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**MRS Awards 2023**  
International Research

**Winner**

**Gallup**  
**Harvard T.H. Chan School**  
**of Public Health**  
**Global Alliance for**  
**Improved Nutrition**

**The Global Diet Quality Project**

## Summary

Global malnutrition is one of the most pressing issues facing humanity. However, there has always been a critical knowledge gap at the heart of the fight against malnutrition: understanding what the world eats. The Global Diet Quality Project (GDQP) addresses this need. It is the world's first framework for measuring diet quality.

The GDQP is underpinned by the innovative Global Diet Quality Questionnaire (DQQ), which collects food group consumption data at the population level to measure diet quality and adequacy. This new tool takes just five minutes to administer by non-nutrition specialised enumerators, providing a rapid, cost-effective instrument compared to traditional measurement techniques that require long interviews from nutrition experts.

To date, nationally representative diet quality data have been collected for 56 countries — covering over two thirds of the world's population — and made freely available through the project's open-source platform. The data paint a bleak picture of the parlous state of global diets. Plans to collect data for 140 countries periodically will continue to build up the picture of global diets. The GDQP has already redrawn the global map of diet quality and given policymakers a valuable tool to tackle global malnutrition.

## Synopsis

### The Problem of Diet – and Measuring It

Diet is consistently ranked as the top risk factor in the global burden of disease. It affects individuals and society in significant ways. Poor diet and malnutrition are linked to non-communicable diseases including diabetes, heart disease, stroke and cancer. Global estimates suggest that about half of the world's population suffers from some form of malnutrition, costing the global economy around \$3.5 trillion annually.

Monitoring global diet quality is essential in driving accountability to nutrition, health and global development. To address malnutrition and its related health and economic impacts policymakers need data that are credible, affordable and timely. Unfortunately, despite the importance of a good diet to a good life, a persistent global data gap has stymied progress in the fight against malnutrition.

Traditional methods of collecting dietary intake information are time and resource intensive and differ between countries. They depend on past 24-hour recall records of food items consumed in terms of grams and calories, requiring technical nutritional knowledge that is often limited in lower-income countries. As such, national dietary intake surveys cost millions to implement and require extensive training to administer. Once data are collected, dietary expertise is again needed to perform analysis. Years can pass until findings are released.

There has hitherto been no single tool or data source responsible for tracking global diets. Until now.

### The Solution: The Global Diet Quality Project

The Global Diet Quality Project (GDQP) is the first global initiative to address this critical data gap. In 2016 Gallup brought together Harvard T.H. Chan School of Public Health, and the Global Alliance for Improved Nutrition (GAIN) to understand what the world eats and identify where action is needed to address global malnutrition. The GDQP is the world's first routinely collected, standardised, globally implemented, comparable source of diet quality data. The ongoing goal of the project is the extensive uptake of the tool by national governments, NGOs and international organisations for implementation in their own data collection efforts.

The GDQP is underpinned by the Diet Quality Questionnaire (DQQ). The DQQ has two aims: a) to capture diet adequacy and b) to understand diet components that protect against or increase the risk of noncommunicable diseases. It was designed to gather comparable, interpretable data in an accessible and cost-efficient way, unlike traditional methods used in nutrition research. It therefore required several innovations in its development.

- To collect globally *comparable* diet data, the questionnaire assesses the consumption of items across food groups utilising a list-based approach. The DQQ measures 29 main food groups —g., dark leafy green vegetables, vitamin A-rich fruits — that have been selected for their relationship to nutrition, sustainability and alignment with United Nations indicators.

- The DQQ can be *adapted* to every country's most common food items across food groups, such as the example of Botswana provided as an illustration. As such, the DQQ produces cross-country comparable data, while still considering the unique foods commonly consumed as part of a country's cuisine. To date, the GDQP has customised about 120 country-level DQQs, consulting with over 850 experts in the field of nutrition: a major participatory effort from the global food community. Semi-structured interviews with key local informants identify commonly consumed foods and their commonly used names. The tool has been refined through more than 100 cognitive interviews in six languages for linguistic and cultural relevance and validated against traditional diet measurement methods.
- The DQQ is *accessible* to implement and respond to. Using food groups to measure diet quality requires minimal specialised knowledge by the enumerator. It takes around five minutes to answer and was designed to present a low cognitive burden for respondents. Unlike previous diet quality assessment tools, it does not require the respondent to self-categorise food items into groups, or to estimate frequency of consumption; both processes that can introduce bias and error into the data. An example of the questionnaire being administered is given as an illustration.
- The speed and simplicity of the DQQ make it more *cost-efficient* than traditional dietary intake methods. It is estimated that each nationally representative DQQ survey effort costs about 1% of what is required for traditional dietary intake surveys.
- The pace at which the DQQ delivers robust dietary intake data — available within a matter of weeks — has transformed how we *interpret* global food consumption and diet adequacy. Freely available syntax to analyse the data means that results map onto well-established extant measures used by the international nutrition community, such as minimum dietary diversity for women (MDD-W).

