaboration. Zambia's challenges reflect a broader issue in global development: the reliance on external funding to build internal capabilities. While digital tools like SMART+ demonstrate how technology can revolutionize crisis management and development strategies, Zambia's dependence on international aid highlights the need for a fundamental shift in financing models.

Blended finance could be a compelling solution, integrating public, private, and philanthropic capital to address immediate funding needs while fostering national ownership. By attracting foreign investment in digital health infrastructure, Zambia can align funding with national health priorities, ensuring investments support local strategies and maintain the country's agency in decision making. This approach provides a mechanism to ensure that financing is mobilized effectively and strategically allocated to generate measurable impact.

One of the key strengths of blended finance is its ability to incentivize investments from technology companies. As the World Economic Forum highlighted, investing in African health tech presents a significant opportunity for private firms seeking scalable impact.[6] Digital health tools can transform healthcare delivery, improve health outcomes, and address gaps in access across the continent. For Zambia, showcasing SMART+ as a pilot initiative could attract private-sector players by emphasizing its scalability, alignment with UN Sustainable Development Goals, and potential to demonstrate real-world impact. Public-private partnerships could further enhance this appeal by offering tax incentives, co-development opportunities, and strategic collaboration with NGOs and the Zambian government.

In addition to financial incentives, NGOs could play a pivotal role in managing investments. NGOs, such as ACF, bring project management expertise and a deep understanding of local contexts, enabling them to implement interventions that deliver tangible and measurable outcomes. By collaborating with investors or private entities that provide financing, NGOs can ensure that funds are allocated effectively and aligned with community needs. This approach bridges the gap between high-level funding mechanisms and on-the-ground implementation, enhancing efficiency and accountability.

*For Zambia, showcasing SMART+ as a pilot initiative could attract private-sector players by emphasizing its scalability, alignment with SDG goals, and potential to demonstrate real-world impact.*

With the increasing frequency of climate disasters, countries must adopt digitization for the rapid collection of data and timely responses and interventions for those who need them most. Zambia and its experience with SMART+ can serve as a case study for low-income countries disproportionately affected by climate disasters. The SMART+ model highlights the importance of working alongside governments to build capacity, align with national priorities, and eventually

6 Somto Chloe Keluo-Udeke, "Investing in African Health Tech Can Transform Health Systems," World Economic Forum, 26 June 2024.

transition programs to full national ownership. This approach ensures that external interventions provide immediate relief and create systems capable of sustaining long-term resilience.

To achieve long-term sustainability, stakeholders must focus on:

1. **Localized capacity building.** Empowering local NGOs and civil society organizations to manage funding and projects ensures interventions are relevant, measurable, and aligned with community needs.
2. **Innovative financing mechanisms.** Leveraging blended finance to integrate public, private, and philanthropic capital fosters flexibility and sustainability while attracting tech companies and private investors with tangible incentives. Such mechanisms can showcase Zambia as a hub for health-tech innovations, attracting tech firms eager to demonstrate impact in underserved markets.
3. **Cross-sectoral policy alignment.** Recognizing the interconnectedness of malnutrition, climate resilience, and economic development, governments can design holistic solutions that address multiple challenges simultaneously.

## Conclusion

SMART+ in Zambia exemplifies how systemic barriers within the existing aid structure inhibit the full potential of evidence-based interventions. Despite aligning policies, developing government accountability mechanisms, and localizing ownership, Zambia's reliance on external funding remains a significant hurdle to integrating and sustaining innovative tools like SMART+ within its national systems because foreign funding is often reactive, arriving during crises rather than supporting preventive measures. This dependency underscores a broader challenge in global development: enabling countries to transition from donor reliance to self-sufficient governance while maintaining the ability to respond effectively to crises.

Key external stakeholders, such as UNICEF, ACF, and GIZ, play a dual role in this ecosystem. On one hand, their technical support, funding, and advocacy have catalyzed the adoption of SMART+ and enhanced its credibility at both national and international levels. On the other hand, Zambia's ability to secure funding for evidence generation and national nutrition surveys was triggered by a national emergency — the 2024 drought. This reactive funding model highlights inefficiencies in current development financing structures that often prioritize crisis-driven responses at the expense of long-term resilience. While international donors are indispensable in filling immediate resource gaps, their contributions risk perpetuating a cycle of dependency. The Zambian government appreciates this external support but faces long-term sustainability and sovereignty limitations, which it aims to address through strategies outlined in the National Health Strategy Plan for 2022–2026.

Through this plan, Zambia has articulated its commitment to reducing reliance on external aid by strengthening domestic systems, fostering local ownership, and building capacity to sustain initiatives like SMART+ independently over time. The government's structures, such as TWGs and district meetings, promote cross-sector collaboration, but quality data are essential for guiding non-nutrition sectors toward actionable solutions.

The insights from Zambia's experience with SMART+ underscore a powerful opportunity for the country to recognize and leverage the transformative potential of digitized data systems. SMART+ illustrates the necessity of positioning nutrition as a core priority within Zambia's national strategy — not as an auxiliary

concern but as a foundational pillar that directly influences health, resilience, and development outcomes. By institutionalizing this approach, Zambia can solidify its commitment to data-driven governance, ensuring that nutrition remains central to public health and broader policymaking.

This deployment of SMART+ aligns with Zambia's need to address the broader implications of climate change on food security and resilience. By adopting and championing data digitization, Zambia has the opportunity to take a leadership role in multilateral environmental agreements and forums such as COPs, advocating for African nations' interests and demonstrating how high-quality data can help countries transition from reactive responses to preventive measures in combatting climate-induced crises.

