



Global Diet Quality Project

MEASURING WHAT THE WORLD EATS

INSIGHTS FROM A NEW APPROACH



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SCHOOL OF PUBLIC HEALTH
Department of Global Health
and Population



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

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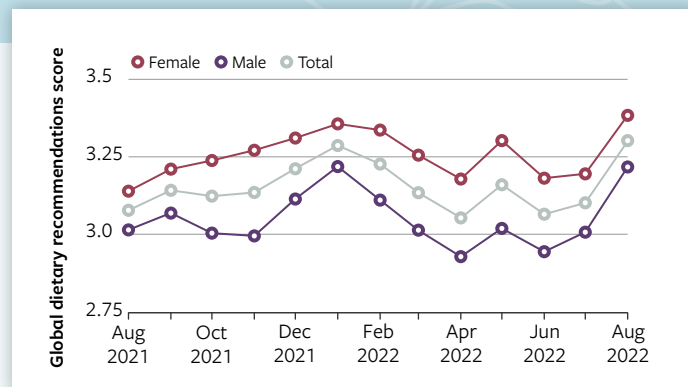


FIGURE S1.1. Global dietary recommendations score varies between Rwandan women and men and over time. Global dietary recommendations scores are on a scale from 0 to 18.

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.

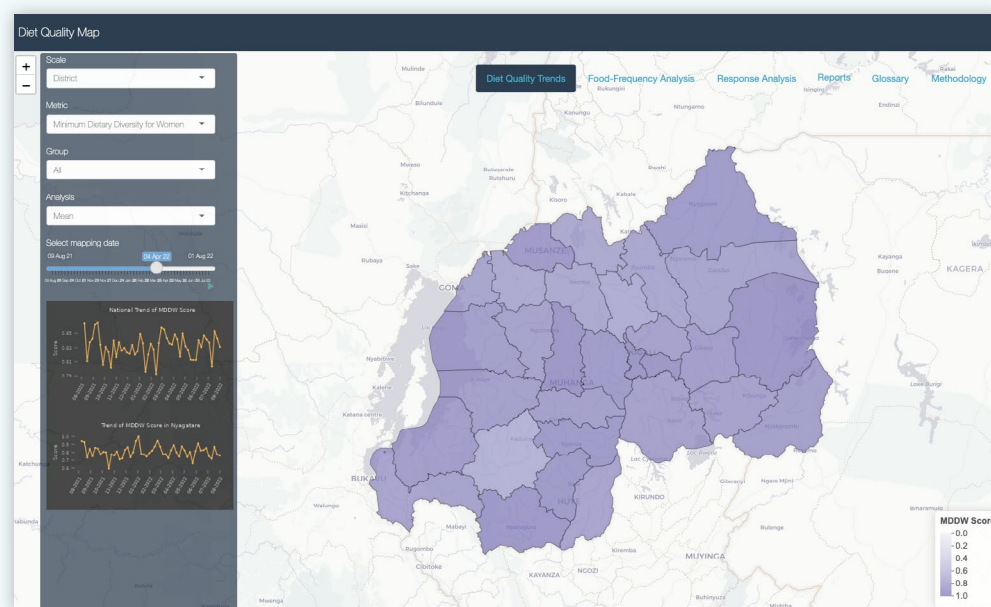


FIGURE S1.2. The interactive dashboard allows the analysis of spatiotemporal trends in DQQ indicators.



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.

