OPHI MPI Methodological Note 66

The global Multidimensional Poverty Index (MPI) 2026: Changes over time results for 89 countries

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Attribution
2021–24. The global MPI harmonised level estimates and their changes over time published in the four rounds 2021–24 were produced by Professor Sabina Alkire, Dr Usha Kanagaratnam and Dr Nicolai Suppa for over 80 countries using over 200 harmonised surveys. Since 2021, a new and well-conceived production process was implemented by Dr Kanagaratnam and Dr Suppa to enable transparent, reproducible and user-friendly access to the data, which had not been possible in earlier rounds. The details of the data repository are documented in the open-access paper in *Scientific Data* (Suppa and Kanagaratnam, 2025).

Following the attribution presented in the Methodological Note 60 published in 2024, all earlier published work continued to be acknowledged.

The following attribution is based on Alkire, Kanagaratnam and Suppa (2024) as presented in the OPHI MPI Methodological Note 60, Oxford Poverty and Human Development Initiative (OPHI), University of Oxford.

2011. The changes over time estimates using global MPI specifications was first published by Alkire et al. (2011), comparing changes in MPI for 10 countries and 158 subnational regions using DHS data across two periods of time.
2013. Alkire and Roche (2013) published harmonised levels and changes estimates for 22 countries using comparable DHS data across two periods. The methodological specifications were discussed in Alkire et al. (2013). In addition, a country-specific analysis on the change in multidimensional poverty in India between 1998–99 and 2005–06 was published by Alkire and Seth (2015).

2014. Alkire and Vaz (2014) documented changes over time results for 34 countries and 338 subnational regions. The methodological specifications were highlighted in Alkire et al. (2014). The harmonised estimates were based on comparable DHS datasets across two time points, except for two countries (Ethiopia and Peru), where the comparison included three time points. Alkire, Roche, et al. (2017) presented the changes estimates for 34 countries and their subnational regions.

2016–17. Alkire et al. (2016) extended the harmonised estimates to 50 countries (16 new countries, in addition to 34 previously harmonised countries). This round included comparisons using Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) data and, for three countries (Nigeria, Senegal and Zimbabwe), the analysis was extended from two to three time points. This was followed by a publication that focused on changes in multidimensional poverty among countries in sub-Saharan Africa (Alkire, Jindra, et al., 2017).

2018. A country-specific analysis on the change in multidimensional poverty in India between 2005–06 and 2015–16 was published by Alkire, Oldiges, et al. (2021).

2019. The 2019 global MPI covered harmonised intertemporal estimations using two data points for 10 countries (Alkire, Kovesdi, Mitchell and others, 2019).

2020. The 2020 global MPI covered harmonised intertemporal estimations using two data points for 80 countries (Alkire, Kovesdi, et al., 2020).

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1. Overview

This methodological note outlines the methodology and policies applied to harmonise 256 survey datasets, which form the basis for generating the harmonised level estimates and their changes over time in multidimensional poverty for **89 countries** and **907 subnational regions**. Thirty-eight of the 89 countries have data for one period spanning two points in time, while poverty trends in 33 countries are based on three points in time. Thirteen countries (Benin, Bolivia, Congo (Democratic Republic of the), Eswatini, Kyrgyzstan, Malawi, Mali, the Philippines, Senegal, Tanzania, Thailand, Turkmenistan and Zambia) have results spanning four time points. Three countries (Ghana, Nepal and Nigeria) provide trends across five time periods, while Mexico and Peru have trends for seven time periods.

We also estimate how multidimensional poverty has changed by four major age categories (0–9 years, 10–17 years, 18–59 years, and 60 years and over) and by two age categories covering children aged 0–17 years and adults 18 years and older in all countries. Our results also show poverty trends by urban and rural areas. Indicator standardisation is detailed in Alkire, Mishra and Suppa (2026a), while indicator harmonisation is detailed in earlier publications by Alkire et al. (2025) and Alkire, Kanagaratnam and Suppa (2021; 2022; 2023; 2024) and in Table 8 (OPHI 2026).

