



Global Diet Quality Project

MEASURING WHAT THE WORLD EATS

INSIGHTS FROM A NEW APPROACH



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Foreword

It is extraordinary that a leading driver of death and disease—poor diet quality—is so infrequently monitored. Typically diet quality in a given country is assessed no more than every 5 to 10 years, if ever, with the analysis of data taking another few years. Until now.

This report—a collaboration between Gallup, Harvard University, and the Global Alliance for Improved Nutrition (GAIN)—outlines a new approach to collecting information on what the world eats. It showcases a pioneering questionnaire that takes just five minutes to complete, is fully validated against much more expensive existing methods, and can generate available data within a matter of weeks. This new approach reveals differences between what men and women in rural and urban areas eat, and highlights the consumption of foods that are health promoting and those that are not. It opens up a whole new map of diets, globally and subnationally.

The results in this report benefit from Gallup's global platform, which allows us to collect robust diet quality data for 41 countries (with plans for 140 countries to be assessed periodically). The analysis highlights the parlous state of diets worldwide. It is clear from the findings that higher income levels are no guarantor of healthier diets. Equally, this questionnaire can be collected on subnational platforms to assess, say, the near real-time impacts on diets of shocks such as Covid-19 and the repercussions of the invasion of Ukraine.

In short, the new methodology is a game changer. Now there are few excuses for inaction to improve diets. This is the mission of GAIN and our partners: to make healthier diets from sustainable food systems more accessible for all, especially the most vulnerable. Whether the decisions are about which foods to incentivize the production of, which local and national food businesses to support, how to strengthen nutritious food markets, how to make nutritious foods more affordable, how to curb the consumption of foods that are unsafe or damage health, or how to valorize healthy foods, decision makers now have a sound basis on which to make—and justify—their decisions.

The map of what the world eats just became a lot clearer, giving all of us a critical tool—and a clear mandate—to navigate the terrain more adroitly to plot multiple pathways toward healthy diets.

Lawrence Haddad
GAIN Executive Director



Executive summary

Diet quality is critical for human health. Current diets are the main drivers of ill health and premature mortality, with negative spillover effects on the environment and economy.

Monitoring diet quality globally is thus essential for holding decision makers accountable for progress toward global nutrition, health, and development goals. Yet there has been no way of monitoring diet quality in a credible, affordable, and timely way. Gallup, Harvard University, and the Global Alliance for Improved Nutrition teamed up to overcome this challenge by initiating the Global Diet Quality Project. Through this project we have created a new approach that enables countries to track diet quality year to year, seasonally, or even more frequently. The new approach allows users to investigate both people's overall dietary adequacy *and* their consumption of foods that protect against or increase risk for noncommunicable diseases (NCDs). The project has worked with the Gallup World Poll data collection platform to provide the first round of diet quality data from 2021 for 41 countries, representing two-thirds of the world's population. The project aims to collect data for 140 countries in the future.

This new approach and the initial round of data collection have generated several key insights:

- » The Global Diet Quality Project enables monitoring of diet quality data worldwide through the use of a standard questionnaire called the Diet Quality Questionnaire (DQQ). Data collection using the DQQ takes about five minutes per respondent and requires no specialized nutrition expertise to administer. The DQQ has been adapted for each of more than 100 countries, with the contribution of expertise from nearly 800 individuals worldwide. Country-adapted DQQs are freely available and ready to use. The resulting diet quality data from the Gallup World Poll are also freely available and can be disaggregated by gender, age, urban or rural locality, and socioeconomic indicators.
- » Minimum Dietary Diversity-Women (MDD-W), an indicator of the micronutrient adequacy of women's diets, varies widely from 36% to 89% across 37 low- and middle-income countries. It tends to be higher in urban areas and among those who report having enough money for food. This report offers the first cross-country database of MDD-W.
- » A new indicator called All-5 provides a way to monitor the prevalence of consumption of all five food groups commonly recommended for daily consumption in national food-based dietary guidelines worldwide. In most countries

(34 out of 41), less than half the population is consuming diets that contain all five recommended food groups. Even in the country with the highest prevalence of All-5, more than one-third of the population is not consuming a diet that minimally adheres to dietary guidelines. All-5 is similar among women and men in most countries but tends to be somewhat higher among men and in urban areas.

- » New indicators called NCD-Protect and NCD-Risk reflect protection from and risk for NCDs, respectively. Countries with higher (better) NCD-Protect scores also tend to have higher (worse) NCD-Risk scores, indicating that countries tend to face dual challenges related to overall diet quality: a struggle to increase consumption of health-protective foods while also limiting consumption of unhealthy foods. NCD-Protect is not significantly different between women and men in most countries. In many countries, NCD-Risk is significantly higher among men and in urban areas.
- » People with more years of education and who have enough money for food tend to consume more adequate diets. In low- and middle-income countries, more-educated and wealthier people also tend to consume more foods associated with increased NCD risk, but this does not appear to be the case across high-income countries. Higher income helps improve access to healthy diets but does not guarantee healthy diets are consumed.

