



**186th BIFAD Public Meeting (In-Person and Virtual)**  
***Fed to Thrive: Accelerating Action on Nourishing Foods for Infants and Young Children***

**Meeting Minutes**

Wednesday, October 19, 2022, 7:00 AM to 8:45 AM CDT  
Iowa Event Center, Meeting Room 305/306  
and Online through ZOOM

**Board for International Food and Agricultural Development (BIFAD) Members in Attendance:**

**Laurence B. Alexander**, BIFAD Chair and Chancellor of the University of Arkansas at Pine Bluff  
**Pamela K. Anderson**, Director General Emerita, International Potato Center  
**Marie Boyd**, Associate Professor, University of South Carolina School of Law  
**Rattan Lal**, Distinguished Professor of Soil Science, The Ohio State University  
**Saweda Liverpool-Tasie**, MSU Foundation Professor, Department of Agricultural, Food, and Resource Economics, Michigan State University  
**Henri G. Moore**, Vice President/Head of Responsible Business, Haleon  
**Kathy Spahn**, President and CEO of Helen Keller International

**Speakers:**

**Kathryn G. Dewey**, Distinguished Professor Emerita, Department of Nutrition, University of California at Davis  
**William Masters**, Professor, Friedman School of Nutrition Science and Policy and Department of Economics, Tufts University  
**Siny Samba**, Co-founder and Chief Executive Officer, LE LIONCEAU  
**Fallon Tefft Casper**, Head of Debt, Agriculture & Food, Incofin Investment Management  
**Manisha Tharaney**, Independent Consultant, Public Health  
**Deanna Olney**, Initiative Lead, Research Theme Leader, Senior Research Fellow, International Food Policy Research Institute (IFPRI)  
**Shawn Baker**, Chief Nutritionist, U.S. Agency for International Development (USAID)

*This meeting was convened as a side event of the 2022 Borlaug Dialogue at the World Food Prize under the theme “Feeding a Fragile World.”*

## Meeting Opening

**Laurence Alexander, BIFAD Chair, University of Arkansas at Pine Bluff**

BIFAD Chair Dr. Laurence Alexander opened the public meeting and welcomed participants. Dr. Alexander thanked in-person and online participants and emphasized that participation in the meeting would enrich the discussion and inform the work of BIFAD. Dr. Alexander acknowledged that there were over 550 registered virtual attendees from 63 countries and over 400 organizations.

Dr. Alexander recognized several distinguished guests in the audience, including Ambassador Kenneth Quinn, President Emeritus of the World Food Prize Foundation, Dr. Lawrence Haddad, the 2018 World Food Prize Laureate, and Dr. Howarth Bouis, 2016 World Food Prize Laureate. Dr. Alexander introduced BIFAD, a seven-member presidentially appointed advisory board to USAID established to ensure that USAID brings the assets of U.S. universities to bear on developmental challenges in agriculture, nutrition, and food security.

Dr. Alexander invited BIFAD members attending in person to introduce themselves. Ms. Kathy Spahn is President and Chief Executive Officer (CEO) of Helen Keller International. Dr. Rattan Lal is a Distinguished Professor of Soil Science and Director of the Carbon Management and Sequestration Center at the Ohio State University. Dr. Lal has worked in Africa for about 20 years, in addition to working in Australia and Asia. He has been at the Ohio State University for 35 years, teaching soil, climate, and soil carbon sequestration for food and climate security. Dr. Saweda Liverpool-Tasie is a Michigan State University Foundation Professor in the Department of Agricultural, Food, and Resource Economics. Her work spans understanding Africa's food systems transformation and the opportunities it creates for rural and urban households.

Dr. Alexander introduced the three BIFAD members participating virtually. Ms. Henri Moore is the Vice President and Head of Responsible Business at Haleon. Dr. Pamela Anderson is the Director General Emerita of the International Potato Center. Professor Marie Boyd is an Associate Professor at the University of South Carolina School of Law.

Dr. Alexander noted that BIFAD is a federal advisory committee and includes periods for public comment in its meetings, recognizing the importance of stakeholder participation to BIFAD's role in providing evidence-based recommendations to USAID. He invited virtual participants to share comments and resources using the chat function and to send questions using the Q/A function. Dr. Alexander noted that the official minutes of the proceedings would be posted on USAID's BIFAD website following the event.

Dr. Alexander described the objective of the meeting, *Fed to Thrive: Accelerating Action on Nourishing Foods for Infants and Young Children*, to share the most current evidence around improving the affordability of safe, nutritious foods among children six to 23 months old. Dr. Alexander acknowledged that nutrition is foundational to development and ensuring safe and affordable nutrition is one of the most cost-effective ways to save lives and to achieve other global development goals. Ensuring adequate nutrition requires the coordinated effort of multiple sectors, including health, agriculture, food systems, water, humanitarian relief, and resilience.

Dr. Alexander reflected on the theme of this year's World Food Prize Borlaug Dialogues, *Feeding a Fragile World*, which recognizes the pervasive shocks to the global food system and the compounding effects of conflict, climate change, and COVID-19. The 2022 Borlaug Dialogue meetings are rooted in hope and focused on action. In that spirit, BIFAD aims for their work to inform a cross-sectoral, whole-

of-agency approach. Dr. Alexander invited Ms. Spahn to provide an overview of the meeting objectives and expressed appreciation for her leadership and vision in organizing this event.

### **Are We Failing the World's Children?**

***Kathy Spahn, President and CEO, Helen Keller International***

Ms. Spahn recognized the in-person and virtual audience. Ms. Spahn explained that more than 45 million children under the age of five suffer from wasting around the world. Each year, malnutrition kills more children than AIDS, tuberculosis, malaria, and COVID-19 combined. Malnutrition is the cause of nearly half of all child deaths in the world. The world has failed to improve the way that most children are fed. Child death from malnutrition is not a technical problem; solutions exist and are tested and proven. Ms. Spahn said that continued child deaths from malnutrition result from the lack of political will, but that political will is emerging.

Ms. Spahn expressed that she was thrilled by recent efforts to scale up wasting treatment. She described a major pledging event led by USAID Administrator Samantha Power, who helped to garner more than a half a billion dollars in new resources to combat wasting around the world. She highlighted the landmark Global Malnutrition Prevention and Treatment Act,<sup>1</sup> which was passed by the House of Representatives and the Senate with robust bipartisan support and was awaiting signature into law by President Biden. These commitments, however, need to be sustained and broadened beyond wasting, she said.

Ms. Spahn said that true success is a world where children never experience acute malnutrition in the first place, as children bear the scars of poor diets for their entire lives, and children under two years of age bear the highest burden of malnutrition and of mortality. It is crucial that children get the nourishing food they need at the start of their lives. How children are fed before the age of two sets the course for the rest of their lives. Early childhood nutrition shapes the growth, learning, and development of children. Ms. Spahn expressed that we are failing, as nearly two in three children globally six months to two years of age are not consuming optimally adequate diets that are critical to their growth and development. In lower- and middle-income countries, at best, fewer than one in five children have a minimally acceptable diet. Ms. Spahn remarked that these statistics are both outrageous and deeply frightening.

Ms. Spahn said that the drivers of poor diets for children lie beyond the control of their individual families, yet families are the ones left to bear the consequences. This crisis calls for innovative thinking and new ideas to provide nutritious and safe foods and essential nutrition services to every child under two years old. Despite available evidence-based solutions and knowledge, progress has faltered. In fact, progress has declined with the global impacts of COVID-19, conflict, and climate change. Ms. Spahn expressed the need to examine barriers and consider what can be done differently. Echoing Dr. Alexander's comment that BIFAD's work is cross-sectoral, Mr. Spahn explained that the panel and discussion would bring together experts not only in nutrition, but also in health systems and social protection. Ms. Spahn re-emphasized Dr. Alexander's earlier point that the goal of the meeting is to help BIFAD formulate specific recommendations for USAID to continue Agency leadership to save children's lives and ensure that children around the world have the opportunity to reach their true potential. Ms. Spahn expressed that the panel is looking to push the boundaries and come up with some innovative ways of thinking and approaching this problem. Ms. Spahn expressed her delight in setting the stage for

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<sup>1</sup> The Global Malnutrition Prevention and Treatment Act became law on October 19, 2022.

H.R.4693 - 117th Congress (2021-2022): Global Malnutrition Prevention and Treatment Act of 2021. (2022, October 19). <https://www.congress.gov/bill/117th-congress/house-bill/4693/text>

the discussion with the first speaker, Dr. Kathryn Dewey. Dr. Dewey is a Distinguished Professor Emerita of Nutrition at the University of California Davis (UC Davis) and co-founder of the UC Davis Institute for Global Nutrition. Dr. Dewey's research has focused on maternal and child nutrition in vulnerable populations.

### **The Crisis of Young Children's Diets**

***Kathryn Dewey, Professor Emerita of Nutrition, University of California Davis***

Dr. Dewey thanked Ms. Spahn and expressed that it was an honor to discuss this critical topic. Dr. Dewey introduced her presentation as an overview of key highlights from the *Fed to Fail: The Crisis of Children's Diets in Early Life* 2021 Child Nutrition Report<sup>2</sup> (*Fed to Fail* report) published by the United Nations International Children's Emergency Fund (UNICEF). Dr. Dewey thanked Víctor Aguayo and Grainne Moloney for sharing much of the content provided in her presentation.

Dr. Dewey first reviewed the importance of nutritious diets in early childhood. Children under two years have extraordinary nutrient needs, as a child's brain grows to 75% of that of an adult, and more than one million new neural connections are formed every second. Height increases by 75%, and body weight quadruples. As a result, children under two have very high nutrient needs but consume only a small amount of food. Their diets must be very high in nutrient density, or the amount of each nutrient per 100 calories.

Dr. Dewey highlighted the minimum targets for iron and zinc densities of solid foods, which are often called complementary foods as they are meant to complement breast milk during this age.<sup>3</sup> These estimates are based on average breast milk intake at three age intervals. The needs are highest at six to eight months, especially for iron. Infants need nine times as much iron per 100 calories of solid foods as an adult male, but it is often the adult male in the household who gets the most preferred food—not the infant. As a result, there are many nutrient gaps in complementary food diets in low-income populations. The usual problem nutrients are iron and zinc, but other nutrients may also be low, including calcium, potassium, choline, and omega-3 fatty acids. It is very difficult to construct a diet that is adequate in all nutrients from purely unfortified foods during infancy.

The consequences of poor diets and feeding practices in early life are visible in the age distribution of stunting and wasting. Dr. Dewey referred to a figure<sup>4</sup> showing that the prevalence of stunting increases between six months and two years of age and then levels off. More than half of all children under five with wasting are younger than two years of age.

Dr. Dewey encouraged the attendees to read the *Fed to Fail* report, which provides a comprehensive update on young children's diets. Some of the results from the analysis, conducted in 2020, illustrated that most children aged six to 23 months are not fed according to global recommendations. About half of children are not fed the minimum recommended number of meals; about half of children are missing the benefits of the most nutrient-rich foods like fruits and vegetables and eggs, fish, or meat; and only

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<sup>2</sup> United Nations Children's Fund (UNICEF). (2021). *Fed to Fail? The Crisis of Children's Diets in Early Life. 2021 Child Nutrition Report*. UNICEF. <https://www.unicef.org/reports/fed-to-fail-child-nutrition>

<sup>3</sup> Dewey K. G., & Vitta B.S. (2013). *Strategies for ensuring adequate nutrient intake for infants and young children during the period of complementary feeding* (7). Alive & Thrive. <http://www.aliveandthrive.org/resources/technicalbriefs>

<sup>4</sup> UNICEF Data. (2021). UNICEF-WHO-World Bank Joint Child Malnutrition Estimates Expanded Database: Stunting (Survey Estimates).

29% of children globally are fed even a minimally diverse diet that children need to grow in development.

Unfortunately, most children's diets have not improved in the last decade. Among the 50 countries with trend data, less than half—only 21 countries—have noted a significant increase in the percentage of children fed a minimally diverse diet between 2010 and 2020 (Ethiopia, Burkina Faso, Guinea, Côte d'Ivoire, Niger, Gambia, Lesotho, India, Sierra Leone, Nigeria, Zambia, Timor Leste, Bangladesh, Rwanda, Nepal, Cambodia, Kyrgyzstan, Maldives, Colombia, Bolivia, and Peru).<sup>5</sup> However, 10 countries have experienced a drop during that time in this particular indicator: Congo, Cameroon, United Republic of Tanzania, Kiribati, Malawi, Tajikistan, Ghana, Sao Tome and Principe, Egypt, and Armenia). Liberia, Senegal, Burundi, Democratic Republic of Congo, Pakistan, Zimbabwe, Madagascar, Mali, Haiti, Uganda, Benin, Jordan, Eswatini, Mongolia, Dominican Republic, Guyana, Indonesia, Albania, and Montenegro have experienced no significant change in children's dietary diversity.

Dr. Dewey highlighted that there are many barriers to good diets for young children. The evidence from regional analyses and focus group discussions showed that families struggle to find and afford nutritious foods for their children.<sup>6</sup> The high cost of nutritious foods is one of the greatest obstacles, cited by almost 80% of respondents. Availability of nutritious foods can also be an issue, especially in rural and remote areas. Physical access may be a barrier, for example, in poor urban communities. Climate change, conflicts, and the pandemic are all exacerbating this situation.

Dr. Dewey explained that even if nutritious foods are available and affordable, children's diets are constrained by social, cultural, and gender barriers. One key barrier is time pressures, which influence child feeding decisions, as cited by 62% of respondents. To cope with this time constraint, some caregivers turn to the convenience of processed and fast foods. In some settings, mothers lack the autonomy to decide what to feed their children, which can be a barrier to achieving dietary adequacy.

The prevalence of unhealthful processed foods and drinks is a major issue. These products are widely accessible and heavily marketed, even in the poorest communities. Dr. Dewey referenced a figure showing that approximately one in three children aged six to 23 months in several countries were fed at least one unhealthful food or drink daily. Sugary foods and drinks are of particular concern because they are high in calories but low in vital nutrients. Young children may fill up on these foods and beverages and consequently have very little appetite for nutrient-dense foods. Despite these barriers, there are opportunities for meeting the nutritional needs of young children, and the potential impact of providing a nutritious diet is enormous.

There are several strategies to meet nutrient needs of children aged six to 24 months. The first priority is to promote diverse diets and selection of nutrient-rich, complementary foods. However, the affordability of such foods is a major constraint. To help meet nutrient needs, several fortified products have been developed and tested, including fortified blended foods and products used for home fortification, in which the nutrients are mixed directly with the food provided to the baby in the home. Fortification can be achieved with products such as micronutrient powders or small-quantity lipid-based nutrient supplements (SQ-LNS). The usual daily dose of SQ-LNS is only about four teaspoons, and this daily dose includes 22 vitamins and minerals, essential fatty acids, and some high-quality protein.

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<sup>5</sup> UNICEF Data. (2021). UNICEF-WHO-World Bank Joint Child Malnutrition Estimates Expanded Database: Stunting (Survey Estimates).

<sup>6</sup> Schmied, V. et al. (2020). Food and nutrition: Mothers' perceptions and experiences. The State of the World's Children 2019 Companion Report. Western Sydney University and UNICEF, Sydney.

Adequately addressing nutrient needs in early childhood can have profound beneficial effects. Dr. Dewey presented a sampling of results for SQ-LNS, which has been shown to improve child survival, prevent child malnutrition, and promote healthy development. In a meta-analysis published in 2020, SQ-LNS reduced all-cause mortality by 27% at this age.<sup>7</sup> In a set of papers published last year, Dr. Dewey and her co-authors demonstrated that SQ-LNS reduced stunting by 12%, wasting by 14%, iron-deficiency anemia by 64%, and delayed development by 16% to 19%.<sup>8</sup> Last year, Dr. Dewey and her co-authors extended those analyses and demonstrated that SQ-LNS reduced severe wasting by 31% and severe stunting by 17%.<sup>9</sup>

Interventions to improve the diets of young children have been prominently featured in the revised 2021 Lancet series on Maternal and Child Undernutrition. Preventive SQ-LNS for optimizing health and growth in children was added in 2021 to a prior list of recommendations published in 2013.

The 2013 recommendations included:

- Periconceptual folic acid supplementation or fortification;
- Maternal calcium supplementation;
- Maternal BEP supplementation;
- Maternal MMN or IFA supplementation;
- Vitamin A supplementation;
- Promotion of breastfeeding;
- Complementary feeding education and food provision (food insecure);
- Complementary feeding education (food secure);
- Preventive zinc supplementation;
- Management of MAM and treatment of SAM; and
- Zinc for management of diarrhea.

The updated 2021 recommendations included:

- Large-scale food fortification for prevention of MN deficiencies;
- Maternal calcium supplementation in low-intake populations;
- Maternal BEP supplementation in undernourished populations;
- Maternal MMN supplementation;
- Vitamin A supplementation in deficient contexts;
- Breastfeeding promotion and counseling;
- Complementary feeding education and food provision (food insecure);
- Complementary feeding education (food secure);
- Preventive zinc supplementation
- RUSF for management of acute malnutrition;
- Therapeutic zinc supplementation for diarrhea;

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<sup>7</sup> Stewart CP, Wessells KR, Arnold CD, Huybregts L, Ashorn P, Becquey E, Humphrey JH, Dewey KG. Lipid-based nutrient supplements and all-cause mortality in children 6-24 months of age: a meta-analysis of randomized controlled trials. *Am J Clin Nutr*. 2020 Jan 1;111(1):207-218. doi: 10.1093/ajcn/nqz262. PMID: 31697329.

<sup>8</sup> Dewey KG, Stewart CP, Wessells KR, Prado EL, Arnold CD. Small-quantity lipid-based nutrient supplements for the prevention of child malnutrition and promotion of healthy development: overview of individual participant data meta-analysis and programmatic implications. *Am J Clin Nutr* 2021;114:3S-14S

<sup>9</sup> Dewey KG et al. Preventive small-quantity lipid-based nutrient supplements reduce severe wasting and severe stunting among young children: an individual participant data meta-analysis of randomized controlled trials. *Am J Clin Nutr* 2022;116:1314-1333.

- Preventive SQ-LNS for optimizing health and growth of children.

The *Fed to Fail* report calls for bolder actions and greater accountability to address the crisis of children's diets. These actions are grouped into four categories: i) actions to transform the food system; ii) actions to mobilize the full potential of the health system; iii) actions through the social protection system; and iv) actions under multi-system governance. Dr. Dewey expressed her hope to discuss this in more detail later in the session and thanked the attendees for their attention.

Ms. Spahn thanked Dr. Dewey and introduced the next speaker, Dr. William Masters. Dr. Masters is a professor at the Friedman School of Nutrition at Tufts University and has a secondary appointment in Tufts Department of Economics and the Director of the Food Prices for Nutrition Project, which focuses on ways of measuring access to a healthy diet around the world.

