

Monitoring stunting reduction at country level and assessing progress towards national and international targets

The European Commission's Methodology

Background and rationale

The European Commission's (EC's) nutrition commitments (to reduce the number of stunted children by 7 million by 2025, and to commit EUR 3.5 billion from 2014 to 2020 to support improved nutrition) are being operationalised through the EC's Action Plan on Nutrition. The EC holds itself accountable to these commitments and Plan, and has put in place a number of measures to be able to track progress. One of these measures is the development of a tool to assess country-level changes in the number of stunted children.

At the time of developing the Action Plan in 2013, no method was available for tracking stunting progress. So the EC, through its Nutrition Advisory Service, and in close collaboration with WHO, developed an Excel-based tool for this purpose (the Stunting Reduction Calculations Tool – SRCT). This has since been used by the EC for monitoring stunting reduction at country level. At the same time, the tool was modified¹ and published on WHO's website, serving as a basis for the Global Nutrition Targets Tracking Tool (GNTTT) - used to monitor the global progress for all the nutrition targets endorsed by the World Health Assembly in 2012. The year 2012 is important because it serves as the baseline year for the global WHA targets (including a 40% reduction in the *number* of children under five who are stunted²), as well as for the EC's stunting reduction commitment.

The data used

The SRCT is populated with data using two databases:

- i. Stunting data - Estimates of stunting prevalence from national surveys validated by the WHO/UNICEF/WORLD BANK group, accessible through the Joint Malnutrition Estimates (JME) database³; and
- ii. Demographic data - Estimates of the most recent under-five population of a country - and future projections using a medium fertility scenario - from the latest revision of the World Population Prospect (WPP).⁴

Comparison with the WHO nutrition tracking tool

The SRCT remains an interactive tool to monitor stunting reduction at country level, and is aligned with the WHO tool with two exceptions⁵: 1) Estimating baseline prevalence; and 2) Date of earliest available data to calculate trends (historical (pre-baseline), current).

- 1) The SRCT establishes the estimated prevalence of stunting in 2012 using all the prevalence estimates available for the country between the specified baseline (1999) and 2012. In contrast, the GNTTT uses a country's latest available survey prevalence estimate between 2005 and 2012, to calculate the baseline prevalence of stunting⁶.

¹ As outlined in de Onis et al, 2013

² Achievement is dependent on both, prevalence of stunting and population growth

³ <http://www.who.int/nutgrowthdb/estimates/en/>

⁴ The UN's demographic database: <http://esa.un.org/unpd/wpp/Download/Standard/Population/>

⁵ The SRCT has built-in options that allow the user to use the WHO method of estimating the baseline prevalence of stunting and to set the same time-points as WHO for calculating historical and current trends. In this case the two tools are aligned, providing the stunting and demographic data is the same.

⁶ If a country does not have any data point within the 2005-2012 interval, the baseline year is the first subsequent survey after 2012.

As a consequence of the above, the EC establishes a fixed target for the 2025 40% reduction in the number of stunted children, whereas the GNTTT updates the 2025 target in line with the baseline⁷.

The EC considers having a fixed baseline and target figures as more appropriate for dialogue with partner countries than figures that can vary.

2) In addition, the EC's analyses of progress differ from those of WHO in one further respect: to calculate current trends the EC tool uses the data available from 1999 onwards, in order to give a longer time-horizon of the changes occurring in the country. This differs from the GNTTT, which uses the data available from 2008 onward. As a consequence, depending on the number of data points available, and on the history of stunting in the country, the trends calculated with the EC tool do not necessarily give emphasis to the recent evolution in stunting; this then has bearing on the predictions made for the year 2025. To calculate historical trends, the EC and WHO both use all data available on the JME database from 1999.

Scope of the EC's methodology

The EC analyses stunting progress in those countries that have prioritised nutrition in their national investment plans. The results are depicted graphically, and published alongside the regular Progress Reports on implementation of the Action Plan on Nutrition⁸. The graphs are accessible through an online interactive map, in comprehensive country nutrition profiles.

Details of the EC's method for producing graphs

Graphs are produced using the stunting and demographic data above which are used to calculate the following:

- (a) a historical trend in stunting prevalence;
- (b) an estimate of stunting prevalence in any year along this trend; and
- (c) the estimated number of stunted children in a given year.

Baseline calculations

The estimates of (b) and (c) are first produced for the baseline year, 2012, using (a), calculated on the basis of all data available in the JME up until that time from 1999 (using a log-linear regression to establish a trend line), and using the latest WPP data.

From this data estimates are then made of:

1. the number of stunted children in 2012;
2. the country's target with respect to the WHA global target for 2025, which is a 40% reduction in the number of stunted children in 2012;
3. the projected number of stunted children in 2025, expected based on the stunting trend up until 2012 (i.e. assuming the same rate of change between 2012 and 2025)⁹; and
4. the baseline Annual Average Reduction Rate (AARR)¹⁰ of stunting (estimated from 1999-2012).

From these calculations, we can then determine the gap between progress (in terms of numbers stunted and AARR) expected from 2012 data and the 2025 target.