To date, investing in high-quality dietary data has been expensive and therefore intermittent. The DQQ is a game changer. Now there is no excuse: diets can be robustly monitored around the world.

The findings on 41 countries presented in this report from the 2021 Gallup World Poll demonstrate the potential of these data to monitor diet quality, in terms of both dietary adequacy and protection against and risk for NCDs. Every country's average diet has strengths and weaknesses. These data generate insights into which ways diets are unhealthy, where, and in which population groups. If countries use the DQQ at the subnational level and in different seasons, even greater insights about trends and disparities could be gained.

We must act now to measure what the world eats. Measurement sparks and guides action. Guided by these new data, we must take urgent action to tackle unhealthy diets—the main factor threatening human health, while also affecting the environment and economies in all countries worldwide.



Creating a lean, reliable, and scalable platform for high-frequency data on diet quality in Rwanda

RHYS MANNERS AND JULIUS ADEWOPO

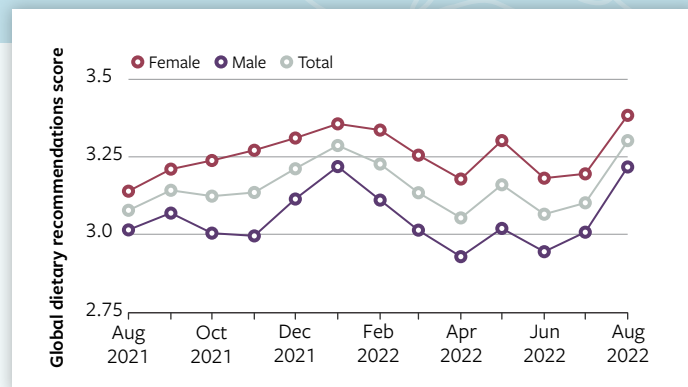


FIGURE S1.1. Global dietary recommendations score varies between Rwandan women and men and over time. Global dietary recommendations scores are on a scale from 0 to 18.

CGIAR, in collaboration with the Government of Rwanda's Ministry of Agriculture (through the Rwandan Agricultural and Animal Resources Board) and Viamo (an information and communication technology company), has piloted a generic, lean, and scalable data collection system for high-frequency collection using the DQQ. The system allows users of both smart and basic or feature phones to participate. Respondents can anonymously respond to the DQQ at their convenience. Participation is encouraged through a small payment (US\$0.30) upon response.

From August 2021 to August 2022, the system generated 87,569 spatially distributed data records. Responses from each respondent cost the project less than \$1 to collect and took less

than 15 minutes. While the survey covered the entire country respondents tended to be younger and middle-income, with respondents normally distributed across the five economic classes. Preliminary results show that younger, female, rural respondents from middle-income groups have the diets with the lowest NCD risk, when considering both NCD-Protect and NCD-Risk scores.³⁰ Figure S1.1 demonstrates the benefits of high-frequency monthly data collection, showing that women have higher global dietary recommendation scores than men.

These data also show how diet quality oscillated seasonally throughout the year. These data can provide relevant insights into seasonal trends in diet quality (based on preharvest scarcity or food price fluctuations), and how traditional hunger months (March and August), and potentially the Ukraine crisis, affect diet quality. The trends of all indicators that can be constructed from the DQQ can be explored in more detail in the interactive dashboard (www.dietqualitymap.org) (Figure S1.2).

An upcoming study of the remote phone-based system will test its validity and reliability compared with face-to-face data collection. Successful validation would reinforce the potential to develop this pilot into a lean, reliable system for high-frequency dietary data collection at scale. Learnings from the project suggest it is important to engage local stakeholders early in the process to ensure buy-in and facilitate successful implementation.