Gallup has used the World Poll to capture the dietary patterns of the world between 2020 and 2023. To date, the consortium has released dietary data for 56 countries, accounting for over two-thirds of the world's population with plans to collect data from 140 countries periodically. The GDQP has already demonstrated the poor state of global nutrition. Key global findings include higher income levels being no guarantee of better-quality diets, and in some countries as many as a quarter of adults do not consume either fruit or vegetables daily.

### The Impact

The impact of the GDQP goes far beyond the tool created to measure diet quality. It is valuable because of its contribution to the public good, its incorporation into efforts by other major organisations and ongoing local outreach efforts.

**Freely Available Tools:** The GDQP was created as a global public good which can be used by anyone interested in improving what the world eats. DQQ data are made publicly available for use and uptake at no cost. The Diet Quality

Database — freely available online and shown as an illustration — is the first global, gender-disaggregated, publicly available source of dietary intake data. It provides a valuable resource for policymakers, researchers, businesses, media and the nutrition community in addressing malnutrition. Translated, customised country questionnaires and indicator syntax for analysis are also made freely available, meaning that any other organisation could easily deploy it.

**Rapid Uptake of Tools:** The DQQ tool has already been adopted by several international agencies. The U.S. Agency for International Development (USAID) has incorporated the DQQ to measure minimum dietary diversity for women, as has the Demographic and Health Surveys (DHS). The Learning Network on Nutrition Surveillance (LeNNS) uses the DQQ to develop long-term solutions to food insecurity in eight countries in East Africa. Additionally, the Rwandan government has piloted a monthly data collection system using the DQQ, demonstrating how diet quality oscillates over time. When countries like Rwanda collect their own data, regional differences become apparent and can be used to inform targeted action.

**Stakeholder Engagement:** The GDQP conducts dissemination efforts around the world. The GDQP global project launch event took place in October 2022 in Washington, D.C., attracting stakeholders from organisations such as the UN Food and Agriculture Organization (FAO) and from academic, NGO and business sectors alike. Other global dissemination activities have included an event at the Nutrition for Growth summit in 2021, and a scientific session at the 22<sup>nd</sup> International Union on Nutrition Sciences in Tokyo.

**Country-level Briefings:** The GDQP is committed to local outreach efforts to increase local uptake of the approach. In-person events have been held in Mozambique, Ghana, Nigeria, Malawi, Pakistan, India and the U.S. focusing on national DQQ results. For each country where the GDQP takes place, the project releases a two-page brief covering key findings and policy implications. These are designed to support disseminating country-level findings and are easily referenced by local and global stakeholders. For instance, UNICEF Laos used a county-level DQQ report for their own national events on nutrition.

*“The DQQ has supported us in focusing the attention of policymakers on the poor quality of diets in Lao PDR during a challenging period where food security faced many threats... the DQQ opens greater possibilities for monitoring diets to track the impact of shocks.”*

- Janneke Hartvig Blomberg – UNICEF

**Create Lasting Change at the Individual Level:** These efforts — making GDQP tools freely available, global dissemination and uptake and national communication events — underpin our mission to ensure progress is made toward healthier diets. While change at this scale requires time, the GDQP has kickstarted a push to accelerate the understanding of what the world is really eating. Decision-makers now have a sound basis on which to make and justify their decisions.

### Why the GDQP Should Win

The value and benefits of this evidence-driven, societal change initiative are numerous. But the GDQP deserves to win for three primary reasons.


1. The GDQP addresses a critical data gap, offering a radical new lens into how the world measures diet.
2. The innovation in survey design and application, meaning the DQQ can monitor data at a fraction of the cost and speed of traditional methods.

3. Democratizing diet quality data to better understand the ways that diets are unhealthy, where, in which population groups and the adverse impacts on quality of life.

The map of what the world eats just became much clearer, giving all of us a critical tool and clear mandate to plot pathways toward healthy diets.