### **A Healthy Food Basket for Young Children: What Would It Take?**

***William Masters, Professor, Friedman School of Nutrition at Tufts University***

Dr. Masters thanked Ms. Spahn and stated that it was a great privilege to follow Ms. Spahn and Dr. Dewey and to share some of the results of his work at Tufts University. As an economist, Dr. Masters and his team have been looking at food prices and considering the food environment and how conditions around the household influence the cost and affordability of the infant foods that are so desperately needed. Dr. Masters shared key results from the Food Prices for Nutrition Project and from a variety of other work funded by USAID and other donors with global partners, mainly from Africa.

Dr. Masters' presentation considered the age patterns of different types of child malnutrition month-by-month as children enter and go through the 6-to-24-month age window considered by the *Fed to Thrive* report. He highlighted that anemia prevalence resulting from micronutrient deficiencies and disease peaks at an extraordinarily high prevalence rate of above 70% only in the early part of the 6-to-24-month window (9–12 months).<sup>10</sup> Stunting prevalence rises primarily after six months of age, as attained height is downregulated in response to the many deficiencies in children's ability to reach their growth potential. Wasting prevalence is very high in the early months but declines after the first year as calorie needs to meet the lower stature are easier to attain, often from empty calories of starchy staples.

The difficulty of meeting infant needs in the six-to-24-month window requires addressing the challenge of introducing foods one-by-one as the child progresses to consuming the full range of foods consumed by adults in the household.

Results from a paper by Dr. Masters and Derek Heady at IFPRI using Demographic and Health Survey data from 42 countries,<sup>11</sup> showed that infants' dietary diversity rises only very slowly from six to 18 months. The study accounted for different food groups fed to infants over a 24-hour period in the 6–23 month window to reach the minimum level of dietary diversity for children—about four out of the seven different food groups, in addition to continued breastfeeding. Initially, children received very few, often none, of the additional food groups, and at 6 months, the number of food groups fed to children gradually rose. Only in the richest third of households was the threshold of four food groups met, on average, and even in those households only at 18 months, most of the way through the window. This is

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<sup>10</sup> Headey, D. D., & Masters, W. A. (2021). Agriculture and undernutrition. *Agricultural development: New perspectives in a changing world*, 321-358.

<sup>11</sup> Choudhury, S., Headey, D. D., & Masters, W. A. (2019). First foods: Diet quality among infants aged 6–23 months in 42 countries. *Food Policy*, 88, 101762. <https://doi.org/10.1016/j.foodpol.2019.101762>

about convergence to the family diet and the role of the family diet in determining whether it is even possible to meet infant needs.

Taking a more granular look at the headline results shared by Dr. Dewey, a key insight is that only the richest households have the means to acquire the individual food groups that deliver the nutrients that infants need. Almost all nutrient-rich food groups are expensive and more often fed to infants in richer households.<sup>12</sup> The only nutrient-rich food group that low-income households are able to afford is the dark green leafy vegetables, which are perishable and more labor intensive to prepare.<sup>13</sup> In contrast, all other nutrient-rich food groups, both vitamin A-rich vegetables and animal-source foods, are expensive to buy and out of reach for most households. The only food group consumed by a majority of children is dairy, and another exception is dried fish, which is equally consumed across income groups.

Dr. Masters said that he specializes in food prices, the food environment, and the ability of agricultural production, distribution, and markets to make it possible for households to meet their needs. Dr. Masters presented a figure showing the variation in least-cost diets by age, sex, and reproductive status across 172 countries in 2017, disaggregated by age group ranging from four to six years of age through adulthood.<sup>14</sup> For female adolescents before and during pregnancy and lactation, the cost per day rises to levels above what low-income households have available to spend on food.<sup>13</sup> The unaffordability of even the least-expensive foods that would be needed for maternal and child health before and during pregnancy is crucial to understanding pre-pregnancy nutrition regarding the early micronutrient deficiency and in-utero growth retardation and deprivation that are so common.

In addition to affordability, diet quality is an important consideration. The cost per hundred calories is significantly more expensive for women during late adolescence and especially during breastfeeding because of the need for more-expensive foods. Foods are much more costly to meet the needs of the mother in order to provide adequate nutrition for the child. Dr. Masters and his co-authors on the food prices for nutrition project are collaborating alongside the World Food Programme, and its costs of diets work, in response to the agenda identified in the *Fed to Fail* report. The researchers are working in parallel to dig more deeply into how the food environment makes it easy or hard for infants, and there is an opportunity to model this carefully and understand it. Dr. Masters' presentation noted that measurement of the cost of meeting needs of infants 6–24 months would be available soon. Referring to the figure on variation in least-cost diets and reinforcing a point that Dr. Dewey made, Dr. Masters commented that the quantity and the cost per day of diets of infants 6–24 months is particularly challenging to address. The quantity, and therefore the total cost per day, is actually quite low because the total volume of food consumed is very small—between 50 and 70 grams a day—but is exquisitely sensitive to the exact quality of that food and the need to access specialized foods.

Turning to the kinds of nutrient-dense products that households buy and that food companies sell, Dr. Masters said that by far the most common type sold around the world are the premixed cereals mentioned by Dr. Dewey. Dr. Dewey has been an extraordinary pioneer and leader in the development of the small-quantity lipid-based nutritional supplement (SQ-LNS) approach that provides consistent nutrients to complement breastmilk and the other foods eaten by infants. Premixed flours for nutrient-dense porridge are a combination of a cereal grain, such as rice or wheat, typically fortified with

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<sup>12</sup> Choudhury, S., Headey, D. D., & Masters, W. A. (2019). First foods: Diet quality among infants aged 6–23 months in 42 countries. *Food Policy*, 88, 101762. <https://doi.org/10.1016/j.foodpol.2019.101762>

<sup>13</sup> Choudhury, S., Headey, D. D., & Masters, W. A. (2019). First foods: Diet quality among infants aged 6–23 months in 42 countries. *Food Policy*, 88, 101762. <https://doi.org/10.1016/j.foodpol.2019.101762>

<sup>14</sup> Bai, Y., Herforth, A., and Masters, W. A. (2022). Global variation in the cost of a nutrient-adequate diet by population group: An observational study. *The Lancet Planetary Health*(6)1. E19-E28. [https://doi.org/10.1016/S2542-5196\(21\)00285-0](https://doi.org/10.1016/S2542-5196(21)00285-0).



soybeans or another source of protein, and additional fat, often including a micronutrient powder. That basic recipe comes primarily from North America. Dr. Masters showed historical images of such fortified cereal products common around the world, the first of which was Pablum, developed in 1931 at the Toronto Hospital for Sick Kids, Incaparina, introduced in Central America in 1961, and the global blockbuster, Nestlé's Cerelac, introduced after World War II in 1949. Cerelac was extensively advertised globally and holds a dominant market share of over 90% in most of Latin America and over 80% in much of Africa. There are also many locally produced infant food products introduced in the 1980s from Africa, with examples from Malawi and Rwanda. The blockbuster food aid product is Supercereal Plus, introduced in 2010–2012 for food aid only.

A study<sup>15</sup> of the nutrient composition, relative to Supercereal Plus, of 108 premixed, fortified infant cereals sold across Africa and elsewhere from 22 countries showed that almost two-thirds (63%) of products tested were inadequate in both iron and zinc. This variation was completely random, impossible to explain, and not correlated with labeling information about ingredients, nutrients, packaging, or price. Without a third-party certification or a standard set by an international agency and then enforced, it is impossible for these companies to maintain and signal quality. Scaling up any premixed food depends on standards and quality control.

In conclusion, Dr. Masters presented three key recommendations:

1. **Need for specialized infant products, with higher nutrient density than family foods:** There is a need to create commercial markets for low-cost, nutrient-dense infant feeding products, in addition to the provision of nutrition assistance. He noted that for commercial markets to provide competing brands of uniform quality, there would need to be international standards that are set and enforced through collaborations between international agencies and national authorities. Dr. Masters recommended to BIFAD the need for the role of standard setting and enforcement for these specialized infant foods because relying on family diets is not feasible.
2. **Need for more diverse family diets, to which infants converge as they age:** Family diets are crucial and difficult to attain. Healthful diets are now unaffordable for ~3 billion people, who need higher income and safety nets. Even when healthful diets are affordable, those foods are often displaced by unhealthful items. Dr. Masters shared that ultimately, a whole suite of multi-sectoral interventions is needed. Solutions require interventions that include addressing the issue of competitive foods that are substituted for nutrient-dense foods and the crucial role of maternal and adolescent women's diets.
3. **Need for better adolescent and maternal health, for birth outcomes and infant care:** Behavior change is important, but behavior determines choice only among affordable options. Even when high-quality products are available at low prices, healthful items may be displaced by other foods.

Dr. Masters expressed that it was a privilege to introduce this research and data and thanked the audience.

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<sup>15</sup> W.A. Masters, M.D. Nene and W. Bell, 2017. *Nutrient composition of premixed and packaged complementary foods for sale in low- and middle-income countries: Lack of standards threatens infant growth. Maternal and Child Nutrition*, 13(4): e12421

## **Panel Discussion: Cross-Sectoral Solutions to Deliver on Nutrition Outcomes for Infants and Young Children**

***Moderated by Kathy Spahn, President and CEO, Helen Keller International***

Ms. Spahn expressed appreciation for Dr. Dewey and Dr. Masters for setting the context of the public meeting. She explained that the next segment, a panel discussion, was meant to identify entry points and incentives to enable children's access to safe, affordable, and nutritious foods. The panel would discuss ways to bring down the cost of the healthy food basket, improve nutrient content, improve convenience, help women access safety nets, and engage across systems, reflecting the need for a multi-sectoral effort. The discussion was designed to address the following key themes:

- Drivers of unaffordability and leverage points to reduce costs, including incentives for producers and enterprises to produce more nutritious agricultural products and to make their food products more nutritious;
- The financing landscape for companies trying to make nutritious foods more affordable for local consumption, the viability of investments in these enterprises, and measures to de-risk investments in this space;
- The role of social safety nets in making foods affordable and desirable, improving caregivers' knowledge about young child feeding, and empowering and enabling women to make pro-nutrition decisions;
- Solutions to increase the desirability of nutritious foods and incentives to purchase these foods, particularly considering the important role of mothers in the household and the interrelated family dynamics around money and empowerment; and
- Necessary actions to achieve coordinated, gender-transformative change across the food, health, and social protection systems in both development and humanitarian (emergency) settings.

Ms. Spahn introduced each of the panelists:

- Ms. Siny Samba is Co-founder and CEO of Le Lionceau in Dakar, Senegal. Le Lionceau is a company that specializes in the production of natural and high-quality food for babies.
- Ms. Fallon Tefft Casper is Head of Debt, Agriculture, and Food at Incofin Investment Management. She oversees their global debt investments in the agro and the food sector.
- Ms. Manisha Tharaney is a public health professional with 20 years of experience in nutrition, working in both Africa and in Asia, and has also worked in health systems, systems strengthening, and gender issues. Most recently, Ms. Tharaney was the West Africa Program Director at the Alive and Thrive Project.
- Dr. Deanna Olney is a Senior Research Fellow at the International Food Policy Research Institute (IFPRI) and is the lead of a new initiative on Fruit and Vegetables for Sustainable Healthy Diets (FRESH).

Ms. Spahn indicated that the panel would start with Ms. Samba, whose company uses locally sourced foods, partners with local farmers, and engages women's groups to grow produce. Ms. Spahn asked Ms. Samba to share how she started her venture, why she started to make infant foods, how she addresses the high cost of making nutrient-dense foods, and ideas and solutions to bring down the cost of nutritious foods for children.

## **Panel Discussion**

### ***Siny Samba, Co-founder and CEO, Le Lionceau***

Ms. Samba expressed gratitude for the invitation to speak on the panel. Ms. Samba explained that she traveled to the meeting from Senegal, the headquarters of Le Lionceau, a company that specializes in producing baby foods, infant flour, purées, and biscuits from local raw material.

Ms. Samba's interest in this issue started when she was a young girl helping her grandmother make biscuits and main meals with their local crops, which they distributed weekly to children who lived on the street. After studying in France, Ms. Samba worked for the leading French company in baby food as a food processing engineer in nutrition. Ms. Samba then discovered the field of early childhood development and became passionate about nutrition.

Ms. Samba started asking questions about the foods found in the markets and given to babies in Senegal and realized that the markets mainly carried imported products. At the same time, local smallholder farmers were experiencing significant farm losses and waste. For example, 60% of mangoes are lost in the field, even while malnutrition remains an issue. Ms. Samba wondered why people were not valorizing their resources and selling products in the market aligned with local eating habits. Ms. Samba had a vision to support the local food value chain by collaborating with smallholder farmers. This led to the founding of Le Lionceau five years ago.

Ms. Spahn asked Ms. Samba if Le Lionceau's baby foods are more expensive than other, less-nutritious products sold in the market.

Ms. Samba highlighted that Le Lionceau's products are 15 to 20% cheaper than other products found in the market. Producing an affordable product is not easy, as the company works throughout the value chain, and when there is a problem in one part of the value chain, it impacts all other costs of the final product. For example, smallholder farmers often produce fruits and vegetables that are perishable. Farmers add the cost of lost raw materials in what they sell to the processor. There are logistic problems as well, as the company must transport the raw materials from farmers' fields. Most smallholder farmers do not have vans or cars to transport the raw material, resulting in a high cost to the company.

Ms. Samba said that the formulation of nutrient-dense baby food is important. Le Lionceau's purées are at least 80% fruit and have high nutritional value. The company could lower costs by using 5% fruit and adding water and sugar because producing high-quality baby food is expensive.

Ms. Spahn asked Ms. Samba whether Le Lionceau was making a profit, and if so, how many years it took to become profitable.

Ms. Samba responded that her company became profitable about five years after launching, so just about two months prior to the public meeting.

## **Panel Discussion**

### ***Fallon Tefft Casper, Head of Debt, Agriculture and Food, Incofin Investment Management***

Ms. Spahn directed a question to Ms. Tefft Casper, who works in the financing space. Ms. Spahn acknowledged that nutrient-dense foods are expensive to produce due to the perishability of fruits and food loss and asked Ms. Tefft Casper what financing might look like for companies like Le Lionceau, and whether Ms. Tefft Casper marketed those companies as valuable investments to her investors.

Ms. Tefft Casper thanked Ms. Spahn for the invitation to speak at the panel and said that it was interesting to hear the perspectives of the panelists on nutrition. Ms. Tefft Casper said that in the impact

investing space, Incofin is working with the Global Alliance for Improved Nutrition (GAIN) to develop a nutrition fund called the Nutritious Financing Food Facility (N3F). This fund is designed as a whole-systems approach, informed by the understanding that increasing the availability, affordability, and accessibility of foods requires multi-sectoral approaches that include the entire value chain. An example of the whole-systems approach is the cold chain, which is very important in ensuring that food does not become contaminated on its way to different distribution centers but is limited in sub-Saharan Africa.

Incofin seeks ways in which impact investors can support the enabling environment through different approaches. Incofin developed a creative fund structure incorporating various share classes within a fund so that there is a catalytic tranche where different investors that invest in the fund will be able to take a more long-term position. For example, a catalytic investment tranche can provide more patient capital, such that investors might be willing to take the first loss. Ms. Tefft Casper said that these types of structures are needed because investing in companies producing and marketing nutritious products in sub-Saharan Africa requires working with small, local companies that may not have a very technified approach. Investing in these companies can be much riskier for investors.

Ms. Tefft Casper said that that risk can sometimes be compensated by first-loss guarantees or by other types of de-risking mechanisms, such as blended-finance approaches that can help unlock potential investments. Ms. Tefft Casper added that the Incofin fund, N3F, is a pioneer in its focus on nutrition, but it has not had an easy fundraising journey because of the nontraditional approach that diverges from the traditional investment perspective. Nutrition is a blend of many perspectives and includes a broader view beyond agriculture. In that way, an ecosystems approach is necessary.

Ms. Spahn commented that Ms. Samba and Dr. Lawrence Haddad were listening with interest and might have some comments and questions during the public question and answer period.

### **Panel Discussion**

#### ***Manisha Tharaney, Independent Consultant, Public Health***

Ms. Spahn said that while mothers around the world have the primary caregiving responsibility for their children, they also face social, time, and financial pressures and do not necessarily have the autonomy to ensure their children are fed well with the products that these investments are supporting and that Le Lionceau produces. Ms. Spahn said that although mothers know what nutritious foods are, when they are pressed for time and money, they and their children are often drawn to unhealthy, high-convenience foods, which are marketed with misleading claims about their nutrition content. Ms. Spahn asked Ms. Tharaney about mothers' and families' perceptions of nutritious foods and how nutritious foods can be made more appealing to mothers to incentivize pro-nutrition choices for their families with the support of their mothers, their mothers-in-law, and their husbands.

Ms. Tharaney stated that it was an honor to speak at the public meeting. Children's diets are influenced by social, gender, and cultural barriers, and women should not have to face these barriers alone. Ms. Tharaney shared experiences and solutions tested from designing and implementing programs for the initiative Alive and Thrive, some of which are also mentioned in the *Fed to Fail* report. The initiative used a system-strengthening approach to change behaviors and improve the consumption of more desirable foods amongst women, children, and families.

Ms. Tharaney shared a first lesson learned that intensity matters. When implementing programs around improving young children's diets, it is important to share messages and counseling through multiple platforms and channels of communication, including digital media, and to focus on what is appropriate for young children and making nutritious foods more desirable.

Ms. Tharaney said that a second solution that worked was expanding program focus beyond mothers. While several programs focus only on mothers, from the Alive to Thrive experience, it is critical to include other family members and caregivers when seeking to change social norms at the societal level. In many countries, mothers live in intergenerational households, so it is important to focus on grandmothers and fathers, who control spending in many households. Ms. Tharaney said it is also important to engage community leaders, service providers, and staff from multiple sectors beyond health care, including food, education, employers, policy makers, and legislators. To change young children's diets and social norms, it is critical to focus on various audiences.

Ms. Tharaney stated that a third lesson learned is that many programs try to do too much. Nutrition programs are most successful when they focus on a few selected behaviors, but it is often unclear which behaviors should be focused on and how to address them. Ms. Tharaney said that it is critical to look at country-level and global-level data and then to consider which behaviors have the greatest impact. Diversity of diets and quality of foods that children eat is critical. Program implementation may be improved by focusing on a few key behaviors.

A fourth lesson is understanding what drives behaviors. Mothers frequently report time constraints as a high barrier. Ms. Tharaney said that Alive and Thrive attempted to address that by understanding social norms and how mothers may be supported. In South Asia, in Bangladesh and India, where animal-source foods are available and affordable to some extent, Ms. Tharaney's group tried to influence behavior by sharing information with mothers. The team tested a message that when children are fed animal-source foods, they cry less and play more, giving mothers more time to focus on household chores. Ms. Tharaney concluded that very simple actions can address some of these constraints faced by mothers.

