

## The importance of food systems and the environment for nutrition Research snapshot<sup>1</sup>

**T**here is considerable ongoing debate around how food systems can better ensure the delivery of healthy, safe, nutritious foods in a way that is environmentally sustainable and resilient to climate change. Food systems are complex entities with many interconnecting drivers, stakeholders and outcomes. Furthermore, food systems and climate change have a cyclical relationship, as environmental change is both a driver and an outcome of food systems.

Climate change impacts the immediate, underlying and basic causes of undernutrition. As climate change progresses, optimal conditions for human health will continue to come under threat introducing instability into our food systems and ultimately decreasing access to nutritionally dense and healthy foods. While this is likely to affect the nutritional status of all populations, it will have a disproportionate impact on poor and marginalised populations.

The bi-directional relationship between food systems, environmental change and nutrition demands that nutrition scientists engage in food systems transformation. Nutrition is inherently a multidisciplinary science; however, within nutrition, scientists have been traditionally siloed into those studying undernutrition and overweight and those

in humanitarian or development contexts. Given the global inter- and transdisciplinary nature of these challenges, the traditional boundaries need to be broken down to ensure relevant public health interventions, research and policies.

Current research gaps in this important area include:

- Scientific consensus on definitions and metrics to assess the sustainability of dietary patterns and food environments
- Limited scope of research e.g., research needs to be implemented across different stages of the supply chain, a wider variety of food products and on a wider range of nutrition outcomes
- Limited topic base e.g., research is needed on food safety, food waste and loss and the role of consumer practices
- Levers of change in the food system and how to utilise these
- Accurate global and subnational data on topics such as dietary patterns, food loss and waste
- Applicability of current literature to more localised contexts

<sup>1</sup> Fanzo J, Bellows L A, Spiker L M, Thorne-Lyman L A, Bloem WM (2021) The importance of food systems and the environment for nutrition. *Am J Clin Nutr.* 2021; 113(1): 7-6. doi:10.1093/ajcn/nqaa313.

## Monitoring systems for the management of severe acute malnutrition programmes in northern Nigeria Research snapshot<sup>1</sup>

**E**ach year in Nigeria, more than two and a half million children under five years of age are affected by wasting. Since 2016, UNICEF has supported the government in the introduction of a Short Message Service (SMS) for data transmission to support the monitoring of community-based management of acute malnutrition (CMAM) programmes. The SMS system operates in parallel with the traditional paper-based system and transmits data directly from health facilities to federal levels on a weekly basis. In comparison, the paper-based system uses monthly data summaries that are passed through all levels of government. This study undertook contextualised research<sup>2</sup> to assess data quality and performance in both CMAM information systems.

The study adopted a mixed-method approach. Primary data, observations, interviews and the recount of data from outpatient therapeutic programme (OTP) cards were collected in nine health facilities in one northern state in Nigeria, while secondary data was obtained from five states. The accuracy and reliability of CMAM data were deficient to a similar extent in both the paper-based and SMS systems and discrep-

ancies existed between recounted and paper records for admissions, total exits, defaults, deaths and ready to use therapeutic food consumption for the audited month. The large discrepancies in some facilities indicate the loss or removal of OTP cards and the discrepancies in death or default rates can be attributed to inconsistencies between actual treatment practices and national CMAM guidelines, possibly leading to underestimations that give a false impression of good programme performance.

There are several advantages to the SMS reporting system such as fewer intermediate data transfers. However, mobile network coverage is not sufficiently reliable for the SMS system to replace the paper-based system in Nigeria. The study highlights the need for improvements in the design of the CMAM monitoring system, training in and supervision of data management and the communication of results.

<sup>1</sup> Tuffrey V, Mezger C, Nanama S, Bulti A, Oilsenekwu G, Umar C, Jones E, Namukasa E. Assessment of monitoring systems in the management of severe acute malnutrition in northern Nigeria. *BMC Nutr.* 2021; 7(2). <https://doi.org/10.1186/s40795-020-00405-z>.

<sup>2</sup> Contextualised research based on the PRISMA (Performance of Routine Information System Management) framework

## Triple trouble: The triple burden of child undernutrition, micronutrient deficiencies and overweight in East Asia and the Pacific Research snapshot<sup>1</sup>

**Y**oung children in East Asia and the Pacific region are failing to thrive in large numbers as indicated by stagnation in the reduction of child undernutrition and micronutrient deficiencies and a growing prevalence of overweight and obesity. To address the lack of data on the drivers of child malnutrition in the region, the UNICEF regional office for East Asia and the Pacific commissioned a series of papers in 2017 to 2019. These papers found that most of the 26 countries in the region have a double burden of stunting, overweight or anaemia and six countries suffer from all three (the 'triple burden'). Poverty and inequality are the leading drivers of child malnutrition, with children often exposed to multi-dimensional forms of poverty, and poor maternal nutrition is a consistent predictor of stunting and wasting in the region.

However, national policies and programmes do not always address these key drivers and there is often still a focus on undernutrition alone rather than on the triple burden of malnutrition. Implications for future advocacy, policy and programme actions highlighted in the papers are as follows:

- Governments must address all forms of malnutrition in an integrated manner across the life cycle.
- Improving women's nutrition is central to breaking the intergenerational triple burden of malnutrition.
- Policies and programmes require an integrated multi-sector approach across food, health, water and sanitation, education and social protection systems to address the multiple determinants of child malnutrition.
- Nutrition-sensitive social protection programmes are needed to address the disparities and inequalities in child growth during the first 1,000 days.
- Prioritisation is needed in all countries to collect, analyse and utilise data to assess progress and to inform decisions.

To address the drivers of the triple burden of maternal and child malnutrition, synergistic and accelerated change is needed through broader and bolder multi-sector approaches.

<sup>1</sup> Blankenship L.J, Rudert C, Aguayo M.V. Triple trouble: Understanding the burden of child undernutrition micronutrient deficiencies, and overweight in East Asia and the Pacific. *Maternal and Child Nutrition.* 2020; 16(S2). <https://doi.org/10.1111/mcn.12950>.