## DIET QUALITY QUESTIONNAIRE (DQQ)

### LENAANE LA DIPOTSO LA BOLENG JWA DIJO



BOTSWANA

**Bala:** Jaanong ke rata go go bota dipotso dingwe tse di batlang ee kgotsa nnyaa ka dijo le dino tse o di jeleng maabane motshegare kgotsa bosigo, o ka tswa o di jetse kwa gae kgotsa felo gongwe

Sa ntlha, ke batla gore o akanye ka letsatsi la maabane, go tioga ka nako e o tsogileng ka yone go fitlha bosigo. Akanya ka selo sa ntlha se o se jeleng kgotsa se o se noleng fa o sena go tsoga mo mosong ... Akanya gore o ne o le kae fa o ne o ja kgotsa o nwa sengwe motshegare ... Akanya gore o ne o le kae fa o ne o ja dilalelo ... le dijo kgotsa dino dipe tse o ka tswang o di jele maitseboa kgotsa bosigo thata ... le dijo dipe tse di motlhoswana kgotsa dino tse o ka tswang o di jele fa gare ga nako ya dijo motshegare kgotsa bosigo.

Ke kgatlhegela go itse gore a o jele dipe tsa dijo tse ke tla buang ka tsone, tota le fa di ne di kopantswe le dijo tse dingwe.

Tsweetswee reetsa lenaane la dijo le dino, mme fa o jele kgotsa o nole DIPE TSA TSONE, araba ka ee.

	Maabane, a o jele dipe tsa dijo tse di latelang:	(tshwaya karabo)
1	<b>Mosoko, setampa, reisi, borotho, diphaphatha, makarone, kgotsa sepaketi?</b> Paletshi, samp, rice, bread, diphaphatha, macaroni, or spaghetti?	EE kgotsa NNYAA
2	<b>Mabele, lebelebele, lohata kgotsa lesasaoka, dikgobe, kgotsa mmidi?</b> Sorghum, millet, lohata or lesasaoka, dikgobe, or mmidi?	EE kgotsa NNYAA
3	<b>Tapole, potata, kgotsa tswii?</b> Potato, sweet potato, or water lily roots?	EE kgotsa NNYAA
4	<b>Dinawa, dinawa tsa morama, letlhodi, ditloo, dikgobe kgotsa lehata, kgotsa dikuno tsa soya?</b> Beans, morama, mung beans, Bambara groundnuts, dikgobe or lehata, or soy products?	EE kgotsa NNYAA
<b>Maabane, a o jele epe ya merogo e e latelang:</b>		
5	<b>Digwete, lephutshe, kgotsa bathanate?</b> Carrots, pumpkin, or butternut?	EE kgotsa NNYAA
6.1	<b>Sepinatšhe, kheile, reipe, chomolia, kgotsa morogo wa masetete?</b> Spinach, kale, rape, chomolia, or mustard greens?	EE kgotsa NNYAA
6.2	<b>Matlhare a amarantha, rothwe, morogo wa jute, matlhare a lephutshe, kgotsa matlhare a dinawa?</b> Amaranth leaves, rothwe, jute mallow, pumpkin leaves, or bean leaves?	EE kgotsa NNYAA
7.1	<b>Ditamati, khabetšhe, mabowa, di-truffle, kgotsa segwana?</b> Tomatoes, cabbage, mushrooms, truffles, or bottle gourd?	EE kgotsa NNYAA
7.2	<b>Pepere e tala, komokomore, lethisi, beterute, kgotsa nyebu?</b> Green pepper, cucumber, lettuce, beetroot, or nyebu?	EE kgotsa NNYAA
<b>Maabane, a o jele ape a maungo a a latelang:</b>		
8	<b>Menku, pawpaw, bogobe jwa lerotse?</b> Mango, pawpaw, or bogobe jwa lerotse?	EE kgotsa NNYAA
9	<b>Namune kgotsa nariki?</b> Orange or naartjie?	EE kgotsa NNYAA
10.1	<b>Panana, apole, pere, guava, moretiwa wa sekgoa, dipolamo, kgotsa diperekisi?</b> Banana, apple, pear, guava, grapes, plums, or peaches?	EE kgotsa NNYAA
10.2	<b>Legapu, legapu la Kalahari kgotsa la citron, Inara, leungo la baobab, mototroko, kgotsa mogorogorwane?</b> Watermelon, Kalahari or citron melon, Inara, baobab fruit, prickly pear, or monkey orange?	EE kgotsa NNYAA
10.3	<b>Morula, motsintsila, moretologa, kgotsa maungo a mangwe a kwa nageng?</b> Marula, motsintsila, moretologa, or other wild fruits?	EE kgotsa NNYAA
<b>Maabane, a o jele dipe tsa dimonamone tse di latelang:</b>		