Ms. Spahn thanked Ms. Tharaney and asked Ms. Samba whether Ms. Tharaney's message resonated with her as a mother of a young infant in addition to her role as CEO of a successful infant food company.

Ms. Samba noted having similar experiences with her mother and shared that her mother-in-law influences the nutritional habits of her children. Ms. Samba said her mother will feed her son sugar and pastries when he visits, despite Ms. Samba's preferences to avoid sugary foods, creating conflict. Ms. Samba recognized that the challenge of infant nutrition is not just about having good food but also raising awareness about the importance of infant nutrition in the first thousand days of an infant's life. The first thousand days are when nutrition has the greatest impact on a child's future health and potential.

Ms. Tharaney shared that she was happy to read in the *Fed to Fail* report that 80% of countries have programs for education and counseling on responsive parenting, feeding, and stimulation. Raising greater awareness and an intense outreach approach on multiple platforms and channels are critical.

Ms. Spahn added that health systems have been challenged by the COVID-19 pandemic in the last few years. She spoke of the importance of price points for nutritious foods getting mothers to feed their children. Even if foods that mothers wanted to feed their children were 15% less expensive than other foods, they would still be unaffordable for mothers. This challenge points to the importance of safety nets and social protection, particularly with the strain on health systems and safety nets by COVID-19.

## **Panel Response**

***Deanna Olney, Senior Research Fellow, Division of Poverty, Health and Nutrition, International Food Policy Research Institute (IFPRI)***

Ms. Spahn asked Dr. Olney about the role that social safety nets can play in providing children with nutritious foods, current challenges and successes, and specific interventions, including food, cash transfers, or conditional/unconditional food vouchers.

Dr. Olney expressed gratitude for the invitation to speak on the panel and commented that it has been interesting to hear the different perspectives of the panelists. Over the last few years, Dr. Olney has extensively reviewed evidence on social protection programs and how they can improve nutrition. Results strongly show that it is not obvious that cash transfers can lead to any change in diets or nutrition outcomes. Cash transfers were not traditionally designed for that purpose but rather to address food security issues and immediate needs for household cash.

Dr. Olney expressed a need to rethink the design of social safety nets to work for nutrition. Most studies on diet or nutrition outcomes have focused on women and children, and very few studies have looked at impacts on men or other family members. Providing cash, vouchers, or food does lead to improvements in dietary diversity for women, but not for infants and young children. Fewer than half of the studies looking at this have found impacts on diet diversity of infants or young children. Dr. Olney said this finding reinforces a point raised by other panelists that children aren't a priority for more diverse or higher-quality foods. There is a potential gap in prioritization of what households do with extra cash or children may not necessarily want to eat more vegetables or more meat.

Dr. Olney said we need to examine how social safety net programs are being designed, including strong behavior change communication addressing multiple family members and consideration of how different kinds of transfers may be used to improve the diets of young children. Dr. Olney recommended targeting households with women and children in the first thousand days. Programs with a blanket social safety net could target an additional component, such as a fortified supplement like the LNS, fortified blended food, or corn–soy blend, to women and children in the first thousand days to directly support their nutrient needs. Alternatively, programs could designate an extra portion of a cash transfer for women and children in the first thousand days. These actions can have a direct effect.

Dr. Olney and her colleagues have evaluated several USAID programs designed to improve the nutrition of women and children in the first thousand days. Results showed that the most intense programs were the most effective. These programs provided food and behavior change communication, linkages with health services for the full thousand days, and household and individual cash transfers to support both general household consumption and targeted fortified products for women and children in the first thousand days.

Although intense programs are the most effective, they are also the most expensive. They warrant investment because of the potential impact on improved diets and nutrition. Less-intense or less-robust programs may positively impact food security or other important outcomes but may not have any impact on diets or nutrition. Considering the package, size, and targeting of interventions is important to improving diets or nutrition.

Dr. Olney acknowledged a lack of robust evidence in this space (i.e., evaluating program impacts on overall diet quality and micro-nutrient deficiencies), although some studies have shown associations or have been specifically designed to look at variations and size of transfers or inclusion of complementary program interventions. Evidence is especially lacking regarding overall diet quality and micronutrient deficiencies—not just diet diversity. Dr. Olney called for greater investment to fill research/evidence

gaps and to test interventions—for example, targeting transfers to women and including both household and individual transfers—that are believed to be effective but are based on evidence from very few studies. Few studies have been designed to rigorously test these assumptions. Identifying the most-cost-effective ways of programming will provide an opportunity to expand the coverage of these types of programs.

Dr. Olney added that the evaluation of USAID programs showed that increasing the duration of programs could lead to cost savings. USAID-funded programs, such as Title II emergency food assistance,<sup>16</sup> are typically short in duration. Effective programs often end after a few years and are replaced by a new cycle, which requires a redesign of interventions and a redesign of targeting, leading to cost waste.

Dr. Olney concluded that evidence points to a cost savings and increased coverage of effective programs by increasing their duration. Dr. Olney thanked the audience.

### **Panel Discussion Continued**

Ms. Spahn thanked Dr. Olney and asked Ms. Tefft Casper if she had any final comments, particularly regarding the financing space and the project with GAIN. She reminded the panel and audience that the floor would open soon for questions, first to BIFAD members and then to the audience.

Ms. Tefft Casper said that she has been thinking about the importance of the enabling environment because many projects and interventions may help support the eventual increase in small- and medium-sized enterprises (SMEs) that can address nutrition by producing healthful food. For example, adequately trained technical experts who can support food safety preparation in these companies may be lacking. Current projects to strengthen the entire ecosystem are focusing on areas such as local value chain strengthening, supply chains, and production in the fields. Ms. Tefft Casper concluded that enabling actors are important in the areas of distribution, value chains, technical experts, and scaling up production efficiencies.

### **BIFAD Comment Period**

***Moderated by: Ms. Kathy Spahn, President and CEO, Helen Keller International***

Ms. Spahn thanked Ms. Tefft Casper and invited Dr. Dewey and Dr. Masters to the podium. Ms. Spahn invited the BIFAD members and audience members to ask the panelists questions to help crystallize concrete, actionable, and feasible recommendations from BIFAD for USAID.

Ms. Spahn thanked Dr. Dewey for the overview presentation and acknowledged that time constraints prevented Dr. Dewey from comprehensively presenting the recommendations of the *Fed to Fail* report. She asked Dr. Dewey, considering USAID's comparative advantage in this space, to prioritize the top four recommendations for USAID from the report.

Dr. Dewey presented slides showing the 10 recommendations of the *Fed to Fail* report, organized into four categories:

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<sup>16</sup> USAID. (n.d.). *Types of Emergency Food Assistance*. <https://www.usaid.gov/food-assistance/what-we-do/emergency-activities/types-emergency#:~:text=U.S.%20in-kind%20food%20aid%20%28Title%20II%29%20is%20often,to%20mirror%20local%20diets%20as%20much%20as%20possible>

- 1.) Actions to transform the food system:
  - a.) Increase the availability and affordability of nutritious foods - including fruits, vegetables, eggs, fish, meat and fortified food - by incentivizing their production, distribution, and retaining;
  - b.) implement national standards and legislation to protect young children from unhealthy processed and ultra-processed foods and beverages and harmful marketing practices targeting children and families;
  - c.) Use multiple communication channels, including digital media, to reach caregivers with factual information and advice on young child feeding and increase the desirability of nutritious and safe foods;
- 2.) Actions to mobilize the full potential of the Health System:
  - a.) Expand caregiver access to quality counseling and support on young child feeding by investing in the recruitment, training, supervision, and motivation of community-based counselors and health workers;
  - b.) Deliver dietary supplements, home fortificants, and fortified complementary foods to young children at risk of micronutrient deficiencies, anemia and growth and development failure;
- 3.) Actions through the social protection system:
  - a.) Design social transfers - cash, food and/or vouchers - that support, and do not undermine, nutritious and safe diets in early childhood, including in fragile settings and in response to humanitarian crises;
  - b.) Use social protection programmes to improve caregivers' knowledge about young child feeding by providing education and counseling and by encouraging the use of health and nutrition services;
- 4.) Actions under the multi-system governance:
  - a.) Position young children's right to nutritious and safe diets as a priority in the national development agenda and ensure coherent policy support and legislation across sectors and systems;
  - b.) Strengthen public accountability for young children's diets by setting targets and tracking progress through sector-specific monitoring systems and household surveys;
  - c.) Conduct research to understand context-specific barriers, enablers and pathways to improving the quality of young children's diets.

Dr. Dewey explained that she would emphasize one recommended action from each category for which she believes USAID has deep experience and a strong comparative advantage.

The first category is "Actions to Transform the Food System", and Dr. Dewey recommended prioritizing "Increasing the availability and affordability of nutritious foods, including fruits, vegetables, eggs, fish, meat and fortified foods, by incentivizing their production, distribution, and retailing." This is important because these nutrient-dense foods are not necessarily the foods that have received the most investments, which tend to be cereal-based foods that were historically part of food aid programs. Dr. Dewey expressed that far more attention is needed on these other types of products. Because many of these products are perishable, expertise on both production and food-safety aspects is very important.

The two other actions to transform the food system, as outlined in the *Fed to Fail* report, are to "Implement national standards and legislation to protect young children from unhealthy processed and ultra-processed foods and beverages and harmful marketing practices targeting children and families" and to "use multiple communication channels, including digital media, to reach caregivers with factual information and advice on young child feeding and increase the desirability of nutritious and safe



foods.” Dr. Dewey acknowledged that recommendations two and three are important, but USAID could play a more critical leading role in addressing recommendation one while supporting implementation for the other two recommendations.

The second category of recommendations is “Actions to Mobilize the Full Potential of the Health System.” Recommendation number four is “Expand caregiver access to quality counseling and support on young child feeding by investing in the recruitment, training, supervision, and motivation of community-based counselors and health workers.” This recommendation is directed at programs on the ground and in-country, which would be a much broader mandate. Dr. Dewey prioritized recommendation five for USAID, “Deliver dietary supplements, home fortificants and fortified complementary foods to young children at risk of micronutrient deficiencies, anemia and growth and development failure.” Dr. Dewey stated that USAID could lead on recommendation five by delivering dietary supplements, home fortificants, and fortified complementary foods through its programs This action could be integrated into multi-sectoral approaches.

The third category of recommendations is “Actions through the Social Protection System.” Dr. Dewey highlighted recommendation six for USAID action, to “design social transfers—cash, food, and/or vouchers—that support, and do not undermine, nutritious and safe diets in early childhood, including in fragile settings and in response to humanitarian crises.” Recommendation seven is to “use social protection programmes to improve caregivers’ knowledge about young child feeding by providing education and counseling and by encouraging the use of health and nutrition services.” Dr. Dewey prioritized that number six, in particular, be incorporated in the larger strategy implemented by USAID.

The fourth category of recommendations is “Actions under the Multi-System Governance.” Recommendation eight is to “position young children’s right to nutritious and safe diets as a priority in the national development agenda and ensure coherent policy support and legislation across sectors and systems.” Recommendation nine is “Strengthen public accountability for young children’s diets by setting targets and tracking progress through sector-specific monitoring systems and household surveys.” Recommendation 10 is “Conduct research to understand context-specific barriers, enablers and pathways to improving the quality of young children’s diets.” Dr. Dewey said she would prioritize recommendation 10, as learnings from programs such as Alive and Thrive and rigorous IFPRI evaluations can help guide intervention prioritization and modification of existing programs. Dr. Dewey concluded that these evaluations could help identify the enablers and barriers of targeted outcomes.

Ms. Spahn thanked Dr. Dewey and invited BIFAD member Ms. Henri G. Moore, Vice President and Head of Responsible Business of Haleon Group, to ask a question.

Ms. Moore acknowledged that commercial production of complementary foods is not often regulated, and few countries have standards in place regulating the composition of these foods, let alone enforcement of these standards. Ms. Moore asked Ms. Samba and the other panelists how USAID programs can support the necessary policy work to get important standards in place.

Ms. Samba thanked Ms. Moore for the question and acknowledged that standardization is a significant challenge. As an example, Ms. Samba shared that she recently saw an advertisement for juice marketed as a product for babies, though it was not formulated specifically for their nutritional needs. Ms. Samba expressed that products and advertisements like the example shared create unfair competition for her company in marketing products for children under two years of age, as it is difficult to compete with cheaper products. Ms. Samba added that most products do not target early childhood. The issue of affordability is complicated. Ms. Samba wished to target the most-vulnerable populations when founding her company but found it difficult as a small company. Ms. Samba changed her business plan

to target middle-income consumers before widening her target to include the most vulnerable once her business was established.

Ms. Samba added that investments and finance at the early stage of her company would have helped the company produce food according to content standards and create economies of scale to reduce costs, ultimately offering a more affordable product.

Ms. Spahn acknowledged Ms. Tefft Casper nodding in agreement and Dr. Dewey's previous point about the importance of standards. Ms. Spahn invited BIFAD member Dr. Pamela Anderson, Director General Emerita of the International Potato Center, to ask a question.

Dr. Anderson thanked Ms. Spahn and the speakers. Dr. Anderson acknowledged that the need for a pivot to a multi-sectoral approach, from compartments and silos, had been emphasized throughout the meeting's presentations as well as in the publications shared by the speakers (refer to Annex 3). Dr. Anderson asked the speakers to share specific institutional advice for USAID, including what needs to change to make this pivot toward a multi-sectoral approach, such as structure, programming, financing, or other recommendations.

Ms. Spahn thanked Dr. Anderson for the question and invited the speakers to comment.

Building on the evidence Dr. Olney shared about cost effectiveness, Dr. Masters spoke of the challenge of USAID implementing projects over five-year time scales. There are natural reasons for the "projectization" of USAID's work, but that has limitations. Dr. Masters expressed that USAID has an opportunity to consider the broader enabling environment over a longer term, its institutional framework, quality standards, institutions, and enforcement of standards, and other multi-sectoral issues. He recommends USAID expand planning beyond the five-year window.

Ms. Spahn acknowledged the limited time and invited Dr. Alexander to ask a question.

Dr. Alexander stated that social protection programs only work if they reach their targeted populations. Dr. Alexander asked Dr. Olney to suggest specific policy or program changes USAID could make to ensure safety nets reach the families that need them.

Dr. Olney responded that the USAID Food for Peace program specifically targeted women and children in the first thousand days in 2010, and she suggested that this could be revisited. Dr. Olney added that, in addition to other opportunities previously mentioned, even general social assistance programs targeting the poor or poor areas, such as emergency aid or resilience-building activities, could, when registering beneficiaries, identify families with children under two years and pregnant women and add components such as LNS or corn-soy blends to bolster the diets of women and children in that vulnerable period.

Ms. Spahn thanked Dr. Olney for her response and invited Dr. Saweda Liverpool-Tasie, BIFAD Member and Professor at Michigan State University, to ask questions and take the podium to moderate the public Q&A period.

Dr. Liverpool-Tasie mentioned that the question of high costs was a primary basis for holding the public meeting. She acknowledged Ms. Samba's example of high transportation costs and the implication that this filters down into the cost of nutritious food products. Dr. Liverpool-Tasie asked the speakers to share targeted policies and programs they recommend USAID could support to specifically reduce the cost of nutritious diets.

Ms. Tefft Casper responded that reducing the cost of food is not an immediate solution, as it does not take a short amount of time. Reducing food cost requires investing in technification, machinery, economies of scale, and supply chains to reduce the cost of food production and the cost of food over time. Thinking about companies seeking to reduce costs, while being mindful that nutrition is costly, it is important not to dilute production. Reducing costs may require investment in machines, specialized personnel, or other interventions to make value chains more efficient and to make production more efficient. Over time, this can make production more efficient and effective and can support ecosystem improvement that will reduce food costs.

Dr. Liverpool-Tasie invited Dr. Dewey to comment.

Dr. Dewey added that it is important to understand the costs of a nutritious diet for a household. Dr. Masters has done some work in this area, and the World Food Programme (WFP) has extensive work on the cost of a nutritious diet for a household of five in low- and middle-income countries. WFP has looked specifically at the cost of achieving a nutritious diet for children under two and for pregnant women. One clear result is that the cost of meeting nutrient needs from unfortified foods is very high for those two target groups. Incorporating a fortified product for pregnant women, such as a multiple micronutrient tablet, and some sort of fortified product for young children significantly reduced the cost, sometimes by half, and dramatically increased the percentage of households able to afford a nutritious diet. Dr. Dewey concluded that combining these types of strategies is one way to reduce the costs of nutritious foods.

Dr. Liverpool-Tasie thanked Dr. Dewey and invited speakers to comment on other potential areas, such as post-production, building on the suggestions that USAID introduce fortified foods at low cost and support at the ecosystem level to reduce costs along the supply chain. She invited Dr. Masters to respond.

Dr. Masters responded that the advantage of an ecosystem, or enabling environment, approach, is the power of the market, of competition, and of a diversity of suppliers. Dr. Masters suggested that in a country like Senegal, one could imagine four or five national companies instead of a few large multinational corporations and small, local companies, but this would require an enabling environment of quality standards that prevent undercutting and false, yet persuasive, advertising. This issue can be addressed so that there is competition, not just one company at a time, but across the entire market.

### **Public Comment and Questions**

***Moderated by Saweda Liverpool-Tasie, BIFAD Member and MSU Foundation Professor, Michigan State University***

Dr. Liverpool-Tasie thanked Dr. Masters and highlighted that the public comment period would start with one question online before transitioning to questions from the audience in the room. Dr. Liverpool-Tasie invited online participants to post questions and asked for all participants who were not able to ask a question to communicate their comments to Dr. Clara Cohen, BIFAD Executive Director, USAID Bureau for Resilience and Food Security.

Dr. Liverpool-Tasie turned to an online participant question. Building on the conversation around regulations of weaning and complementary food formulas, Ahmed Kablan from USAID asked if standards should be established by the Codex Alimentarius, a regulatory body and part of the food standards programs of the Food and Agriculture Organization (FAO) and the World Health Organization (WHO), and what role USAID could play in supporting regulatory standards. Dr. Liverpool-Tasie invited Dr. Masters and other panelists to respond.

Dr. Masters responded that much of this infrastructure is already in place, according to Mr. Shawn Baker, Chief Nutritionist for USAID. Dr. Masters expressed that a remaining question is whether it is possible for USAID to address the enabling environments and institutions, expanding beyond approaches constrained to a particular project or company. Dr. Masters acknowledged that this process is political and institutional in nature. He added that a process needs to be set in motion to establish standards through a partnership among expert panels, commissions, industry, public health nutrition authorities, WHO, and regional authorities. It is more about a process than about pre-specifying the outcome.

Dr. Liverpool-Tasie thanked Dr. Masters and invited other panel members to comment.

