APPENDIX 1: ASSESSING COUNTRY PROGRESS AGAINST GLOBAL TARGETS – A NOTE ON METHODOLOGY

The *2018 Global Nutrition Report* tracks country progress against nine of the global nutrition targets highlighted in Chapter 1 using the latest available data.

Maternal, infant and young child nutrition targets

Annual national prevalence and trends in maternal and child malnutrition are reported in the annual joint child malnutrition estimates produced by the United Nations Children's Fund (UNICEF), World Health Organization (WHO) and World Bank.[1] These prevalence estimates are used alongside information about rates of change to assess whether a country is 'on course' or 'off course' to meet each maternal, infant and young child nutrition target when the global target is applied at the national level, assuming the same relative reduction in all countries.[2] The rules to determine which countries are on or off course are established with extensive technical input from WHO and UNICEF.

The *2017* and *2018 Global Nutrition Reports* employ the monitoring rules and classification of progress towards achieving the six nutrition targets proposed by the WHO/UNICEF Technical Expert Advisory Group on Nutrition Monitoring (TEAM).[3] The methodology and rules to track maternal, infant and young child nutrition targets were revised in 2017 by WHO and UNICEF to improve the quality of nutrition target monitoring.

The assessment exercise aims to differentiate between countries following different trajectories as they progress, so it is important that assessment methodologies reflect and help achieve this objective.

At the country level, average relative percent change in prevalence of an indicator is calculated using a metric called average annual rate of reduction (AARR). There are two types of AARR: a required AARR ensures that a country achieves the global target, and a current AARR reflects recent trends in prevalence. The required AARR, current AARR and current prevalence are combined to create rules for various on/off track categories for each indicator. The rules devised in 2017 are stated in Table A1.

It is important to note that since the goal for exclusive breastfeeding is to *increase* rates rather than *decrease* as for all other indicators. The rate of change must be positive. However, to harmonise assessment criteria, the AARR is still used to track exclusively breastfed but demonstrates a decrease in the proportion of children who are not exclusively breastfed, thus representing an increase in the proportion who are exclusively breastfed (since not exclusively breastfed=100-exclusively breastfed).

Methodology to track country progress of nutrition targets

INDICATOR	ON TRACK	OFF TRACK – SOME PROGRESS	OFF TRACK – NO PROGRESS OR WORSENING
Stunting	AARR ≥ required AARR* or level <5%	AARR < required AARR* but ≥0.5	AARR < required AARR* and <0.5
Anaemia	AARR ≥5.2** or level <5%	AARR <5.2 but ≥0.5	AARR <0.5
Low birth weight	AARR ≥2.74+ or level <5%	AARR <2.74 but ≥0.5	AARR <0.5
Not exclusively breastfed	AARR ≥2.74++ or level <30%	AARR <2.74 but ≥0.8	AARR <0.8
Wasting	Level <5%	Level ≥5% but AARR ≥2.0	Level ≥5% and AARR <2.0
	ON TRACK	**OFF TRACK – SOME PROGRESS**	
Overweight	AARR ≥-1.5	AARR <-1.5	

Source: WHO and UNICEF for the WHO-UNICEF Technical Expert Advisory Group on Nutrition Monitoring. *Methodology for monitoring progress towards the global nutrition targets for 2025: Technical report.* Geneva: WHO, UNICEF: New York, 2017.
Notes: *Required AARR based on the stunting prevalence change corresponding to a 40% reduction in number of stunted children between 2012 and 2025, considering the estimated population growth estimated (based on UN Population Prospects). **Required AARR based on a 50% reduction in prevalence of anaemia in women of reproductive age between 2012 and 2025. +Required AARR based on a 30% reduction in prevalence of low birth weight between 2012 and 2025. ++Required AARR based on a 30% reduction in not exclusively breastfed rate between 2012 and 2025.

Data requirements and key considerations

- Stunting, wasting, overweight and exclusive breastfeeding: countries require at least two nationally representative survey data points since 2008 to assess recent progress, and one of these must have been since 2012 to reflect post-baseline status.

- If countries do not have any post-baseline status (2012) data, an assessment is reserved until new survey data becomes available.

- To provide reliable trend estimates and aid effective progress monitoring, nationally representative survey data must have been collected every three years.

- For anaemia, modelled time-series estimates are available from 1990 to 2016, 189 countries are currently classified. However, not all countries have post-baseline (2012) survey estimates, reflecting poor availability of survey data. The results of the classification and data availability should be interpreted with caution.

- National estimates for low birth weight are being produced by an inter-agency/institution group of experts. New estimates are forthcoming.