By embedding regular nutrition surveys into its national strategy and leveraging SMART+ as a tool for evidence-based policymaking, Zambia has the potential to position itself as a leader in health data innovation across Africa. However, this potential should be approached with caution: the scalability of Zambia's experience might require adaptation to different governance structures, resource environments, and local contexts in other countries. Political will, digital infrastructure, and capacity-building efforts will be critical to replicating similar outcomes elsewhere. This approach enhances Zambia's national strategy and inspires other countries on the continent to adopt similar methodologies, fostering cross-border collaboration and driving regional progress in combatting malnutrition and addressing climate-related health challenges. By championing innovations like SMART+ and showcasing the transformative impact of evidence-based, digitized solutions, Zambia can solidify its position as a model for resilience and sustainable development, advancing health and development outcomes across the region.

**Figure 13.** The research team visit a community health centre in Rufunsa, Zambia (photo by Moni Kim)

# Research Team

**José Arsenault-Moriel** is a fourth-year student at the University of Toronto pursuing a bachelor of arts in peace, conflict, and justice and political science. Having lived in six developing countries across Latin America and Sub-Saharan Africa, he has gained an interest in understanding the complexities of international development. He has worked in NGOs, embassies, academia, and consulting, with a particular interest in development finance for sustainable development. He currently contributes his interdisciplinary knowledge in development finance consulting and research at the Munk School of Global Affairs & Public Policy.

*"This research has significantly broadened our understanding of public health and food insecurity, particularly within Zambia, where the malnutrition crisis is exacerbated by climate change. Addressing this issue requires technological advancements, which in turn require adequate funding and financial support. This underscores the imperative for collaboration across diverse fields to advance sustainable development. Moreover, the willingness of individuals to support one another and the government's commitment to fostering development play crucial roles in addressing these challenges.*

**Molly Graham** is a fourth-year international student at the University of Toronto, pursuing a combined honours degree in public health, political science, and critical equity studies on a Lester B. Pearson International Scholarship. She has conducted research with the University of Oxford Department of Social Policy and Intervention and interned with the Brookings Institution's Center for Sustainable Development in Washington, DC. In both theory and praxis, Molly is committed to shifting international frameworks toward environmental justice — empowering local actors, combatting capitalist realism, and promoting Indigenous ways of knowing.

*This experience has not only deepened our appreciation for the resilience and solidarity of the Zambian people but also reinforced the importance of collaborative efforts between communities, governments, and international partners in overcoming complex health and environmental challenges."*

**Minh Nguyen** is a fourth-year bachelor of commerce student at the University of Toronto, specializing in management with a minor in economics and a focus in strategy and innovation. Aside from her work as a researcher, Minh has experience working with nonprofits and businesses to develop and implement sustainability strategies that advance environmental, social, and governance (ESG) goals for the transition to sustainable practices. She was a Global Goals ambassador, advocating for the involvement of youth toward the achievement of the SDGs and has volunteered with various organizations for advocacy, gender equality, prevention of drug usage, etc.

**Leo Mukonka** completed a master of science degree in project management and a bachelor of science in agricultural extension. He is a manager for monitoring, evaluation, accountability, and learning (MEAL) at Action Against Hunger Zambia. Prior to this role, he was a monitoring-and-evaluation specialist at World Vision. Leo is an experienced project management professional adept in monitoring and evaluation across diverse sectors including agriculture/livelihoods, nutrition and health, environmental management and biodiversity, WASH, education, social protection, and governance.

**Moni Kim, MPH**,is the senior research program and engagement officer at the Reach Alliance and leads the student leadership and research program across the global institutional partners. She has extensive experience working at leading development organizations to mobilize international partnerships with civil society, academic institutions, government, and private stakeholders. These collaborations involved scaling up local and global responses to HIV prevention and treatment efforts in sub-Saharan Africa and expanding innovative youth entrepreneurship among some of the world's most marginalized communities. She has contributed to a range of critical public health projects that advanced health and human rights including work with Indigenous peoples, incarcerated populations, vulnerable seniors, and refugees. Moni holds a Master of Public Health from University of Toronto and a certificate in International Development from the Coady International Institute at St. Francis Xavier University.

**Avni Shah** is an associate professor of marketing in the Department of Management at the University of Toronto Scarborough, with a cross-appointment to the marketing area at the Rotman School of Management and the Munk School of Global Affairs & Public Policy. Shah investigates how payment influences consumer decision making and consumer well-being, particularly in financial and health contexts. She was the faculty mentor on the 2018–2019 Reach project on Ethiopia's Productive Safety Net. She has also advised international organizations such as the United Nations, the World Bank, the Consumer Financial Protection Bureau, the Financial Consumer Agency of Canada, South African National Treasury and Revenue Service, United Kingdom NEST pension group, South African government's pension group, and the Organisation for Economic Co-operation and Development (OECD).

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Action Against Hunger is a global humanitarian organization committed to ending hunger and malnutrition. Founded in 1979, the organization focuses on saving lives by preventing, detecting, and treating undernutrition, particularly during and after emergencies caused by conflict, disasters, and food crises. It provides life-saving services such as nutritional support, access to clean water, food security programs, and health system strengthening in over 50 countries. Action Against Hunger is driven by a mission to empower vulnerable communities with sustainable solutions to achieve long-term food security and resilience. Through innovation and advocacy, it works to create a world free from hunger.
**https://www.actionagainsthunger.org**

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