Ms. Samba added that multi-sectoral collaboration is very important. She expressed that food standards must be built working with private sector organizations and the state (government). Ms. Samba said that reducing taxes on food for babies under two could help reduce costs and allow companies to produce foods that meet those standards more easily.

Dr. Liverpool-Tasie acknowledged that the speakers called for USAID to use its power to negotiate or engage with governments to support this enabling environment. Dr. Liverpool-Tasie invited a participant in the room to pose a question.

David Beckmann, former president of Bread for the World, said that in September 2022, President Biden launched a U.S. national strategy<sup>7</sup> on hunger, nutrition, and health with the goal to end hunger in the United States by 2030 and to have a clear impact on dietary diseases. In the action plan, some provisions are relevant to the discussion today, such as improvements in the women, infants, and children (WIC) program. The administration convened civil society and U.S. federal agencies for several months on how they could contribute to the president's goal. As a result, the administration is committed to many recommendations across various federal agencies, serving as a model of intersectoral collaboration. The Biden-Harris Administration also ventured to specify what NGOs and businesses in the U.S. should do to meet the goal of ending hunger and improving nutrition and health by 2030. David Beckmann asked Ms. Spahn how USAID could take advantage of this domestic success in its dialogue with developing countries.

Ms. Spahn responded that the plan is aspirational but agreed that multi-sectoral collaboration is important. Ms. Spahn mentioned that Mr. Shawn Baker, USAID Chief Nutritionist, would later speak and noted that the Chief Nutritionist position was designed to pull across various strands of nutrition at USAID because nutrition is in humanitarian assistance and global health. Ms. Spahn acknowledged that multi-sectoral collaboration must be inclusive but focused to bring together all important actors. Ms. Spahn commented that she is co-chair of a CEO council on nutrition that brings groups together to elevate their voices in Congress and also influence the executive branch. Ms. Spahn added the importance of considering what heads of states from other countries can do. Ms. Spahn expressed that African heads of state at the upcoming Africa Leaders Summit in Washington could pressure the White House to elevate nutrition on that agenda. Ms. Spahn concluded that multiple leverage points are necessary.

Dr. Liverpool-Tasie thanked Ms. Spahn and invited another question from the audience.

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<sup>17</sup> The White House Washington. (2022, September). *Biden-Harris Administration National Strategy on Hunger, Nutrition, and Health*.

Stephanie Mercier of the Farm Journal Foundation asked the panelists about the extent to which there was an educational component in the interventions that have been studied and discussed thus far in the meeting. Stephanie Mercier commented that many of the families profiled in *The First 1,000 Days: A Crucial Time for Mothers and Children-And the World*,<sup>18</sup> written by Roger Thurow, did not understand what a nutritionally appropriate diet for infants was, which underscores that education must be an important part of this discussion.

Ms. Tharaney agreed that it is critical to address education. Social and behavior change communication more commonly address this in seeking to understand both the behaviors and the drivers of behaviors. Ms. Tharaney expressed that it is important to conduct research to better understand and tailor communication to different local contexts. Even in the United States, it is different across states, but across different countries as well. It is important to understand whether mothers and caregivers have the knowledge, but more importantly, the confidence and the skills. Ms. Tharaney added that it is important to ensure that mothers are supported by families and societies at-large. This requires considering social norms alongside seeking to influence the practices of mothers. Governance is also important, as taxes and affordability also contribute to shaping young children's diets. Ms. Tharaney agreed that education is key and critical to this effort.

Dr. Liverpool-Tasie acknowledged the time constraints and invited a question from Dr. Lawrence Haddad, Executive Director of GAIN.

Dr. Haddad thanked the panel and presenters for their session and expressed two suggestions for USAID related to framing. Dr. Haddad said that it is important to frame the issue in a problem statement, i.e., how to make safe, nutritious foods more affordable for the most vulnerable. Dr. Haddad added that if the issue is not framed in a problem statement, there is a risk that initiatives may be disconnected across geographies or systems may not add up to a full solution. Framing a problem statement around how to make five key nutritious foods in a country more affordable would draw in many different components: the demand-side, including supply chains, reducing food loss, and providing finance to national food companies; the enabling environment, including standards and policies; school procurements and social protection procurements; and the health system, including supplements. Dr. Haddad added that it is difficult to frame that as a complementary feeding initiative, because if the commercial sector is involved, it might view complementary food as a small market and tend not to be excited about it. Dr. Haddad suggested that a framing of making critical ingredients—that are important for many purposes, including complementary feeding—more affordable is a more sustainable model that will achieve greater momentum with the private sector. Dr. Liverpool-Tasie thanked Dr. Haddad for the comment and read a question from online participant Lisa Sherburne: "There are still small initiatives to have home-processing and local markets offer small, dried fish as a good addition to young children's food from about six months and feeding young children caught fish. Any thoughts about greater scale for these initiatives and what role USAID can play in supporting these initiatives?" Dr. Liverpool-Tasie indicated that this question was addressed to Dr. Masters and invited others to comment.

Dr. Masters commented that World Food Prize week is a great time to remember the 2021 prize to Shakuntala Thilsted, who has been pioneering that particular kind of food. Dr. Masters expressed that a major challenge for dried fish is its taste. Higher-income consumers avoid dried fish, making it a valuable food for targeting low-income consumers, along with dark-green leafy vegetables. Dr. Masters

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<sup>18</sup> Thurow, R. (2016). *The First 1,000 Days: A Crucial Time for Mothers and Children-And the World*. *Breastfeeding Medicine* 11(8). DOI: 10.1089/bfm.2016.0114

suggested that this is highly relevant to Dr. Olney's work with the Food Retail Expansion to Support Health (FRESH) program. Dr. Masters concluded and echoed Lawrence Haddad's point that dried fish are vitally important for infant feeding as well as for many other groups of people.

Dr. Liverpool-Tasie thanked Dr. Masters and suggested that earlier comments indicated how USAID could support initiatives. Dr. Liverpool-Tasie closed the public comment period and asked the audience to communicate any remaining comments or questions to the BIFAD team.

Ms. Spahn thanked Dr. Haddad for his recommendations to USAID and invited Shawn Baker to share a synthesis of the high-level recommendations shared by the panelists. As Chief Nutritionist of USAID, Mr. Baker guides USAID's investments and engagements with partners to address malnutrition in developing countries. Ms. Spahn added that a report of the full recommendations from the session would be produced and communicated to USAID and Administrator Samantha Power.

### **Final Discussion and Takeaways**

#### ***Shawn Baker, Chief Nutritionist, USAID***

Mr. Baker thanked Ms. Spahn and expressed the challenge of summarizing the dense discussion in a short time. Mr. Baker thanked BIFAD for addressing this subject and presented seven key takeaways from the discussion.

Mr. Baker said that the general state of infant and young children's nutrition was sobering. Globally, children are malnourished because they are not receiving the nutrients they need. Mr. Baker expressed that it was sobering to learn that, in at least 10 countries, there is backsliding in meeting young child nutrition. With current global crises such as COVID-19, the climate crisis, and conflict, Mr. Baker commented that nutrition backsliding is likely worse for the most vulnerable.

Mr. Baker commented that he is an optimist and believes that the power of doing something right is immense. Mr. Baker added that it is not necessary to always be entirely successful, as incremental improvements are also important. Mr. Baker expressed that the discussion reaffirmed that infant and young child nutrition should be a strong priority for USAID.

Second, Mr. Baker expressed that there are many existing but isolated solutions. Moving forward, a challenge is learning how to bring together isolated solutions to create systemic change at scale where it matters most. This includes addressing remaining evidence gaps. Mr. Baker added that moving solutions forward must be framed within existing knowledge and bringing together that knowledge most effectively. Solutions must also be framed within knowledge gaps and efforts to generate evidence.

As the third takeaway, Mr. Baker commented that internal agency action is important to create focus and intensity for present impact while simultaneously building for medium and long-term impact. Long-term systems change does not happen quickly.

Third, Mr. Baker commented that improving the way that USAID works across projects might help create present impact while building long-term impact. As an institution, USAID can offer continuity and works with partner institutions that operate with continuity. Mr. Baker expressed that one challenge for USAID is working within the constraints of project time frames while simultaneously working towards long-term goals. Mr. Baker added that this is an area where different offices of USAID need to come together.

Fourth, because of its strong presence in health systems, food systems, humanitarian assistance, and a growing portfolio in social protection, USAID does have, as a donor agency, extensive resources and connections. Mr. Baker commented that USAID is well placed to bring together different resources and initiatives. The Global Malnutrition Prevention and Treatment Act further codifies the internal

coordination sought by USAID. Mr. Baker expressed that this topic exemplifies the value of coordination in achieving concrete outcomes.

As a fifth takeaway, Mr. Baker expressed appreciation for the discussion on other levers of USAID beyond financing. While funding is critically important, USAID may also leverage the wealth of evidence and knowledge resident in its implementing partner ecosystem and internal capacities. Mr. Baker added that there are also calls for USAID to better use its convening power, as the enabling environment includes the regulatory and financing environment beyond what the agency can fund itself. Mr. Baker expressed that this aligns well with one of Administrator Power's priorities, which she calls "progress beyond programs." This includes considering how USAID may use other levers of its knowledge and convening assets to drive systemic change to achieve progress beyond its own directly funded programs.

Sixth, Mr. Baker added that the discussion implicitly suggested that young child nutrition is fundamental to the equity agenda. Mr. Baker expressed it was striking to learn the extent to which young child nutrition is driven by a lack of affordability and accessibility of nutritious foods and the time constraints in preparing them. More marginalized individuals face greater socioeconomic challenges. Mr. Baker added that Ms. Tharaney's comment that the tendency of public health nutrition to place sole responsibility for child nutrition on mothers should be central to the agenda of USAID in reducing inequities.

Seventh, Mr. Baker expressed that child nutrition cannot improve without political leadership, and he has been pleased by the leadership that USAID and its administrator and deputy administrator have shown on issues of nutrition.

Mr. Baker referenced the domestic leadership of President Biden in organizing the first White House Conference on Hunger, Nutrition, and Health in 50 years. This is an issue that will require political leadership at a high level. Mr. Baker suggested that proper framing and language are important to create political momentum. He expressed that the discussion used technically focused terminology, which allows room to dismiss young child nutrition as overly technical and complicated. Mr. Baker pointed out that young child nutrition is also a simple concept, as children need nourishment to live and thrive.

Mr. Baker acknowledged that the voice of BIFAD is important in moving young child nutrition beyond a technical issue to a fundamental moral issue, where USAID can create systemic change in collaboration with its vast ecosystem of implementing partners and partner governments. Mr. Baker thanked the audience for the opportunity to share his seven key takeaways of the discussion.

### **Closing Remarks and Notes of Appreciation**

#### ***Laurence Alexander, BIFAD Chair and Chancellor, University of Arkansas at Pine Bluff***

Dr. Alexander thanked Mr. Baker for his comprehensive summary of the meaningful recommendations for USAID programs and policies to improve the affordability of safe and nutritious foods for young children. Dr. Alexander thanked Ms. Spahn for her leadership in organizing the meeting and the speakers and panelists for sharing their experience and evidence-based recommendations.

Dr. Alexander also thanked the World Food Prize Foundation and President Barbara Stinson for organizing this year's event. Dr. Alexander expressed appreciation for those participating in person and virtually for their input and questions in creating a rich discussion that will help BIFAD produce actionable recommendations for USAID. Dr. Alexander reminded participants that the recording and official minutes of these proceedings would be posted on USAID's BIFAD website following the event.

Participant comments and questions would form part of the official public record and would be considered in BIFAD'S recommendations to the USAID Administrator.

Dr. Alexander thanked those behind the scenes who helped to organize the event, including BIFAD Executive Director Clara Cohen, the BIFAD support team members in the room, including Senior Counselor Carmen Benson and Program Associate Lina Mohammadi, those hosting the meeting on Zoom, including Tommy Crocker, Carol Chan, Mary Beggs, and members of the technical team at CLE Productions, and the catering team which kept participants alert with hot coffee and tea. Dr. Alexander thanked all participants and adjourned the 186th BIFAD Public Meeting.

### **Certification of Minutes**

We hereby certify that the foregoing minutes are an accurate and complete summary of the matters discussed and conclusions reached at the meeting held on October 19, 2022.

Laurence B. Alexander, BIFAD Chair and Chancellor, University of Arkansas at Pine Bluff

Clara K. Cohen, Executive Director, Board for International Food and Agricultural Development, Bureau for Resilience and Food Security, USAID

January 18, 2023



## ANNEX 1: CHAT TRANSCRIPT

From Tommy Crocker to Everyone:

Welcome to the Fed to Thrive Side Event, hosted by BIFAD at the World Food Prize. The meeting will begin in about 4 minutes.

From Tommy Crocker to Everyone:

Please note that closed captioning is available in ZOOM.

From Tommy Crocker to Everyone:

Welcome to the Fed to Thrive Side Event, hosted by BIFAD at the World Food Prize. The meeting will begin shortly!

From Tommy Crocker to Everyone:

Hello everyone! My name is Tommy Crocker and I am a Program Associate to the BIFAD Support Contract.

From Tommy Crocker to Everyone:

Welcome! Today's agenda and speaker bios are available here: <https://bit.ly/3VCbL0t>

From Tommy Crocker to Everyone:

We welcome ZOOM participants to introduce yourself using the chat feature.

From Tommy Crocker to Everyone:

Learn more about BIFAD here: [www.usaid.gov/bifad](http://www.usaid.gov/bifad)

From Benjamin Kohl to Everyone:

Hi all! Benjamin E. Kohl, Ph.D.

Program Administrator

Feed the Future Innovation Lab for Collaborative Research on Sorghum and Millet (SMIL)

Kansas State University

[Contact information removed]

Website: <https://smil.k-state.edu>

LinkedIn: <https://www.linkedin.com/company/sorghummillet>

Twitter: [https://twitter.com/sorg\\_millet\\_lab](https://twitter.com/sorg_millet_lab)

From Mary Beggs to Everyone:

Good morning everyone! My name is Mary Beggs, and I am the BIFAD Support Contract Project Manager, and Tetra Tech Ag and Economic Growth Sector Director. I look forward to the conversation today!

From Tommy Crocker to Everyone:

Hello everyone, we welcome introductions and hope you will join the discussion by sharing your ideas and resources in the chat and send questions to panelists using the Q/A function.

From Temina Mkumbwa to Hosts and panelists:

Hi everyone! Temina Mkumbwa, Nutrition Coordinator - USAID/Tanzania.

From Arouna SADJI BOUKARI to Everyone:

Hi all! Arouna SADJI BOUKARI Chief of Gender and Environment Unit at Ministry of Development and governmental actions coordination in Bénin

From Judy Canahuati to Hosts and panelists:

Hi everyone, Judy Canahuati from USAID Bureau for Humanitarian Assistance Nutrition.

From Tommy Crocker to Everyone:

View the full report here: <https://www.unicef.org/reports/fed-to-fail-child-nutrition>

From Jennifer Billings to Hosts and panelists:

Good morning! Jennifer Billings, Global Ag Development Leader, Corteva Agriscience

From Olunuga Olawale to Everyone:

Olunuga Olawale, M.Agric Federal University of Agriculture Abeokuta

From Hart Jansson to Everyone:

For a practical and sustainable, hyper-local solution to chronic malnutrition, see <https://www.youtube.com/watch?v=NnOtIJ-U6KQ> best regards, [Contact information removed]

From Stephanie Hodges to Everyone:

Hello! Stephanie Hodges, public health dietitian and consultant with 1,000 Days. Thank you for focusing on this critical window for growth and development.

From Anteneh Omer Ali to Everyone:

Greetings from Ethiopia! I am Anteneh Omer, a PhD candidate in Human Nutrition at Hawassa University, Ethiopia.

From Judy Canahuati to Hosts and panelists:

Online we can't see the entire slide. The view is really small.

From Aparna Deshpande to Everyone:

Greetings! Dr. Aparna Deshpande, Nutrition Specialist, Chhattisgarh, India

From Temina Mkumbwa to Everyone:

Hi Everyone! Temina Mkumbwa, Nutrition Coordinator - USAID/Tanzania

From RAJALAKSHMI Nair to Everyone:

Hi everyone. I am Rajalakshmi Nair Nutrition Specialist UNICEF Maharashtra India. very happy to be part of these very important discussions. Especially to hear from Kate.

From Oumarou SAMNA to Everyone:

Hi , Oumarou SAMNA Associate Prof from University of Maradi Niger and Director of the International Cooperation, High Education and Research Ministry

From Marie Boyd to Everyone:

Greetings, Marie Boyd, Associate Professor, University of South Carolina School of Law and BIFAD Member. I'm looking forward to the discussion!

From Moussa Sarr to Everyone:

Hi everyone!

Moussa Sarr, MPH, EMBA, Helen Keller Country Director - Senegal

From Bamidele Afanwoubo to Everyone:

Hello everyone. I am a graduate of Agricultural Economics from the Ladoke Akintola University of Technology, Nigeria. It's so good to be here to learn from great researchers and listen to talks on how to improve the global food system.

From Placidius Rwechungura to Everyone:

Greetings! Placidius Rwechungura from Global Climate Smart Agriculture Youth Network (TANZANIA)

From Christiana Daankwa Opoku to Everyone:

Greetings from Ghana! I'm Christiana D. Opoku Nutritionist at Self-Help International,

From DIVINE NTIOKAM to Everyone:

Greetings from climate Smart agriculture youth network global (GCSAYN)

From Carol Chan to Everyone:

Hello! Carol Chan, Associate in Tetra Tech's Agriculture and Economic Growth sector, serving as Operations Manager on the BIFAD Support Contract. Look forward to a lively discussion!

From Katelyn Yuen Esco to Everyone:

Hello! Katelyn Yuen Esco with Assessment & Research on Child Feeding (ARCH) Project managed by Helen Keller Intl.

From Jatani Bonaya Godana to Everyone:

Hello everyone ! I'm Jatani Bonaya, from Ethiopia. A Lecturer at Dilla University, Active Youth Initiative Coordinator and AYPI - Ethiopia Chapter Communication Head

From Joseph Forcherio to Everyone:

Good Morning. Thank you for this valuable nutrition session. Though in Des Moines, I'm attending virtually.

From DIVINE NTIOKAM to Everyone:

We are the youth led network at BIFAD Climate change subcommittee

From Alissa Pries to Everyone:

Hello all, Alissa Pries with Helen Keller Intl's Assessment and Research on Child Feeding (ARCH) project

From Jesse Idegwu to Everyone:

Jesse Daniel Idegwu ED Danuwa Empowerment Foundation Nigeria

From DIVINE NTIOKAM to Everyone:

<https://csaynglobal.org/divine-at-university-of-arizona/>

From Justine Kavle to Everyone:

Good morning! Dr. Justine Kavle, CEO and Public Health Nutritionist, Kavle Consulting, LLC

From Mary J Oakland to Hosts and panelists:

Greetings everyone! from Mary Jane Oakland, Board Member, Self Help International. Glad to see one of my fellow nutritionists from Ghana on this call.