⁷ The GNTT calculates the target number of stunted children considering the number of years between the baseline year and 2025.

⁸ To date, three Progress Reports have been published, in 2016, 2017 and 2018.

⁹ This is based on a log-linear regression, as before.

¹⁰ The AARR is used for the analysis for monitoring and evaluation of the global trend in stunting prevalence among children under five, to quantify the rate of change of the prevalence from baseline to the current year. If the prevalence is known and the annual rate of reduction is constant, then the prevalence of the next year can be calculated.

Assessing current progress

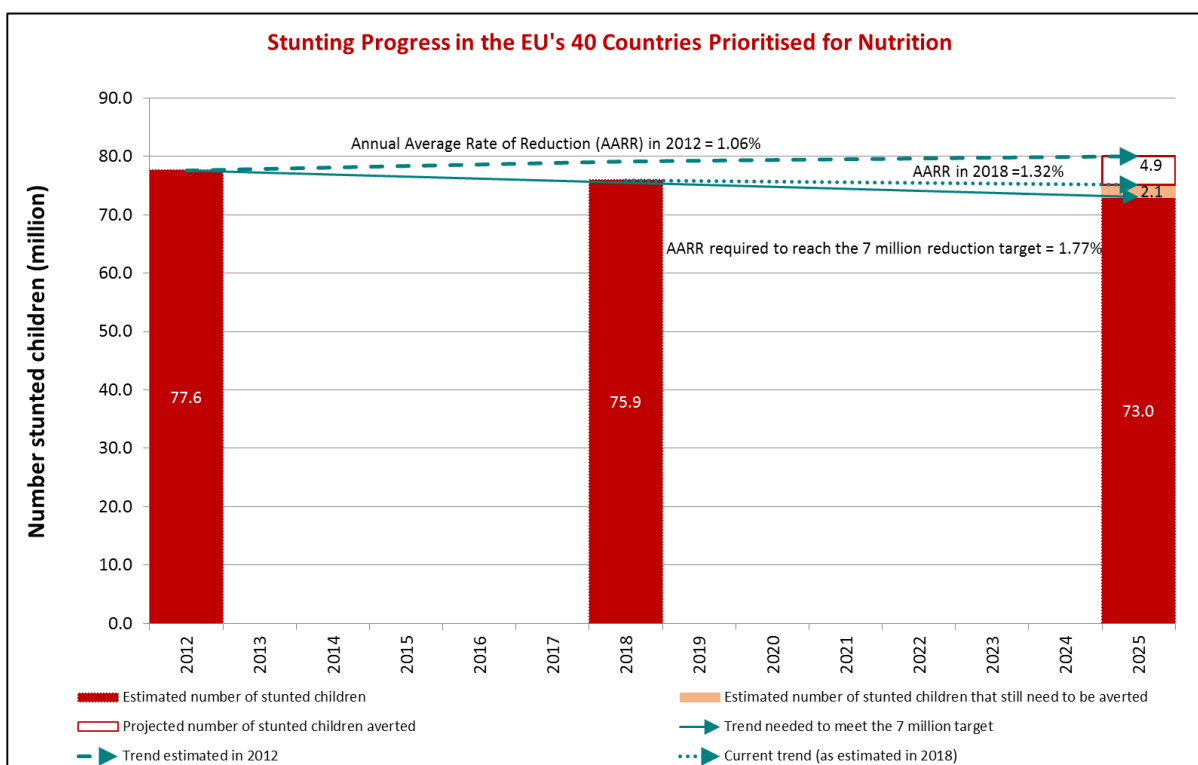
As new data becomes available, the current trend in stunting reduction changes. This new trend is used to calculate three new estimates¹¹:

- the number of stunted children in a given year after 2012 (e.g. 2017 for the 2018 Progress Report);
- the current AARR (estimated from 1999 to current year); and
- a new projection of the number of stunted children in 2025 (which assumes that the new trend remains constant).

In this way, the number of stunted children in 2025, estimated from 2012, can be compared to the current estimation, thereby giving an indication of the scale of progress being made in achieving the WHA target.

Current progress in 40 priority countries (2018)

The graph below illustrates stunting progress in the EU's 40 priority countries toward the target of a reduction in stunted children of 7 million children. The current AARR (as calculated in 2018) is 1.3% (an increase of 0.3% from baseline) resulting in 4.9 million fewer children stunted in 2025 compared to 2012. The required AARR to reach the 7 million target is 1.8%.



Country examples – Ethiopia and Angola (2018)

The graphs below illustrate stunting progress in Ethiopia and Chad toward their WHA (set globally) and Government targets (set at country level).

Ethiopia has seen an increase in the rate of stunting reduction (from 2.2 to 2.3%). However, they are not on track to reach either target (WHA target; 3.7 million children stunted in 2025 and Government target; 26% of stunted children in 2020).

¹¹ Note: these new estimates are calculated using the same method as before (i.e. using all data available on the JME, both before and after 2012).

Angola has seen a decrease in the rate of stunting reduction (from 6.6 to 2.6%). They are not on track to reach either target (WHA target; 0.6 million children stunted in 2025 and Government target; 5% of stunted children in 2021).