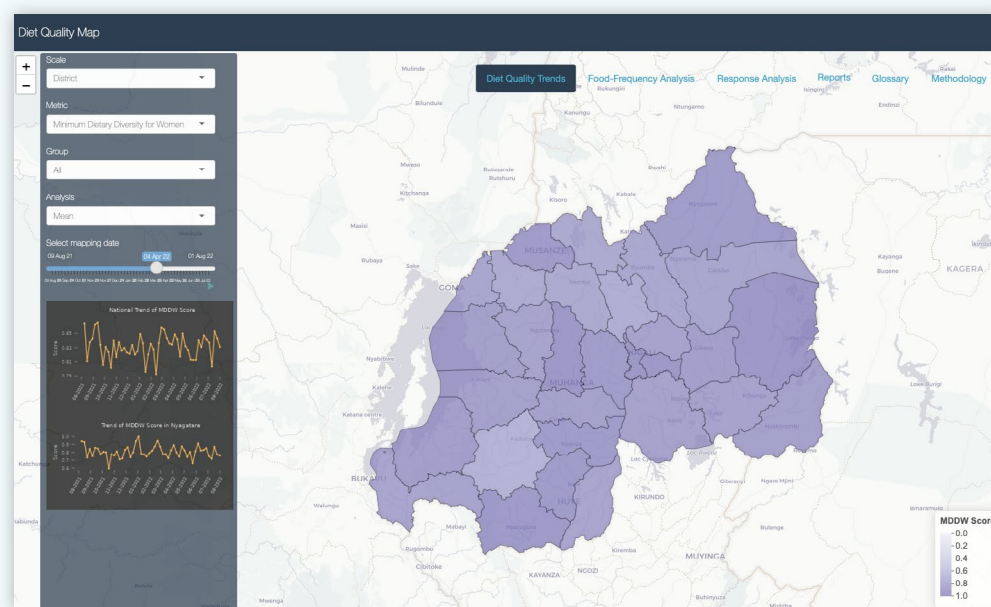


FIGURE S1.2. The interactive dashboard allows the analysis of spatiotemporal trends in DQQ indicators.



routine and frequent data collection, can enable countries to respond better to both acute and chronic challenges in specific areas—for example, after a natural disaster or in areas of the country experiencing chronic seasonal challenges in consuming healthy diets.

As a low-burden, affordable tool, the DQQ brings the capacity to monitor national diet quality within reach for the many countries that need it. Out of 110 countries that prepared a United Nations Food Systems Summit paper, 79 countries listed healthy diets from sustainable food systems as one of their top priorities (www.fao.org/datalab/dashboard/food-systems-summit). These countries will need to create monitoring frameworks to help track national-level progress toward their stated priorities. Until now, establishing national-level systems to monitor the foods populations consume has been a challenge owing to the lack of a feasible and cost-effective data collection method.

Countries can also use the data on diet to monitor both long-term shifts, such as dietary and nutrition transitions, and the dietary effects of short-term shocks, such as the Covid-19 pandemic or acute inflation. When countries collect their own data as has been done in Rwanda (www.dietqualitymap.org),³⁰ differences at the regional or provincial (or state) level become apparent and can be useful to inform targeted action. Spotlight 1 highlights a continuous 12-month diet quality monitoring effort conducted jointly by the Government of Rwanda, CGIAR, and the company Viamo using the DQQ.

FUTURE DIRECTIONS

The DQQ and its standardized set of indicators can also potentially be used to monitor diet quality at subnational and program levels. Many countries have decentralized decision-making to provincial or local levels, where policy decisions are now made and monitored. Accountability mechanisms to monitor progress at this level are critically important for both government and civil society. Food security and nutrition programs delivered at the community level often use dietary improvement as an outcome indicator. In these situations the DQQ may serve as a standardized and cost-effective monitoring approach. Spotlight 2 describes how diverse stakeholders in Mozambique with a collective interest in integrating diet quality monitoring into subnational programs are engaging with the DQQ and its potential use as a monitoring tool. The type of data and indicators that can be collected by the DQQ can complement other approaches countries use for dietary assessment in quantitative dietary intake surveys.

At the program level, the DQQ can help broaden the range of groups for whom dietary quality is measured. WHO and UNICEF recommend using certain indicators to assess infant and young child feeding practices, and the DQQ can help users calculate these indicators for other age groups. For example, calculating the prevalence of sweet beverage consumption or zero vegetable or fruit consumption across age and gender groups will allow for a broader understanding of diet across the lifecycle and provide deeper insights into barriers and opportunities to improve diets. If women or men are consuming a food group at a much higher prevalence than that found for infants and young children, the programmatic implications will be different than if the prevalence of consumption is the same across age and gender groups.

The DQQ can also help standardize collection of data for, for example, the MDD-W and MDD for infants and young children—well-known indicators endorsed by FAO, UNICEF, and WHO and recommended for use in population-level program monitoring and evaluation.^{26,31} The World Food Programme, the International Fund for Agricultural Development, and Deutsche Gesellschaft für Internationale Zusammenarbeit have all used MDD-W as a monitoring and evaluation indicator in large-scale programs.²⁶ There are different approaches to collecting MDD-W data (for instance, the open recall method and the list-based method), and differences in the prevalence of MDD-W can occur when evaluators use diverse data collection tools.³² Although the choice of data collection tool should be driven by the program or research objectives, adoption of one standardized data collection method would allow for better comparability across programs and over time. When the objectives are suited to list-based data collection methods, the DQQ can be used as a standardized data collection tool for MDD-W and MDD for infants and young children in program monitoring and evaluation cycles.

The Gallup World Poll data and tools highlighted in this report demonstrate the feasibility and utility of diet quality monitoring, alongside insights about diet quality and disparities across and within countries. Data collection needs to become embedded and owned within national systems to solidify the effort to create a global diet quality monitoring system over the long term. Diet quality, with its impacts on human, economic, and environmental health, is not a problem for only a few countries, but a global issue that requires globally comparable data across all countries. With feasible and valid tools now available to provide useful indicators of diet quality, the vision of a global monitoring system for healthy diets is now within reach. For the first time, we have established infrastructure for tracking diet quality and can now measure what the world eats.