From Pushpendra Mishra to Everyone:

This is Pushpendra, Researcher at Ipsos Nigeria Limited...

From Abdifatah Ahmed Mohamed to Everyone:

Hi. Am Abdifatah from Somalia. Work for WFP as third part Monitor Consultant CTG. Well appreciated and suitable course and also match to my Duties every day.

From Nathalie Likhite to Hosts and panelists:

Greetings! Nathalie Likhite, Social and behavioral change specialist, writing from France.

From Siyanbola Omitoyin to Everyone:

Hello everyone. Siyanbola Omitoyin from Department of Aquaculture and Fisheries Management, University of Ibadan

From Don Humpal to Everyone:

Good morning. Don Humpal, Senior Agriculturist, DAI Global, Agriculture and Market Systems.

From Elizabeth Zehner to Everyone:

Hello. Elizabeth Zehner, Helen Keller International, ARCH Project

From Tommy Crocker to Everyone:

See the panelist bios in today's agenda: <https://bit.ly/3VCbL0t>

From Henry Heilbroner to Everyone:

Good morning everyone! This is Henry Heilbroner. I'm a Market Systems Specialist with USAID's Bureau for Resilience and Food Security, Center for Ag-Led Growth.

From Nabe Kanfigue to Everyone:

Hello everyone that's the presentation

From Arouna SADJI BOUKARI to Everyone:

[Contact information removed]

From Isatou Jallow to Everyone:

Greetings. Isatou Jallow, Executive Director, Africa Catalyzing Action for Nutrition (AfriCAN), The Gambia

From Blessing Alexander to Everyone:

Hello, Blessing Alexander, Nutrition Assistant, WFP Nigeria.

From Paul James eteudo to Everyone:

hello everyone, Paul James eteudo, department of psychology university of Ibadan Nigeria

From Tommy Crocker to Everyone:

We hope you will join the discussion by sharing your ideas and resources in the chat and send questions to panelists using the Q/A function.

From Jan Braunholz to Hosts and panelists:

Hello everyone, Jan Braunholz from Frankfurt/M <https://cafe-cortado.tem.li>

From Patience Mgoli Mwale to Hosts and panelists:

Hi. Patience Mgoli Mwale. CARE USA. Partnerships and Research Advisor.

From Ifedolapo Raji to Everyone:

Hi everyone. I am a graduate of Animal science from the University of Ibadan, Nigeria.

From Patience Mgoli Mwale to Everyone:

Patience Mgoli Mwale, CARE USA, Partnerships and Research Advisor. Based in Malawi

From Nabe Kanfigue to Everyone:

Mr NABE Kanfigue, the president and Founder Union Syndicale des Agriculteurs USA in Togo and we are to boost food security dealing with food producers and traders as an agriculture stakeholders organisation.

From Ndah Teddy to Everyone:

M. NDAH Teddy

From Dr.Tariq Javaid to Everyone:

Dr.Tariq Javaid  
Pakistan

From Emmanuel Folorunso to Hosts and panelists:

Emmanuel Folorunso/ Nigeria

From Ahmed Kablan to Hosts and panelists:

Why not set the standards via CODEX?

From Ndah Teddy to Everyone:

I am called NDAH Teddy from Cameroon a Health Promotion Service Provider for Helen Keller International

From Tommy Crocker to Everyone:

See the panelist bios in today's agenda: <https://bit.ly/3VCbL0t>

From Dr Ayah Talal Zaidalkilani to Everyone:

Dr Ayah Talal Zaidalkilani  
Assistant Professor in Public Health Nutrition  
at the University of Petra

Amman – Jordan

From Kedir Hassen to Hosts and panelists:  
kedir hasse from Ethiopia

From Mary Beggs to Everyone:  
Hello all, please feel free to share your ideas, experiences, and resources/research in the chat.

From Dr.Tariq Javaid to Everyone:  
Dr.Tariq Javaid from Pakistan working on Biofortified Potatoes to eliminate malnutrition & providing cheaper source of Nutrients to all consumers Collaboration in this regards would highly be appreciated  
[Contact information removed]

From Jemberu Alemu Megenas to Everyone:  
It is very great being a participant here

From Lisa Sherburne to Everyone:  
Lisa Sherburne, USAID Advancing Nutrition. This is so useful- thank you for this session! I was glad to hear Dr. Masters call out dried fish. There are -- still small - initiatives to have home processing and local markets offer small, dried fish as a good addition to young children's food (from 6 months) and feeding young children fish caught. Any thoughts about greater scale for these initiatives?

From Hart Jansson to Hosts and panelists:  
Dried fish is great, but locally made soymilk is cheaper and better for the environment - check out [www.malnutrition.org](http://www.malnutrition.org)

From Orenuga Joseph to Everyone:  
Joseph Orenuga, Nutritionist and Director of Operations at Praiseland schools. Thrilled to be a part of this.

From Hart Jansson to Hosts and panelists:  
Also, any packaged food is by definition unaffordable by those in communities with high rates of malnutrition.

From Jemberu Alemu Megenas to Everyone:  
Nice to meet you all here

From Hart Jansson to Hosts and panelists:  
locally made soymilk for 1 cent / gram of protein, including profit for the entrepreneur making it! [www.malnutrition.org](http://www.malnutrition.org)

From Muhammad Muzzamil Momoh to Everyone:  
Muhammad Momoh, Nutrition component lead on the Advancing Local Dairy Development in Nigeria (ALDDN) programme which is implemented by Sahel Consulting Agriculture and Nutrition Limited. So many insights being shared here. I am glad to be here.

From Mary Beggs to Everyone:

Please add your organization and country location with your introduction. An amazing group of experts and experiences on the line!

From Hannah Guedenet to Hosts and panelists:

Women should also not have the burden of being responsible for all family food choices. We cannot make them out to be the bad guys for choosing “unhealthy” foods. Where are the fathers in this equation? Hannah Guedenet, USAID

Hannah Guedenet to Hosts and panelists:

Thank you!! It is critical to focus on ALL family members and their influence on children’s diets.

From DIVINE NTIOKAM to Everyone:

ORG/Network name : CLIMATE SMART AGRICULTURE YOUTH NETWORK GLOBAL

From DIVINE NTIOKAM to Everyone:

FOUNDER/ED:NTIOKAM DIVINE

From Tommy Crocker to Everyone:

Thank you to all of those who have submitted questions with the Q/A function. These questions have been recorded and will be addressed during the public Q/A period. We encourage everyone to share their questions!

From DIVINE NTIOKAM to Everyone:

COUNTRY HQ: CAMEROON

From Linda Shaker Barbari to Everyone:

Linda Shaker Barbari - Nutrition Specialist - UNICEF HQ - really happy to see all the conversations around improving diets of young children.

From Ogalo Vincent to Everyone:

Ogalo Vincent. Social worker with Building Community Initiatives for Development and Self-reliance (BIDS Foundation) based in Soroti district in Eastern Uganda with nutrition and food security as one of the areas of intervention. [Contact information removed]

From Kane Rosenette to Everyone:

Hi everyone ! I am Rosenette Kane, Project Officer at Helen Keller International, Sénégal. Congrats for this, really appreciated

From Nkole Mwamba to Everyone:

Ambassador Nkole Mwamba, Executive Director Savannah Zambia. [Contact information removed]

From Hart Jansson to Hosts and panelists:

milk and eggs are very hard to afford for those making less than \$2 / day - how about locally made soymilk; affordable and much more climate-friendly!!

From MPENDA Matabishi to Everyone:

Hello everyone, I am MPENDA Matabishi, a graduate fellow in Public Health at the University of Rwanda

From Olunuga Olawale to Everyone:

I'm also an early career scholar on a research supporting African Micro small medium enterprises to provide safe and nutritious food

From Samuel Gada to Hosts and panelists:

Samuel Gada - Graphic Designer / Visual Editor

Nigeria Health Watch- Abuja, Nigeria

Happy to learn and contribute to developing compelling ways of conveying nutrition stories.

From Marcia Griffiths to Everyone:

Marcia Griffiths, The Manoff Group, wonderful discussion.

From Yaya Diao to Everyone:

Dr Yaya DIAO, socioanthropologist/researcher of food, Community nutrition and health in Africa humanitarian area from Senegal. founder of Ndiabel & Madiba Initiatives. [Contact information removed] Congratulations Siny, Interesting presentation. LIONCEAU is doing a good job in Senegal for the benefit of young women and children

From Jieping Li to Everyone:

Hi, Everybody, I am Li Jieping. I work at International Potato Center-China Center for Asia Pacific (CCCAP), I want to get more information about BIOT potato materials, varieties. Please send it to Email address: [Contact information removed]

From Kelsey Torres to Everyone:

Kelsey Torres, USAID Advancing Nutrition. Thanks for the interesting discussion!

From Valeria TMK to Everyone:

Valeria Mwesigwa with NIDA LTD Uganda. Wonderful presentation thank you

From Ogalo Vincent to Everyone:

great presentation indeed. Glad to be here

From Tommy Crocker to Everyone:

View the full report here: <https://www.unicef.org/reports/fed-to-fail-child-nutrition>

From Ogalo Vincent to Everyone:

quite difficult to view clearly

From John Alosias to Everyone:

Thanks, dear @Tommy, for sharing the link to the full PDF report.

From Veronica Loko to Everyone:

Great presentations, It feels good to be here, -Veronica Loko National Social Safety Nets program (NASSP) Nigeria.



From Joseph Forcherio to Everyone:

Excellent session. I hope a recording of it will be made available along with the slides that were shown. Thanks!

From Mary Beggs to Everyone:

Thank you, Joseph! Yes, a recording, transcript, and all slides will be shared.

From Emmy Simmons to Hosts and panelists:

This has been a useful session. Urging USAID to take a multisectoral, multi-layered approach is clearly a major recommendation. There is a challenge, though. How might USAID effectively toggle between targeting programs tightly enough to see impact vs taking on investments that will shift “the environment” that affects childrens’ diets and nutritional outcomes...the market, standards, affordability (reflecting both demand and supply), etc.

From Domenico Vito to Everyone:

Question: from Domenico Vito, how can we bring all these regulations and models at a small scale market level and to achieve compliance at the local level?

From Tommy Crocker to Everyone:

Panelists will try to respond to as many questions as possible today. Written public comment to inform BIFAD’s recommendations to USAID are also welcome after the meeting. To submit comment, please email in the next two weeks to BIFAD Executive Director, Dr. Clara Cohen at: ccohen@usaid.gov with subject "Public Comment for 186th Public Meeting".

From Bamidele Afanwoubo to Everyone:

My name is James from Nigeria. My question: What is the impact of women empowerment in agriculture on children's diets?

From Justine Kavle to Everyone:

From Justine Kavle - Could you please comment on the cost of scaling LNS and how we can meaningfully scale alongside food-based strategies, in improving the quality of diets for young children?

From Judy Canahuati to Everyone:

@James can you repost the question in Q & A? Thanks.

From Judy Canahuati to Everyone:

Justine, Can you repost in Q & A?

From Beatrice Rogers to Hosts and panelists:

This is Bea Rogers at Tufts. Given the limitations of the five year project cycle, USAID is currently supporting research on making program impact persistent when programs end. An important corollary is to ask if the five year cycle is realistic

From Mary Beggs to Everyone:

We have caught all the questions, whether coming through the chat or Q&A. All will be relayed to the BIFAD Members. I just wish we could keep the conversation going all day!

From Judy Canahuati to Everyone:

Agreed Mary and thanks... this is such an important topic.

From Diana Carter to Everyone:

Hi all, Diana Carter, Nutrition and Food Systems officer at FAO, super interesting dialogue-  
looking forward to continuing the work!

From Nathalie Likhite to Everyone:

Thank you very much for this immensely interesting and meaningful meeting.

From Tommy Crocker to Everyone:

BIFAD also has exciting new work on systemic solutions to climate change adaptation and  
mitigation. Please consider joining the next BIFAD virtual meeting on October 26th:  
<https://bit.ly/3xPieLj>

From Moussa Sarr to Everyone:

Thanks Kathy, Shawn and all speakers. It was really great. Looking forward to continuing  
discussions et work at operational level

From Tommy Crocker to Everyone:

Thank you for participating in today's meeting. The meeting recording and minutes will be  
posted publicly and shared with participants by email after the meeting.

From John Scicchitano to Everyone:

Thanks for inviting us all to participate remotely.

From Anteneh Omer Ali to Everyone:

Thank you very much. It was very informative.

From Maurice Gerald Zafimanjaka to Everyone:

Thanks you

From Janette R. Wheat, Ph.D. to Everyone:

Thank you. Great Meeting!

From Jane Opiri to Everyone:

Thank you for this great presentation.

From John Alosias to Everyone:

Thank you BIFAD, panelists and presenters, and thanks to all for such an informative event.

From Orenuga Joseph to Everyone:

[clapping emoji]

From Maurice Gerald Zafimanjaka to Everyone:

it was a great meeting

From Judy Canahuati to Everyone:

Thanks. Good discussion.

From Dr Ayah Talal Zaidalkilani to Everyone:  
thank you all

From Olunuga Olawale to Everyone:  
Thanks for the well detailed information

From Ogalo Vincent to Everyone:  
many thanks indeed BIFAD for organizing this event

From Justine Kavle to Everyone:  
Thanks ! Great discussions!

From Benjamin Kohl to Everyone:  
Merci beaucoup!

From Oumarou SAMNA to Everyone:  
Merci beaucoup Thanks a lot

From MPENDA Matabishi to Everyone:  
thank you

From Jaber Jaradat to Everyone:  
Thanks [praying emoji] , great discussion

From Maryan Al-Masri to Everyone: thank you all  
[praying emoji; heart emoji]

From Blessing Alexander to Everyone:  
[clapping emoji] Thank you all, great meeting. I am better informed.

## ANNEX 2: MEETING PARTICIPANTS

**Number of Participants: 239**

c	First Name	Last Name	Organization
<b>BIFAD Members</b>			
1	Laurence	Alexander	BIFAD; University of Arkansas Pine Bluff
2	Pamela	Anderson	BIFAD; International Potato Center
3	Marie	Boyd	BIFAD; University of South Carolina School of Law
4	Rattan	Lal	BIFAD; The Ohio State University
5	Saweda	Liverpool-Tasie	BIFAD; Michigan State University
6	Henri	Moore	BIFAD; Haleon
7	Kathy	Spahn	BIFAD; Helen Keller International

<b>c</b>	<b>First Name</b>	<b>Last Name</b>	<b>Organization</b>
<b>Speakers</b>			
8	Shawn	Baker	USAID
9	Fallon	Casper	Incofin Investment Management
10	Kathryn	Dewey	University of California at Davis
11	William	Masters	Tufts University
12	Deanna	Olney	IFPRI
13	Siny	Samba	Le Lionceau
14	Manisha	Theraney	
<b>Participants (In Person)</b>			
15	Mueni	Asia	Kenyatta University
16	Baral	Avvn	CGIAR
17	Manditsera	Faith	Harare Institute of Technology
18	Buraiske	Gary	Purdue University
19	Bouis	Hovarth	IFPRI
20	Ahlrchs	Jahn	Iowa State University
21	Callahan	Katrina	Harkin Institute
22	Guelker	Lakan	Mississippi State University
23	Haddad	Lawrence	GAIN
24	Smith	MaH	Peppico
25	Edge	Mark	Bayer Crop Science
26	Ibrahim barka	Moussa	You-lean Chad
27	Monaghan	Nolan	Missouri University
28	Sickman	Norman	IRINGA HOPE
29	Ferumal	Ram	KSU
30	Gidado	Rose	National Biotechnology Development Agency Nigeria
31	Coleman	Shannon	ISV
32	Mercier	Stephanie	Farm Journal Foundation
33	Jackson	Stephen Y.	Liberian United Youth for Community Safety and Development
34	Stehl	Thomas	Edesia
35	Lumpkin	Travis	CIMMYT
36	Kazeem	Wandie	Wandievville
37	Gichohi	Wanjiku	Texas Tech University
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41	Alyaa	Adil	No Response

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44	Anteneh Omer	Ali	Hawassa University
45	FR-EN	Alix de Nicolay	Helen Keller Europe
46	Maryan	Al-masri	Zarqa private university
47	John	Alosias	University of Juba
48	Matilda	Amanor	Self Help International
49	Johanna	Andrews	No Response
50	Chandima	Ariyaratna	University of Peradeniya
51	Chioma	Arum	HarvestPlus
52	Amini	Bahati	CASDI, Asbl
53	Mouhamed	Barro	No Response
54	Mohammad Khairu	Bashar	HarvestPlus-Alliance Bioversity-CIAT
55	Cheryl	Bax	Retired from ERS/USDA
56	Sourav	Bhattacharjee	UNICEF
57	Jennifer	Billings	Corteva Agriscience
58	Emma	Bratton	No Response
59	Jan	Braunholz	Cafe Cortado
60	Melissa	Brody	Helen Keller Intl
61	Marybeth	Buchele	Iowa Natural Wellness Center
62	Paula	Burnett	God's Grace for All Nations
63	Judy	Canahuati	USAID
64	Diana	Carter	FAO
65	Kelley	Cormier	USAID
66	Mefor	Cynthia	No organization
67	Saratu	Dalhatu	Bridgewater General Enterprises Limited
68	Aparna	Deshpande	UNICEF
69	David	DeYoung	No Response
70	Yaya	Diao	Ndiabel & MADIBA INITIATIVES
71	Faith	Dube	IFRC
72	Jean Claude	Dusabumuremyi	INES-Ruhengeri Institute of Applied Sciences
73	Rebecca	Egan	USAID
74	Fru	Emmanuella	No Response
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79	Joseph	Forcherio	Department of State