Nutrition-related NCD targets

The WHO Global Monitoring Framework for the Prevention and Control of Non-Communicable Diseases (NCDs) was adopted by the World Health Assembly in 2013 to effectively implement the NCD Global Action Plan and monitor progress in NCD prevention and control at the global level. The framework includes nine voluntary targets tracked by 25 indicators of NCD outcomes and risk factors. The overarching goal is to reduce premature mortality due to NCDs by 25% by 2025.

The *2016 Global Nutrition Report* tracked target 7, 'halt the rise in diabetes and obesity', the NCD target most directly linked to the importance of food and nutrition. The *2017 Global Nutrition Report* went on to track this target using new estimates produced by the NCD Risk Factor Collaboration for WHO, with an altered assessment method to match the new estimation and projection methods.

Two additional targets on reducing salt intake at the population level and containing the prevalence of high blood pressure (hypertension) have been included in the Global Nutrition Report. However, these targets require further prevalence estimates or refined assessment methods before progress in achieving them can be assessed. Limitations and temporary data substitutes are discussed in the following section.

Population salt intake

Target 4, to achieve a '30% relative reduction in mean population intake of salt (sodium chloride)', is monitored by age-standardised mean population intake of salt in grams per day in people aged 18 and over. There is no available global database on trends and projections in mean salt consumption. However, data published in large epidemiological modelling studies on estimates of salt intake[4] sheds light on how much more or less countries consume in relation to the WHO-recommended intake of 2g/day.[5] Global average salt intake has gone from 4g in 2010 to 5.6g/day in 2017. This has now been disaggregated by sex, and men and women consume on average 5.8g and 5.4g per day respectively.

Intake of salt plays a major role in hypertension and related illness such as stroke and cardiovascular disease,[6] although hypertension is also strongly determined by non-dietary factors such as genetics, ageing, smoking, stress and physical inactivity. An intake of greater than 2g/day of salt (5g or one teaspoon of table salt) contributes to raised blood pressure. Reducing salt intake across populations is also a 'best buy' for targeting NCDs – a cost-effective, high-impact intervention that can be feasibly implemented even in resource-constrained settings.[7]

Raised blood pressure

Target 6 to achieve a '25% relative reduction or contain the prevalence of raised blood pressure' is monitored by age-standardised prevalence of raised blood pressure (systolic and/or diastolic blood pressure ≥140/90 mmHg) in adults aged 18 years and over. Data for prevalence of raised blood pressure in 2015 came from modelled estimates produced by the NCD Risk Factor Collaboration Group.[8]

Diabetes and obesity in adults

Target 7 of the NCD Action Plan, halt the rise in diabetes and obesity, lists three prevalence indicators: adult overweight and obesity, adolescent obesity and adult diabetes.

The *2018 Global Nutrition Report* reports on age-standardised prevalence of overweight and obesity (BMI ≥25), obesity (BMI ≥30) and diabetes (fasting glucose ≥7.0 mmol/L or medication for raised blood glucose or with a history of diagnosis of diabetes) in men and women. It tracks country progress on obesity (BMI ≥30) and diabetes using data produced by the NCD Risk Factor Collaboration.[9] These modelled estimates are used in the absence of globally comparable survey-based data for all countries on prevalence of NCD risk factors.

Obesity and diabetes monitoring in adults is based on the probability each target will be reached by 2025. If a country has a probability of at least 0.50, they are defined as 'on course' and if the probability is less than 0.50 they are defined as 'off course'.

NOTES

Appendix 1

1   UNICEF/WHO/World Bank Group: Joint child malnutrition estimates.

2   For a detailed and thorough discussion of the methodology for monitoring progress towards the global maternal, infant and young child nutrition targets for 2025, see WHO and UNICEF, for the WHO/UNICEF Technical Expert Advisory Group on Nutrition Monitoring. Methodology for monitoring progress towards the global nutrition targets for 2025: Technical report. Geneva: WHO, UNICEF: New York, 2017.

3   WHO and UNICEF, 2017 (see note 1).

4   Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks for 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. The Lancet, forthcoming in 2019.

5   WHO, 2012. Guideline: Sodium intake for adults and children.
        Available at: www.who.int/nutrition/publications/guidelines/sodium_intake_printversion.pdf

6   WHO, 2014. Global Status Report on noncommunicable diseases 2014.
        Available at: http://apps.who.int/iris/bitstream/handle/10665/148114/9789241564854_eng.pdf?sequence=1

7   WHO, 2014 (see note 6).

8   NCD Risk Factor Collaboration. Worldwide trends in diabetes since 1980: a pooled analysis of 751 population-based studies with 4.4 million participants. The Lancet, 387:10027, 2016, pp. 1513–30.
        Available at: www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)31919-5/fulltext

9   NCD Risk Factor Collaboration, http://ncdrisc.org/index.html (accessed 26 October 2018).