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84	Jatani Bonaya	Godana	AYI
85	Marcia	Griffiths	The Manoff Group
86	Stephanie	Grunenfelder	Green Field Strategies
87	Hannah	Guedenet	No Response
88	Daniela	Gutierrez	Incofin Investment Management
89	Katrina	Hall	No Response
90	Lailah	Hall	Tetra Tech
91	Karleah	Harris	University of Arkansas at Pine Bluff
92	Kedir	Hassen	Kedir Abdi/Haramaya university
93	Oliver	Haugland	No Response
94	Henry	Heilbroner	USAID
95	Sigrun	Henjum	Oslo Metropolitan University
96	Stephanie	Hodges	1, 000 Days
97	Dave	Hoisington	University of Georgia
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99	Julie	Howard	No Response
100	Don	Humpal	DAI
101	joseph	hunt	Harvard sumer school
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103	Simin	Irani	UNICEF
104	Isatou	Jallow	Africa Catalyzing Action for Nutrition (AfriCAN)
105	Paul	James eteudo	University of ibadan
106	Hart	Jansson	Malnutrition Matters
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108	Dr.Tariq	Javid	Potato Research Institute, Sahiwal, Pakistan
109	Paul	Jere	No Response
110	Susan	Jobando	UNICEF
111	Orenuga	Joseph	No Response
112	Ahmed	Kablan	USAID
113	Nabe	Kanfigue	Union Syndicale des Agriculteurs
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117	Geoffroy	Kienou	No Response
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124	Carole	Levin	USAID
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126	Nathalie	Likhite	No Response
127	Veronica	Loko	National Social Safety Nets program (NASSP)
128	Hiya	Mahmassani	No Response
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130	Yien Bachuch	Mayian	Gambella Agricultural Research Institute
131	Jemberu Alemu	Megenas	Addis Ababa University
132	Patience	Mgoli Mwale	No Response
133	Patience	Mgoli Mwale	No Response
134	Pushpendra	Mishra	No Response
135	Temina	Mkumbwa	USAID
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141	Rajalakshmi	Nair	UNICEF
142	Charity	Nashipae	No Response
143	Bang Pamela	Ncho	No Response
144	Mphokuhle	Ncube	University of Pretoria
145	Gerald N.	Ndakwah	No Response
146	Seydou	Ndiaye	Plateforme Société Civile SUN
147	Jennifer	Nielsen	Helen Keller Intl
148	Divine	Ntiokam	GCSAYN
149	Monde	Nyambe	No Response
150	Mary J	Oakland	Self Help International
151	Mary	Okpala	Federal Polytechnic Oko
152	Olunuga	Olawale	Federal University of Agriculture Abeokuta
153	Wundow	Oldman	Ghana Health Service
154	Farhana	Omara	Ministry of public health
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158	Jane	Opiri	University of Arkansas at Pine Bluff
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160	Gideon	Padi Konotey	Goat Masters Ltd
161	Jyoti	Potare	UNICEF
162	Alissa	Pries	No Response
163	Rahaf	Qtish	Zarqa university
164	Gitanjali	R	No Response
165	Ifedolapo	Raji	No Response
166	Theresia	Ralo	No Response
167	Kathryn	Reider	World Vision
168	Sandra	Remancus	Alive & Thrive/FHI Solutions
169	James	Rhoads	University of Georgia - Peanut Innovation Lab
170	Beatrice	Rogers	Friedman School, Tufts University
171	John	Romo	USAID
172	Kane	Rosenette	Helen Keller International
173	Placidius	Rwechungura	GCSAYN
174	Arouna	Sadji Boukari	Ministère en charge du Développement
175	Arvin	Saleh	No Response
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177	Makuta Adiza	Samura	N/A
178	Faridah	Sanni	University of Ilorin
179	vicky	santoso	No Response
180	Moussa	Sarr	Helen Keller International
181	Ghulam	Sarwar	Cotton Research Station
182	John	Scicchitano	Pangea Global Ventures
183	Linda	Shaker Barbari	No Response
184	Lisa	Sherburne	TMG
185	Jules	Siedenburg	University of East Anglia
186	Emmy	Simmons	CSIS
187	Jessica	Smith	US Dairy Export Council
188	Noel	Solomons	CeSSIAM
189	Daouda	Souaré	No Response
190	François	Stepman	Platform for African – European Partnership in Agricultural Research for Development
191	Rojee	Suwal	Helen Keller Intl
192	Desalew	Tadesse	Addis Ababa University, Addis Ababa, Eth



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194	Ndah	Teddy	No Response
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197	Valeria	TMK	No Response
198	Nora	Tobin	No Response
199	Kelsey	Torres	USAID Advancing Nutrition
200	Gineth	Trujillo Aristizabal	Universidad del valle
201	Kazuto	Tsuji	Saitama University
202	Anna	Vanderkooy	Helen Keller International
203	Theodore	Verheggen	No Response
204	Ogalo	Vincent	BIDS FOUNDATION
205	Domenico	Vito	GCSAYN Italy
206	Yigerem Telele	Wakjira	No Response
207	Amtul	Waris	Indian Institute of Rice, Hyderabad
208	Teresa	Welsh	Devex
209	Janette R.	Wheat, Ph.D.	Univ. of Arkansas at Pine Bluff
210	Carol	Wilson	No Response
211	Deborah	Wilson	United Nations World Food Programme
212	Yibo	Wood	USDA
213	Naziyo	Yeeko	Agric Farm
214	Katelyn	Yuen Esco	Helen Keller Intl
215	Maurice Gerald	Zafimanjaka	No Response
216	Dr Ayah Talal	Zaidalkilani	University of Petra
217	Elizabeth	Zehner	Helen Keller International
218	Haneen	Zreqat	Zarqa University
219	Carine	No Response	No Response
220	Hannah	No Response	Tetra Tech
221	Qwamel	No Response	No Response
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## ANNEX 3: BRIEFER

*\*These materials were submitted to BIFAD on **October 13, 2022**, and contain background literature relevant to the public meeting shared by speakers and the BIFAD Support Team\**

**BIFAD Member Briefing Packet**  
**186<sup>th</sup> Public Meeting, October 19, 2022**  
***Fed to Thrive: Accelerating Action on Nourishing Foods for Infants and Young Children***

**Prepared by:** Lina Mohammadi and Carmen Benson, BIFAD Support Team

**Last Updated:** October 14, 2022

### Purpose

The Board for International Food and Agricultural Development (BIFAD) will convene a public event, Fed to Thrive: Accelerating Action on Nourishing Foods for Infants and Young Children, as a side event of the 2022 Borlaug Dialogue at the World Food Prize under the theme “Feeding a Fragile World”. This public event seeks to convene global experts and practitioners to present and discuss evidence-based solutions for policy and programming shifts necessary to increase the affordability, availability and convenience of nutrient-dense foods for infants and children aged 6–23 months, and to provide adequate safety nets for the families most vulnerable to early childhood malnutrition.

Priority Questions:
What does a nutritionally balanced food basket for infants and young children look like, and what would it cost?
What are evidence-based priority actions to reduce the costs of balanced food baskets, improve nutrient content and safety, incentivize use by improving convenience and enabling caregivers, and provide financial means for the most vulnerable to access them through safety nets?
How do we achieve coordinated, gender-transformative change across the food, health, and social protection systems in both development and humanitarian settings? Drawing from testimony by global experts and practitioners, BIFAD will advise the U.S. Agency for International Development (USAID) on recommended policy and program actions

### Featured Article

**UNICEF, (2021). Fed to Fail? The Crisis of Children’s Diets in Early Life. Child Nutrition Report. [Fed to Fail: The crisis of children's diets in early life - 2021 Child Nutrition Report \[EN/AR/RU\] - World | ReliefWeb.](#)**

**Summary:** Poor-quality diets are one of the greatest obstacles to the survival, growth, development and learning of children today. The stakes are highest in the first two years of life, when insufficient dietary intake of nutrients can irreversibly harm a child’s rapidly growing body and brain. Meanwhile, foods high in sugar, fat or salt can set children on the path to unhealthy food preferences, overweight and diet-related diseases. Children can carry the scars of poor diets for the rest of their lives. The Convention on the Rights of the Child states that governments have a legal obligation to protect and fulfil the right to

food and nutrition for all children. This makes it vital to understand why we are failing to feed children well in early childhood and what it will take to address the barriers to nutritious, safe and age-appropriate diets in early life – when it matters most.

### Recommended Readings

**Bai, Y., Huybregts, L., Iannotti, L., Chapnick, M., Jones, A., Headey, D., & Masters, W. (2021). The Economics of Feeding Infants: Least-Cost Nutrient Adequate Diets From 6 to 23 Months of Age Using Breastmilk and Locally Available Foods in 31 Low-Income Countries. *Current Developments in Nutrition*, 5(Supplement\_2), 623-623. [https://doi.org/10.1093/cdn/nzab045\\_005](https://doi.org/10.1093/cdn/nzab045_005)**

**Abstract:** Objectives Meeting infant needs requires complementing breastmilk with the gradual introduction of solid foods after 6 months. Existing studies have limited evidence on the availability and cost of complementary foods needed during the 6-23-month window when millions of children experience irreversible harm from inadequate diets. Methods Using food prices from the World Bank on 374 items potentially used for infant foods and available for sale in 31 low-income countries, food composition data, and dietary reference intakes (DRIs), we compute least-cost diets for children between 6–23 months. We further used data for food yield and nutrient retention factors and introduced volume constraints. DRIs differ for children aged 6–8 months, 9–11 months, and 12–23 months. We used lower and upper bounds on 25 different nutrients plus fiber and sodium. Our primary specification (Scenario I) considers only total protein and fats, while a more restrictive Scenario II also considers 11 essential amino acids and fatty acids. Results The cost of complementary foods to replace breast milk is \$1–2/day at 6–8 months when small quantities of high-cost ingredients are needed, then declines to below \$1/day at 9–11 months when lower-cost foods can be used before rising above \$1/day again as children grow. Increased breastfeeding substitutes for complementary foods to a limited degree, as shown by the small decline in cost as breastmilk intake rises, and there is a clear threshold beyond which sufficiently nutrient-dense ingredients are very expensive or entirely unavailable. Average intake recommendation levels of breastmilk measured in low-income countries are close to that which makes complementary feeding least expensive, except in Scenario II for the youngest children. Conclusions We find that sufficient nutrients from complementary foods for infants from 6 to 23 months are not affordable for many households in these countries, implying a need for targeted assistance, especially in settings where household incomes are below the global poverty line of \$1.90/person/day.

**Bai, Y., Alemu, R., Block, S. A., Headey, D., & Masters, W. A. (2021). Cost and affordability of nutritious diets at retail prices: evidence from 177 countries. *Food Policy*, 99, 101983. <https://doi.org/10.1016/j.foodpol.2020.101983>.**

**Abstract:** Many policies and programs aim to bring nutritious diets within reach of the poor. This paper uses retail prices and nutrient composition for 671 foods and beverages to compute the daily cost of essential nutrients required for an active and healthy life in 177 countries around the world. We compare this minimum cost of nutrient adequacy with the subsistence cost of dietary energy and per-capita spending on all goods and services, to identify stylized facts about how diet cost and affordability relate to economic development and nutrition outcomes. On average, the most affordable nutrient adequate diet exceeds the cost of adequate energy by a factor of 2.66, costing US\$1.35 per day to meet median requirements of healthy adult women in 2011. Affordability is lowest in Sub-Saharan Africa. The sensitivity of diet costs to each requirement reveals the high cost of staying within acceptable macronutrient ranges, particularly the upper limit for carbohydrates. Among micronutrients, total diet costs are most sensitive to requirements for calcium as well as vitamins A, C, E, B12, folate and

riboflavin. On average, about 5% of dietary energy in the least-cost nutrient adequate diets is derived from animal source foods, with small quantities of meat and fish. Over 70% of all animal products in least-cost diets is eggs and dairy, but only in upper-middle and high-income countries. In lower income countries where egg and dairy prices are significantly higher, they are replaced by larger volumes of vegetable foods. When controlling national income, diet costs are most significantly correlated with rural travel times and rural electrification. These data suggest opportunities for targeted policies and programs that reduce market prices and the cost of nutritious diets, while improving affordability through nutrition assistance, safety nets and higher earnings among low-income households.

**Bai, Y., Herforth, A. and Masters, W.A., 2022. Global variation in the cost of a nutrient adequate diet by population group: an observational study. *The Lancet Planetary Health*, 6(1), pp. e19-e28. [https://doi.org/10.1016/S2542-5196\(21\)00285-0](https://doi.org/10.1016/S2542-5196(21)00285-0).**

*(Recommended by Speaker, Dr. William Masters)*

**Summary** Background: Nutrient deficiencies limit human development and could be caused by the high cost of locally available foods needed to meet nutrient requirements. We aimed to identify the populations whose nutrient needs are most difficult to meet with existing global food systems. Methods In this observational study, we used the International Comparison Program 2017 collection of global food prices to measure cost per day and cost per calorie of meeting nutrient needs, based on least-cost diets within upper and lower bounds for energy and 20 nutrients for healthy populations across 20 demographic groups in 172 countries. We then analysed the composition of these least-cost diets by food groups to estimate how the affordability of foods for meeting nutrient needs varied by age, sex, and reproductive status. Findings In 2017, the global median of diet costs per day was US\$2.32 (IQR 1.95–2.76), with cost highest for adolescent boys aged 14–18 years at \$2.72 (2.31–3.15). For females, median cost was highest for adolescents aged 14–18 years during pregnancy and lactation at \$2.64 (2.29–3.15), exceeding the cost for adult men aged 19–30 years. The global median of diet cost per 1000 kcal was \$0.94 (IQR 0.80–1.12) and was higher for females throughout the life course than for males, peaking for adolescent girls aged 9–13 years (\$1.17 [95% CI 1.15–1.19]) and women older than 70 years (\$1.18 [1.17–1.19]). Diet costs were most sensitive to requirements for calcium, iron, zinc, and vitamins C and E, as well as the upper bounds on carbohydrates and sodium. Total diet costs per day did not vary significantly with national income; however, in high-income countries, the composition of least-cost diets included more animal source foods, whereas in low-income countries, diets with more pulses, nuts and seeds, and fruits and vegetables provided the most affordable way to meet nutrient requirements. Interpretation Diets with adequate nutrients were unaffordable for many demographic groups, especially women and girls. These results could help to guide agriculture and food policy or transfer programmes to support populations at risk of inadequate intake.

**Choudhury, S., Headey, D. D., & Masters, W. A. (2019). First foods: Diet quality among infants aged 6–23 months in 42 countries. *Food Policy*, 88, 101762. <https://doi.org/10.1016/j.foodpol.2019.101762>.**

*(Recommended by Speaker, Dr. William Masters)*

**Abstract:** Diet quality is closely linked to child growth and development, especially among infants aged 6–23 months who need to complement breastmilk with the gradual introduction of nutrient-rich solid foods. This paper links Demographic and Health Survey data on infant feeding to household and environmental factors for 76,641 children in 42 low- and middle-income countries surveyed in 2006–2013, providing novel stylized facts about diets in early childhood. Multivariate regressions examine the associations of household socioeconomic characteristics and community level indicators of climate and infrastructure with dietary diversity scores (DDS). Results show strong support for an infant-feeding

version of Bennett's Law, as wealthier households introduce more diverse foods at earlier ages, with additional positive effects of parental education, local infrastructure and more temperate agro-climatic conditions. Associations with consumption of specific nutrient-dense foods are less consistent. Our findings imply that while income growth is indeed an important driver of diversification, there are strong grounds to also invest heavily in women's education and food environments to improve diet quality, while addressing the impacts of climate change on livelihoods and food systems. These results reveal systematic patterns in how first foods vary across developing countries, pointing to new opportunities for research towards nutrition-smart policies to improve children's diets.

**Dalberg, (2022).** *Towards Market Transparency in Smallholder Finance, Early Insights from Sub-Saharan Africa.* [fsp\\_sdm.5ae103597a43.pdf \(foleon.com\)](https://www.foleon.com/fsp_sdm.5ae103597a43.pdf).

*(Recommended by Speaker, Fallon Casper)*

**Abstract:** Over the last four years, IDH The Sustainable Trade Initiative, with support from the Mastercard Foundation Rural and Agricultural Finance Learning Lab (RAFLL) and Dalberg Advisors, has been working to bring greater market transparency to the smallholder financing gap in sub-Saharan Africa. To do this we assessed the service delivery models (SDMs) of seven financial institutions.<sup>1</sup> The initiative's goal was to understand the true economics of providing finance to rural, mostly smallholder farmer populations and to describe the benefits and costs of these efforts for smallholder farmers, buyers, and providers of capital. Along the way we discovered a large diversity of Financial Service Provider (FSP)-led models working in partnership with other value chain actors to serve smallholder farmers. The seven FSPs analyzed varied in business model, country of operation, and point in time evaluated. This diversity made it difficult to compare the business models or develop a definitive and systematic assessment. Despite this, our efforts yielded the important—potentially sector-altering—lessons summarized and shared here. The product of hundreds of hours of collective effort by multiple teams, this study also built on an incredibly rich trove of unique data from the seven participating FSPs, their partners, and their customers. The key findings are summarized below and explained in more detail in the full report.

**Dewey, K. G., & Vitta, B. S. (2013).** *Strategies for ensuring adequate nutrient intake for infants and young children during the period of complementary feeding.* *Washington: Alive & Thrive*, 7. [Insight-Issue-7 Ensuring-Adequate-Nutrition.pdf \(aliveandthrive.org\)](https://www.aliveandthrive.org/insight-issue-7-ensuring-adequate-nutrition.pdf)

*(Recommended by Speaker, Dr. Kathryn Dewey)*

**Summary and Conclusions:** There is growing recognition that infants and young children need complementary foods that have very high nutrient density. This is especially true at 6-12 months and particularly for iron and zinc. But the reality is that in low-income populations, infant diets are usually dominated by cereal-based porridges with low nutrient density. The phytate in grains and legumes compounds the problem by reducing A&T Technical Brief Issue 7, November 2013 11 absorption of iron, zinc, calcium, and phosphorus. Most complementary food diets will fall short in iron and zinc unless unrealistic amounts of animal[1]source foods are included daily. Why is there such a gap in nutritional adequacy of diets for infants and young children? It is likely that shortfalls in certain key nutrients have been a characteristic of human diets since the agricultural revolution ~10,000 years ago. The pre-agricultural diet was apparently much higher in vitamins and minerals than modern diets. As a result, infants would probably have had much higher nutrient intakes than is true today and would have been able to meet their nutrient needs from the combination of breastmilk and premasticated foods provided by their mothers.<sup>12</sup> Given this scenario, what are the possible solutions? Because infant diets in low-income countries are typically inadequate in several nutrients, a food-based approach is preferable to

the provision of single-nutrient supplements. Increased intake of non-fortified but nutrient-rich foods, including under-utilized sources such as insects, may help meet nutrient needs. However, the evidence so far indicates that a gap may still remain for certain nutrients and diets where recommended amounts of animal-source foods are often prohibitively expensive for low-income households. For this reason, strategies based on fortification of complementary foods have received considerable attention in recent years. This includes not only fortified blended foods but products for home fortification such as MNPs and products that include both macro- and micro[1]nutrients such as LNS. Each of these types of products has advantages and disadvantages, so the choice depends on the needs and desires of the target population. The optimal composition of products for home fortification is still under evaluation. Linear programming analyses indicate that nutrient needs can be met at a much lower cost by using home-fortification than with an unfortified diet, which would have to be very high in animal-source foods to approach nutritional adequacy. If the use of fortified products for complementary feeding is scaled-up, several key issues need to be addressed. It is essential that programs promoting such products take steps to “bundle” them with key educational messages about infant and young child feeding that are consistent with the Guiding Principles for Complementary Feeding.<sup>50</sup> Marketing of fortified products for complementary feeding is a thorny issue, requiring careful attention to international and national guidelines, some of which are still under development. Authoritative guidance is also needed to facilitate adequate monitoring of the composition and quality control of fortified products for complementary feeding. Although these issues are challenging, finding workable solutions is vital to meeting the global health challenge of reducing malnutrition and promoting healthy growth in infants and young children worldwide.

**Dewey, K. G., Stewart, C. P., Wessells, K. R., Prado, E. L., & Arnold, C. D. (2021). Small-quantity lipid-based nutrient supplements for the prevention of child malnutrition and promotion of healthy development: overview of individual participant data meta-analysis and programmatic implications. *The American journal of clinical nutrition*, 114(Supplement\_1), 3S-14S. <https://doi.org/10.1093/ajcn/nqab279>**

***(Recommended by Speaker, Dr. Kathryn Dewey)***

**Abstract:** Small-quantity lipid-based nutrient supplements (SQ-LNSs) were designed to provide multiple micronutrients within a food base that also provides energy, protein, and essential fatty acids, targeted towards preventing malnutrition in vulnerable populations. Previous meta-analyses demonstrated beneficial effects of SQ-LNSs on child growth, anemia, and mortality. To further examine the efficacy and effectiveness of SQ-LNSs and explore study-level and individual level effect modifiers, we conducted an individual participant data meta-analysis of 14 randomized controlled trials of SQ-LNSs provided to children 6–24 months of age ( $n > 37,000$ ). We examined growth, development, anemia, and micronutrient status outcomes. Children who received SQ-LNSs had a 12–14% lower prevalence of stunting, wasting, and underweight; were 16–19% less likely to score in the lowest decile for language, social-emotional, and motor development; had a 16% lower prevalence of anemia; and had a 64% lower prevalence of iron-deficiency anemia compared with control group children. For most outcomes, beneficial effects of SQ-LNSs were evident regardless of study-level characteristics, including region, stunting burden, malaria prevalence, sanitation, water quality, duration of supplementation, frequency of contact, or average reported compliance with SQ-LNSs. For development, the benefits of SQ-LNSs were greater in populations with higher stunting burden, in households with lower socioeconomic status, and among acutely malnourished children. For hemoglobin and iron status, benefits were greater in populations with higher anemia prevalence and among acutely malnourished children, respectively. Thus, targeting based on potential to benefit may be worthwhile for those outcomes. Overall, co-packaging SQ-LNSs with interventions that reduce constraints on response, such as the prevention and

control of prenatal and child infections, improving health care access, and promotion of early child development, may lead to greater impact. Policymakers and program planners should consider including SQ-LNSs in strategies to reduce child mortality, stunting, wasting, anemia, iron deficiency, and delayed development.

**Dizon, F. J. F., & Herforth, A. (2018). The cost of nutritious food in South Asia. *World Bank policy research working paper*, (8557). [World Bank Document \(ssrn.com\)](#)**

**Abstract:** The high cost of nutritious foods can worsen poor diets and nutritional outcomes especially among low-income houses. Yet little is known about the spatial and temporal patterns of the cost of nutritious diets in South Asia, where malnutrition in multiple forms remains high. Using existing food price data from Sri Lanka, Pakistan, Afghanistan, and India, two methods are applied to assess the affordability of nutritious foods: Cost of a Recommended Diet (CoRD) and Nutritious Food Price Index (NFI). The analysis finds that the cost of a nutritious diet is 38 percent higher in Sri Lanka using CoRD compared to the cost of a (calorie-based) diet that meets basic food needs, and 15 percent higher in Afghanistan. In addition, CoRD varies across cities due to variability in the price of dairy and vegetables. Comparison of the NFI and the food Consumer Price Index (CPI) indicates that, for some countries, the price of a nutritious food basket varies more by season and has been increasing at a faster rate than the price of a typical food basket. This phenomenon is largely due to the variable cost of vegetables.

**FAO, IFAD, UNICEF, WFP., & WHO. (2022). In Brief to The State of Food Security and Nutrition in the World 2022.** <https://doi.org/10.4060/cc0640en>

**Notes from Kathy Spahn and Shawn Baker:**

- For the third year in a row, the data show that we are moving backwards with respect to the SDG goals for nutrition – with the exception of child stunting and exclusive breastfeeding, where there is progress. Even for child stunting, there is not progress in all regions. In West & Central Africa child stunting is actually increasing.
- Nevertheless, there are very limited opportunities to target extra financial resources or funds toward this problem, considering the cost of recovery from COVID, global inflation, and the impacts of the war on Ukraine.
- The authors call on governments to reconsider or redirect their existing finances or policies towards interventions which can positively affect nutrition.
- Bottom line for this SOFI 2022 is the message to governments to get smarter in terms of how they are using existing policy levers, subsidies, trade levers, etc.
  - A summary of scenarios and trade-offs for different approaches to market controls, fiscal subsidies, and border measure p.23-25
  - P. 24 “Considering their low budgets, governments of these countries (low-income and some lower-middle-income) will also have to mobilize significant financing to step up the provision of: i) general services support where it has to be prioritized to effectively bridge productivity gaps in the production of nutritious foods with inclusivity and sustainability; and ii) fiscal subsidies to consumers to increase affordability. In this regard, international public investment support will be key to ease the transition towards higher general services support, especially in low-income countries.”
- Confirms the UNICEF report’s<sup>2</sup> findings about the inequality of child nutrition progress, saying “Latest available data per country (2015 to 2021) indicate that globally, stunted children under five years of age are more likely to be residing in rural settings, in poorer households, with mothers who received no formal education, and to be male; while obesity among women is

most common in urban settings and wealthier households.” though, “infants residing in rural areas, in poorer households, with mothers who received no formal education and female infants are more likely to be breastfed.”

- “Reaching the 2030 global nutrition targets will require immense efforts. Only exclusive breastfeeding among infants under six months of age and stunting among children under five years of age have notably improved since 2012, yet even these indicators will require accelerated progress to meet 2030 targets”.
- Notably, the report presents data disaggregated by infants (0-5 months) and children (under five years of age) but does not look at the 6-24 months age range suggested as a focus of the meeting.

**Dewey, K. G. (2013). The challenge of meeting nutrient needs of infants and young children during the period of complementary feeding: an evolutionary perspective. *The Journal of nutrition, 143*(12), 2050-2054. <https://doi.org/10.3945/jn.113.182527>.**

**Abstract:** Breast-fed infants and young children need complementary foods with a very high nutrient density (particularly for iron and zinc), especially at ages 6–12 mo. However, in low-income countries, their diet is usually dominated by cereal-based porridges with low nutrient density and poor mineral bioavailability. Complementary diets typically fall short in iron and zinc and sometimes in other nutrients. These gaps in nutritional adequacy of infant diets have likely been a characteristic of human diets since the agricultural revolution; 10,000 y ago. Estimates of nutrient intakes before then, based on hypothetical diets of pre agricultural humans, suggest that infants had much higher intakes of key nutrients than is true today and would have been able to meet their nutrient needs from the combination of breast milk and pre-masticated foods provided by their mothers. Strategies for achieving adequate nutrition for infants and young children in modern times must address the challenge of meeting nutrient needs from largely cereal-based diets.

**Feed The Future, (2022). Global Food Security Strategy Fiscal Year 2022-2026, USAID (2022, June). [U.S. GOVERNMENT GLOBAL FOOD SECURITY STRATEGY \(usaid.gov\)](https://www.usaid.gov/our-work/programs/feed-the-future).**

**Executive Summary:** The Global Food Security Strategy (GFSS) charts a course for the U.S. government (USG) to support the achievement of global food security, the Sustainable Development Goals (SDGs),<sup>2</sup> and the 2030 Agenda, in collaboration and coordination with partners across the globe.<sup>3</sup> The GFSS brings the full strength of the USG to bear on ending hunger by drawing from the expertise of agencies across the government. Led by the U.S. Agency for International Development (USAID), the USG interagency community developed the first GFSS, as mandated by the 2016 bipartisan Global Food Security Act (GFSA), and implements Feed the Future (FTF), the USG’s initiative to end global hunger and food insecurity.<sup>4</sup> The USG released the first GFSS in 2017, drawing on FTF’s lessons learned since its inception in 2010. Guided by the GFSS, FTF has shown that progress on ending hunger is possible. By bringing partners together to invest in agriculture, resilience, and nutrition, the USG has enabled millions of families around the world to have the basic dignity of food to eat. In areas where FTF works, an estimated 23.4 million more people are living above the poverty line, 3.4 million more children are not stunted, and an estimated 5.2 million more families are not hungry.<sup>5</sup> In addition, the FTF initiative has unlocked \$3.5 billion in financing for food security (2011-2019), helped generate \$13.7 billion in agricultural sales, and developed and deployed more than 1,000 innovations. Since its inception, FTF has worked with 21 target countries. At the time of this writing, the FTF initiative works in 12 countries, while supporting food-security efforts in aligned countries across Africa, Asia, and Latin American and the Caribbean. In Fiscal Year (FY) 2022, USAID and its interagency partners will expand the number of



target countries based on a data-driven analysis of “level of need” and “opportunity for impact” in alignment with the targeting criteria in the GFSA.

**Gatica-Domínguez, G., Neves, P. A., Barros, A. J., & Victora, C. G. (2021). Complementary feeding practices in 80 low-and middle-income countries: prevalence of and socioeconomic inequalities in dietary diversity, meal frequency, and dietary adequacy. *The Journal of nutrition*, 151(7), 1956-1964. <https://doi.org/10.1093/jn/nxab088>**

**Abstract:** Adequate complementary feeding practices in early childhood contribute to better food preferences and health outcomes throughout the life course. Objectives: The aim of this study was to describe patterns and socioeconomic inequalities in complementary feeding practices among children aged 6–23 months in 80 low- and middle-income countries. Methods: We analyzed national surveys carried out since 2010. Complementary feeding indicators for children aged 6–23 months included minimum dietary diversity (MDD), minimum meal frequency (MMF), and minimum acceptable diet (MAD). Between- and within-country inequalities were documented using relative (wealth deciles), gross domestic product (GDP) per capita, and absolute (estimated household income) socioeconomic indicators. Statistical analyses included calculation of the slope index of inequality, Pearson correlation and linear regression, and scatter diagrams. Results: Only 21.3%, 56.2%, and 10.1% of the 80 countries showed prevalence levels >50% for MDD, MMF, and MAD, respectively. Western & Central Africa showed the lowest prevalence for all indicators, whereas the highest for MDD and MAD was Latin America & Caribbean, and for MMF it was East Asia & the Pacific. Log GDP per capita was positively associated with MDD ( $R^2 = 48.5\%$ ), MMF (28.2%), and MAD (41.4%). Pro-rich within-country inequalities were observed in most countries for the 3 indicators; pro-poor inequalities were observed in 2 countries for MMF, and in none for the other 2 indicators. Breast milk was the only type of food with a pro-poor distribution, whereas animal source foods (dairy products, flesh foods, and eggs) showed the most pronounced pro-rich inequality. Dietary diversity improved sharply when absolute annual household incomes exceeded ~US\$20,000. All 3 dietary indicators improved by age and no consistent differences were observed between boys and girls. Conclusions: Monitoring complementary feeding indicators across the world and implementing policies and programs.

**Headey, D. D., & Alderman, H. H. (2019). The relative caloric prices of healthy and unhealthy foods differ systematically across income levels and continents. *The Journal of nutrition*, 149(11), 2020-2033. <https://doi.org/10.1093/jn/nxz158>.**

**Abstract:** Background: Relative prices of healthy/unhealthy foods have been implicated in the obesity epidemic, but never extensively quantified across countries or empirically linked to malnutrition. Objectives: This study compared relative caloric prices (RCPs) for different food categories across 176 countries and ascertained their associations with dietary indicators and nutrition outcomes. Methods: We converted prices for 657 standardized food products from the 2011 International Comparison Program into caloric prices using USDA Food Composition tables. We classified products into 21 specific food groups. We constructed RCPs as the ratio of the 3 cheapest products in each food group, relative to the weighted cost of a basket of starchy staples. We analyzed RCP differences across World Bank income levels and regions and used cross-country regressions to explore associations with Demographic Health Survey dietary indicators for women 15–49 y old and children 12–23-month-old and with WHO indicators of the under-5 stunting prevalence and adult overweight prevalence. Results: Most non-cereal foods were relatively cheap in high-income countries, including sugar- and fat-rich foods. In lower-income countries, healthy foods were generally expensive, especially most animal-sourced foods and fortified infant cereals (FICs). Higher RCPs for a food predict lower consumption among children for 7 of 9 food groups. Higher milk and FIC prices were positively associated with international child stunting

patterns: a 1-SD increase in milk prices was associated with a 2.8 percentage point increase in the stunting prevalence. Similarly, a 1-SD increase in soft drink prices was associated with a reduction in the overweight prevalence of ~3.6 percentage points. Conclusions: Relative food prices vary systematically across countries and partially explain international differences in the prevalence of undernutrition and overweight adults. Future research should focus on how to alter relative prices to achieve better dietary and nutritional outcomes.

Heckert, J., Leroy, J. L., Olney, D. K., Richter, S., Iruhiriye, E., & Ruel, M. T. (2020). The cost of improving nutritional outcomes through food-assisted maternal and child health and nutrition programmes in Burundi and Guatemala. *Maternal & child nutrition*, 16(1), e12863. <https://doi.org/10.1111/mcn.12863>.

*(Recommended by Speaker, Dr. Deanna Olney)*

**Abstract:** Evidence on the cost-effectiveness of multisectoral maternal and child health and nutrition programmes is scarce. We conducted a prospective costing study of two food-assisted maternal and child health and nutrition programmes targeted to pregnant women and children during the first 1,000 days (pregnancy to 2 years). Each was paired with a cluster-randomized controlled trial to evaluate impact and compare the optimal quantity and composition of food rations (Guatemala, five treatment arms) and their optimal timing and duration (Burundi, three treatment arms). We calculated the total and per beneficiary cost, conducted cost consequence analyses, and estimated the cost savings from extending the programme for 2 years. In Guatemala, the programme model with the lowest cost per percentage point reduction in stunting provided the full-size family ration with an individual ration of corn–soy blend or micronutrient powder. Reducing family ration size lowered costs but failed to reduce stunting. In Burundi, providing food assistance for the full 1,000 days led to the lowest cost per percentage point reduction in stunting. Reducing the duration of ration eligibility reduced per beneficiary costs but was less effective. A 2-year extension could have saved 11% per beneficiary in Guatemala and 18% in Burundi. We found that investments in multisectoral nutrition programmes do not scale linearly. Programmes providing smaller rations or rations for shorter durations, although less expensive per beneficiary, may not provide the necessary dose to improve (biological) outcomes. Lastly, delivering effective programmes for longer periods can generate cost savings by dispersing start-up costs and lengthening peak operating capacity.

Heidkamp, R. A., Piwoz, E., Gillespie, S., Keats, E. C., D'Alimonte, M. R., Menon, P., & Bhutta, Z. A. (2021). Mobilising evidence, data, and resources to achieve Global maternal and child undernutrition targets and the Sustainable Development Goals: an agenda for action. *The Lancet*, 397(10282), 1400-1418. [https://doi.org/10.1016/S0140-6736\(21\)00568-7](https://doi.org/10.1016/S0140-6736(21)00568-7).

*(Recommended by Speaker, Dr. Kathryn Dewey)*

**Abstract:** As the world counts down to the 2025 World Health Assembly nutrition targets and the 2030 Sustainable Development Goals, millions of women, children, and adolescents worldwide remain undernourished (underweight, stunted, and deficient in micronutrients), despite evidence on effective interventions and increasing political commitment to, and financial investment in, nutrition. The COVID-19 pandemic has crippled health systems, exacerbated household food insecurity, and reversed economic growth, which together could set back improvements in undernutrition across low-income and middle-income countries. This paper highlights how the evidence bases for nutrition, health, food systems, social protection, and water, sanitation, and hygiene interventions has evolved since the 2013 Lancet Series on maternal and child nutrition and identifies the priority actions needed to regain and accelerate progress within the next decade. Policies and interventions targeting the first 1000 days of

life, including some newly identified since 2013, require renewed commitment, implementation research, and increased funding from both domestic and global actors. A new body of evidence from national and state-level success stories in stunting reduction reinforces the crucial importance of multisectoral actions to address the underlying determinants of undernutrition and identifies key features of enabling political environments. To support these actions, well-resourced nutrition data and information systems are essential. The paper concludes with a call to action for the 2021 Nutrition for Growth Summit to unite global and national nutrition stakeholders around common priorities to tackle a large, unfinished undernutrition agenda—now amplified by the COVID-19 crisis.

**Jain, A., Kalliyil, M., & Agnihotri, S. (2020). Minimum Diet Diversity and Minimum Meal Frequency—Do They Matter Equally? Understanding IYCF Practices in India. *Current Developments in Nutrition*, 4(Supplement\_2), 1012-1012. [https://doi.org/10.1093/cdn/nzaa054\\_084](https://doi.org/10.1093/cdn/nzaa054_084).**

**Objectives:** Infant and Young Child Feeding practices, mainly, complementary feeding in children between 6 months and two years of age, is found to be sub-optimal and emerge as the weakest link in improving child nutrition outcomes in India. Minimum Acceptable Diet (MAD), comprising of two sub-indicators – Minimum Dietary Diversity (MDD) and Minimum Meal Frequency (MMF), serves as an essential indicator to understand the diet adequacy pattern in children. The objective of this study was thus to investigate the role of MDD-MMF dyad in influencing the nutritional outcomes in children and its pattern across regions in India. Methods Data was obtained from the National Family Health Survey – 4 (NFHS-4) from the DHS Program website. The prevalence of MMF and MDD was calculated for 640 districts in India. The MMF and MDD were classified into three categories - high, medium and low based on equal percentile distribution of their prevalence range. Districts with high MMF and high MDD formed one cohort. Similarly, eight other cohorts were created based on their performance on MMF and MDD indicator. The prevalence of Stunting (St), Wasting (Wa) and Underweight (Uw) in children between 6 months and two years of age was then calculated for each of the nine cohorts. The districts were also mapped based on their cohort category to study the variation across regions in India. Results All three anthropometric indicators – stunting, wasting and underweight showed significant decline moving across low MMF- low MDD cohort (40% St; 26.2% Wa; 37.1% Uw) to medium MMF – medium MDD cohort (38.6% St; 23.8% Wa; 35.4% Uw) to high MMF – high MDD cohort (29% St; 15.5% Wa; 19.2% Uw). Second, the importance of minimum dietary diversity in improving nutritional outcomes was revealed, as opposed to minimum meal frequency, which shows improvement only when it reaches a certain threshold. Third, mapping revealed sharp differences across various regions in MMF-MDD pattern, especially in the states like Odisha, Assam and Andhra Pradesh. States in the central region performed poorly on complementary feeding indicators, specifically diet diversity. Conclusions The study highlights the importance of optimal complementary feeding practices in improving nutrition outcomes and the need to consider the regional heterogeneities while promoting IYCF practices in India. Funding Sources None.

**Miller, V., Yusuf, S., Chow, C. K., Dehghan, M., Corsi, D. J., Lock, K., ... & Mente, A. (2016). Availability, affordability, and consumption of fruits and vegetables in 18 countries across income levels: findings from the Prospective Urban Rural Epidemiology (PURE) study. *The lancet global health*, 4(10), e695-e703. [https://doi.org/10.1016/S2214-109X\(16\)30186-3](https://doi.org/10.1016/S2214-109X(16)30186-3).**

**Abstract:** Several international guidelines recommend the consumption of two servings of fruits and three servings of vegetables per day, but their intake is thought to be low worldwide. We aimed to determine the extent to which such low intake is related to availability and affordability. Methods We assessed fruit and vegetable consumption using data from country-specific validated semi-quantitative food frequency questionnaires in the Prospective Urban Rural Epidemiology (PURE) study, which

enrolled participants from communities in 18 countries between Jan 1, 2003, and Dec 31, 2013. We documented household income data from participants in these communities; we also recorded the diversity and non-sale prices of fruits and vegetables from grocery stores and marketplaces between Jan 1, 2009, and Dec 31, 2013. We determined the cost of fruits and vegetables relative to income per household member. Linear random effects models, adjusting for the clustering of households within communities, were used to assess mean fruit and vegetable intake by their relative cost. Findings Of 143 305 participants who reported plausible energy intake in the food frequency questionnaire, mean fruit and vegetable intake was 3·76 servings (95% CI 3·66–3·86) per day. Mean daily consumption was 2·14 servings (1·93–2·36) in low-income countries (LICs), 3·17 servings (2·99–3·35) in lower-middle-income countries (LMICs), 4·31 servings (4·09–4·53) in upper-middle-income countries (UMICs), and 5·42 servings (5·13–5·71) in high income countries (HICs). In 130 402 participants who had household income data available, the cost of two servings of fruits and three servings of vegetables per day per individual accounted for 51·97% (95% CI 46·06–57·88) of household income in LICs, 18·10% (14·53–21·68) in LMICs, 15·87% (11·51–20·23) in UMICs, and 1·85% (–3·90 to 7·59) in HICs (P.Trend=0·0001). In all regions, a higher percentage of income to meet the guidelines was required in rural areas than in urban areas (p<0·0001 for each pairwise comparison). Fruit and vegetable consumption among individuals decreased as the relative cost increased (P.Trend =0·00040).

**Olney, D. K., Gelli, A., Kumar, N., Alderman, H., Go, A., & Raza, A. (2022). Social assistance programme impacts on women's and children's diets and nutritional status. *Maternal & child nutrition, 18*(4), e13378. <https://doi.org/10.1111/mcn.13378>.**

**(Recommended by Speaker, Dr. Deanna Olney)**

**Abstract:** Investments in social assistance programmes (SAPs) have accelerated alongside interest in using SAPs to improve health and nutrition outcomes. However, evidence of how design features within and across programme types influence the effectiveness of SAPs for improving diet and nutrition outcomes among women and children is limited. To address this, we reviewed evaluations of cash, in-kind and voucher programmes conducted between 2010 and 2020 among women and children, and examined associations between design features (targeting, including household and individual transfers, fortified foods and behaviors change communication) and positive impacts on diet (diet diversity, micronutrient intake) and nutrition (anthropometric indicators, hemoglobin, anaemia) outcomes. Our review has several key findings. First, SAPs improve dietary diversity and intake of micronutrient-rich foods among women and children, as well as improve several nutrition outcomes. Second, SAPs were more likely to impact diet and nutrition outcomes among women compared with children (23/45 [51%] vs. 52/144 [36%] of outcomes measured). Third, in-kind (all but one of which included fortified foods) compared with cash transfer programmes were more likely to significantly increase women's body mass index and children's weight-for-height/length Z-score, and both women's and children's haemoglobin and anaemia. However, there is limited evidence on the effectiveness of SAPs for improving micronutrient status and preventing increased prevalence of overweight and obesity for all populations and for improving diet and nutrition outcomes among men, adolescents and the elderly. Further research in these areas is urgently needed to optimize the impact of SAPs on diet and nutritional outcomes as countries increase investments in SAPs.

**Ogbonnaya, J. A., Ketik, A. O., Mojekwu, C. N., Mojekwu, J. N., & Ogbonnaya, J. A. (2012). Energy, iron and zinc densities of commonly consumed traditional complementary foods in Nigeria. *British Journal of Applied Science & Technology, 2*(1),48.[Publication- Jan 2012-with-cover-page-v2.pdf \(d1wqtxts1xzle7.cloudfront.net\)](https://doi.org/10.1111/mcn.13378).**

**Abstract:** Aim: To assess the energy, iron and zinc densities of ten selected commonly consumed traditional complementary foods in Nigeria. Study Design: Survey and Experimental study. Place and Duration of Study: Department of Hotel and Catering Management, Yaba College of Technology, Lagos, and Department of Human Nutrition, University of Ibadan, Oyo State, Nigeria between June and August 2004. Methodology: A validated interviewer-administered questionnaire was distributed to 600 nursing mothers and used to identify the most consumed traditional complementary foods in Nigeria. Thereafter, ten traditional complementary foods were selected and analyzed for proximate composition, iron and zinc using Association of Official Analytical Chemists (AOAC) and Atomic Absorption Spectrophotometric methods. Results: The traditional complementary foods have high moisture content ranging from 55.80% to 91.17%. The protein content of the complementary foods ranged from 1.06g/100g to 13.81g/100g. The energy densities of the selected traditional complementary ranged from 0.48kcal/g to 1.50kcal/g. The study revealed that half of the traditional complementary foods in this study did not meet the PAHO/WHO recommendation of 0.8kcal/g while the remaining half exceeded this basic requirement for energy densities. However, the high requirement of 7.7mg and 1.6mg for iron and zinc densities respectively, could not be met by any of the complementary foods assessed. Conclusion: Incorporation of some animal foods into these plant-based diets will have a lot of advantages as animal-source foods are good sources of readily available hemione and zinc. Therefore, more recipes should be developed to improve the intake of animal source foods which are needed to ensure adequate protein, iron and zinc densities of complementary foods for infants in Nigeria.

**Sanghvi, T., Seidel, R., Baker, J., & Jimerson, A. (2017). Using behavior change approaches to improve complementary feeding practices. *Maternal & child nutrition, 13*, e12406.**

<https://doi.org/10.1111/mcn.12406>.

**(Recommended by Speaker, Manisha Tharaney)**

**Abstract:** This paper applies an implementation framework, based on a behavior change model, to compare four case studies of complementary feeding programs. It aims to expand our understanding of how to design and implement behavior change interventions aimed at improving complementary feeding practices. Four programs met the selection criteria of scale and documented improvements: Bangladesh, Malawi, Peru, and Zambia. We examined commonalities and differences in the design and implementation of social and behavior change approaches, use of program delivery platforms, challenges encountered, and lessons learned. We conclude that complementary feeding practices, in particular dietary diversity, can be improved rapidly in a variety of settings using available program platforms if interventions focus on specific constraints to food access and use effective strategies to encourage caregivers to prepare and feed appropriate foods. A five-step process is presented that can be applied across a range of complementary feeding programs to strengthen their impacts.

**Lal, R. (2009). Soil degradation as a reason for inadequate human nutrition. *Food Security, 1(1)*, 45-57.**

<https://doi.org/10.1007/s12571-009-0009-z>

**(Recommended by Speaker, Dr. Rattan Lal)**

**Abstract:** Soil degradation affects human nutrition and health through its adverse impacts on quantity and quality of food production. Decline in crops' yields and agronomic production exacerbate food-insecurity that currently affects 854 million people globally, and low concentration of protein and micronutrients (e.g., Zn, Fe, Se, B, I) aggravate malnutrition and hidden hunger that affects 3.7 billion people, especially children. Soil degradation reduces crop yields by increasing susceptibility to drought stress and elemental imbalance. Strategies include: improving water productivity, enhancing soil fertility

and micronutrient availability, adopting no-till farming and conservation agriculture and adapting to climate change. There are also new innovations such as using remote sensing of plant nutritional stresses for targeted interventions, applying zeolites and nanoenhanced fertilizers and delivery systems, improving biological nitrogen fixation and mycorrhizal inoculation, conserving and recycling (e.g., waste water) water using drip/sub-drip irrigation etc. Judiciously managed and properly restored, world soils have the capacity to grow adequate and nutritious food for present and future populations.

**Stevens, G., Beal, T., Mbuya, M., Luo, H., & Neufeld, L., (2022). Micronutrient deficiencies among preschool-aged children and women of reproductive age worldwide: a pooled analysis of individual-level data from population-representative surveys. *The Lancet: Global Health*. 10:1.**

[https://doi.org/10.1016/S2214-109X\(22\)003](https://doi.org/10.1016/S2214-109X(22)003)

**\*NEW ARTICLE\* Published 10/11/2022**

**Background:** Micronutrient deficiencies compromise immune systems, hinder child growth and development, and affect human potential worldwide. Yet, to our knowledge, the only existing estimate of the global prevalence of micronutrient deficiencies is from over 30 years ago and is based only on the prevalence of anaemia. We aimed to estimate the global and regional prevalence of deficiency in at least one of three micronutrients among preschool-aged children (aged 6–59 months) and non-pregnant women of reproductive age (aged 15–49 years).

**Methods:** In this pooled analysis, we reanalysed individual-level biomarker data for micronutrient status from nationally representative, population-based surveys. We used Bayesian hierarchical logistic regression to estimate the prevalence of deficiency in at least one of three micronutrients for preschool-aged children (iron, zinc, and vitamin A) and for non-pregnant women of reproductive age (iron, zinc, and folate), globally and in seven regions using 24 nationally representative surveys done between 2003 and 2019.

**Findings:** We estimated the global prevalence of deficiency in at least one of three micronutrients to be 56% (95% uncertainty interval [UI] 48–64) among preschool-aged children, and 69% (59–78) among non-pregnant women of reproductive age, equivalent to 372 million (95% UI 319–425) preschool-aged children and 1.2 billion (1.0–1.4) non-pregnant women of reproductive age. Regionally, three-quarters of preschool-aged children with micronutrient deficiencies live in south Asia (99 million, 95% UI 80–118), sub-Saharan Africa (98 million, 83–113), or east Asia and the Pacific (85 million, 61–110). Over half (57%) of non-pregnant women of reproductive age with micronutrient deficiencies live in east Asia and the Pacific (384 million, 279–470) or south Asia (307 million, 255–351).

**Interpretation:** We estimate that over half of preschool-aged children and two-thirds of non-pregnant women of reproductive age worldwide have micronutrient deficiencies. However, estimates are uncertain due to the scarcity of population-based micronutrient deficiency data.

**Stewart, C. P., Iannotti, L., Dewey, K. G., Michaelsen, K. F., & Onyango, A. W. (2013). Contextualizing complementary feeding in a broader framework for stunting prevention. *Maternal & child nutrition*, 9, 27-45. [Contextualising complementary feeding in a broader framework for stunting prevention \(wiley.com\)](https://doi.org/10.1111/mcn.12088).**

**Abstract:** An estimated 165 million children are stunted due to the combined effects of poor nutrition, repeated infection and inadequate psychosocial stimulation. The complementary feeding period, generally corresponding to age 6–24 months, represents an important period of sensitivity to stunting with life long, possibly irrevocable consequences. Interventions to improve complementary feeding practices or the nutritional quality of complementary foods must take into consideration the contextual

as well as proximal determinants of stunting. This review presents a conceptual framework that highlights the role of complementary feeding within the layers of contextual and causal factors that lead to stunted growth and development and the resulting short- and long-term consequences. Contextual factors are organized into the following groups: political economy; health and health care systems; education; society and culture; agriculture and food Systems; and water, sanitation and environment. We argue that these community and societal conditions underlie infant and young child feeding practices, which are a central pillar to healthy growth and development and can serve to either impede or enable progress. Effective studies with a strong process evaluation component are needed to identify transdisciplinary solutions. Programme and policy interventions aimed at preventing stunting should be informed by careful assessment of these factors at all levels.

**UNICEF, (2021). Fed to Fail? The Crisis of Children’s Diets in Early Life. Child Nutrition Report. [Fed to Fail: The crisis of children’s diets in early life - 2021 Child Nutrition Report \[EN/AR/RU\] - World | ReliefWeb](#)**

**Summary:** Poor-quality diets are one of the greatest obstacles to the survival, growth, development and learning of children today. The stakes are highest in the first two years of life, when insufficient dietary intake of nutrients can irreversibly harm a child’s rapidly growing body and brain. Meanwhile, foods high in sugar, fat or salt can set children on the path to unhealthy food preferences, overweight and diet-related diseases. Children can carry the scars of poor diets for the rest of their lives. The Convention on the Rights of the Child states that governments have a legal obligation to protect and fulfil the right to food and nutrition for all children. This makes it vital to understand why we are failing to feed children well in early childhood and what it will take to address the barriers to nutritious, safe and age-appropriate diets in early life – when it matters most.

**UNICEF. (2020). Improving young children’s diets during the complementary feeding period. UNICEF programming guidance. New York: UNICEF, 76. [Complementary-Feeding-Guidance-2020.pdf \(unicef.org\)](#).**

**Executive Summary:** The right to adequate nutrition is a fundamental right for every child. Children who are fed enough of the right foods, in the right way, at the right time in their development, are more likely to survive, grow, develop and learn. They are better equipped to thrive, even when faced with disease, disaster or crisis. Between the ages of 6 and 23 months – the complementary feeding period – breastfeeding and access to a diverse range of nutritious foods provide children with the essential nutrients, vitamins, and minerals they need to develop to their full physical and cognitive potential, with benefits that endure well into adulthood.<sup>1, 2</sup> The complementary feeding period is also a critical opportunity to prevent all forms of childhood malnutrition, including stunting, wasting, micronutrient deficiencies, overweight, obesity and diet-related non-communicable diseases. In addition, lifelong food preferences, tastes and habits are often established in childhood. Yet in nearly every part of the world, families face economic, political, market, social or cultural barriers to providing nutritious, safe, affordable and sustainable diets to young children. These challenges are exacerbated in humanitarian situations, where access to nutritious food, clean drinking water, and good quality health services are limited, and the resources and capacities of caregivers already stretched. Young children and their caregivers are increasingly exposed to foods of low nutritive value, including commercial complementary foods and processed foods high in added sugar, salt and saturated and trans fats that are inexpensive, ubiquitous, and easy to feed to young children.<sup>3</sup> Accelerating progress to improve the quality of complementary foods and feeding practices for young children is therefore critical.<sup>4</sup> The terms complementary foods/feeding and diets for young children are used interchangeably in this document. In both development and humanitarian programming contexts. This Programming Guidance,

Improving Young Children’s Diets During the Complementary Feeding Period, supports global efforts to improve the diets of children aged 6–23 months in all contexts. It is intended for use by UNICEF staff in programs such as nutrition, health, early childhood development, water, sanitation and hygiene and social policy – in regional, country and field offices – to support the work of governments and partner organizations. Previous UNICEF guidance on infant and young child feeding focused mainly on evidence-based interventions and strategies for improving complementary feeding practices within the household.<sup>5</sup> This Programming Guidance goes beyond feeding practices to articulate interventions and approaches for improving the availability, accessibility, affordability and consumption of nutritious and safe complementary foods. In addition, this Programming Guidance describes the most recent evidence on improving complementary feeding, explores the determinants and drivers of young children’s diets, and presents action frameworks for delivering nutrition results for children through the food, health, water and sanitation, and social protection systems. It also provides guidance on monitoring and evaluating complementary feeding programs and outcomes.



## ANNEX 4: PUBLIC COMMENT AND MATERIALS PROVIDED TO THE BOARD

No.	First Name	Last Name	Organization	Date
1	Hart	Jansen	Malnutrition Matters	10/19/22
<p>Submitted Email:</p> <p>“A comment regarding availability and affordability of nutrient-dense foods.</p> <p>The “Fed to Fail” report shows that only 45% of children aged 6 to 23 months are getting the ‘dairy, eggs, meat’ portion of the required healthy diet.</p> <p>I didn’t hear any panelists address the affordability issue head on, except to say that poverty is the issue. My input is that there is a sustainable, climate-friendly solution, namely locally made soymilk/yoghurt, using locally grown soybeans. Any packaged food that requires transport is by definition unaffordable to the poor.</p> <p>With the food-grad SoyaKit, rural women entrepreneurs can <b>make and sell high-quality soymilk for 1 cent/gram of protein</b> (compared to 2 cents plus for eggs, dairy, meat, etc.), including a profit for themselves. Hear the women entrepreneurs and others describe this innovation, which is currently providing low-cost, high-protein food to 250,000 consumers and providing income to 5,000 women in Kenya, DR Congo, Malawi and Ghana, here:</p> <p><a href="https://www.youtube.com/watch?v=NnOtIJ-U6KQ">https://www.youtube.com/watch?v=NnOtIJ-U6KQ</a> .</p> <p>The SoyaKit platform is:</p> <ul style="list-style-type: none"> <li>- a \$200 self-contained kit,</li> <li>- non-electric and food-grade,</li> <li>- a home business kit,</li> <li>- complete with appropriate small business training and materials,</li> <li>- of daily nutritional benefit to 300,000 poor food consumers,</li> <li>- <b>currently the basis for 5,000 women’s livelihoods</b>, in four countries.</li> </ul> <p>The SoyaKit platform enables:</p> <ul style="list-style-type: none"> <li>- hyper-local availability of high-quality, protein-rich food,</li> <li>- substantial low-risk, quick-to-prove year-round income,</li> <li>- flexible work hours for women entrepreneurs,</li> <li>- transferable business skills,</li> <li>- improved agency for women and youth,</li> <li>- <b>lower cost protein-rich foods for poor community members</b>,</li> <li>- community economic benefits,</li> <li>- reduced carbon emission and other benefits.</li> </ul> <p>I would be happy to provide a peer-reviewed journal article and case study and other documentation – Malnutrition Matters is a Canadian-based non-profit. “</p>				

2	Shawn	Baker	USAID	10/21/22
Submitted Email:				
"This was just published. Very relevant to the BIFAD meeting on Wednesday."				
Attached Reference:				
UNICEF. (Oct. 2022). Child Food Poverty: A Nutrition Crisis in Early Childhood. <i>ReliefWeb</i> . <a href="https://reliefweb.int/report/world/child-food-poverty-nutrition-crisis-early-childhood">https://reliefweb.int/report/world/child-food-poverty-nutrition-crisis-early-childhood</a> .				