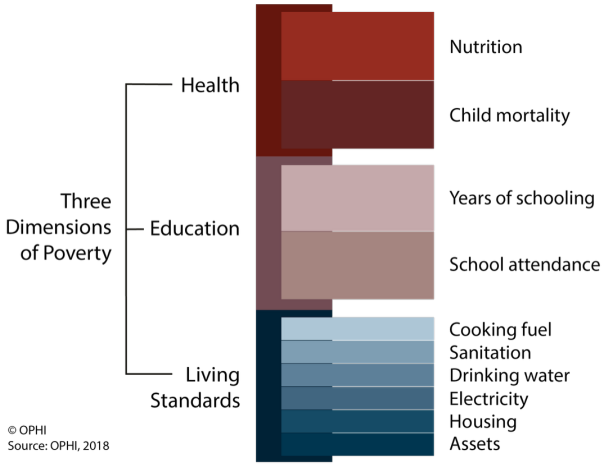
The global MPI harmonised level estimates and their changes over time are an ongoing area of innovation. The number of harmonised countries, datasets and survey periods will increase as we continue to harmonise earlier surveys, alongside upcoming surveys. As the survey time points increase, we may review the methodology and policies underlying the harmonisation principles. This is because some of the policies may be more relevant for surveys with two time points, but less relevant for those with a greater number of time points.

This note is structured as follows. Section 2 presents the global MPI structure and indicator definitions, while Section 3 outlines the global MPI and its partial indices that we estimate and publish. Section 4 summarises the changes over time methodology and Section 5 details the tool for estimating global MPI, while Section 6 summarises the harmonised surveys. Section 7 outlines the principles and decisions that underlie our harmonisation work. Section 8 summarises the country-specific decisions applied to the datasets harmonised in the 2026 round. We conclude with key highlights of the work implemented in this round.

1. The global MPI structure

The global MPI, published annually since 2010, captures acute multidimensional poverty in developing regions of the world (Alkire and Santos, 2010; 2014). This measure is based on the dual cutoff counting approach to poverty measurement developed by Alkire and Foster (2011). The global MPI is composed of three dimensions (health, education and living standards) and 10 indicators (Figure 1). Each dimension is equally weighted, and each indicator within a dimension is also equally weighted.

Figure 1. Composition of the global MPI – dimensions and indicators



Source: OPHI (2018).

The first major revision of the global MPI was undertaken in 2018, adjusting the definitions of five of the ten indicators (Alkire and Jahan, 2018). Alkire et al. (2022) provide a comprehensive analysis of the consequences of the 2018 revision. The normative and empirical decisions that underlie the revision of the global MPI, and adjustments related to the child mortality, nutrition, years of schooling and housing indicators, are discussed in Alkire and Kanagaratnam (2021). The revision of the assets indicator is detailed in Vollmer and Alkire (2022).

The global MPI begins by establishing a deprivation profile for each person, showing in which of the 10 indicators they are deprived. Each person is identified as deprived or non-deprived in each indicator based on a deprivation cutoff (Table 1).

Table 1. The global MPI – dimensions, indicators, deprivation cutoffs and weights

Dimensions	Indicator	Deprived if ...	SDG area	Weight
Health	Nutrition	Any person under 70 years of age for whom there is nutritional information is **undernourished**.[1]	SDG 2	1/6
	Child mortality	A child **under 18** has **died** in the household in the five-year period preceding the survey.[2]	SDG 3	1/6
Education	Years of schooling	**No** eligible household member has completed **six years** of **schooling**.[3]	SDG 4	1/6
	School attendance	Any school-aged child is **not attending** school **up to** the age at which he/she would complete **class 8**.[4]	SDG 4	1/6
Living standards	Cooking fuel	A household cooks using **solid fuel**, such as dung, agricultural crop, shrubs, wood, charcoal or coal.[5]	SDG 7	1/18
	Sanitation	The household has **unimproved** or **no** sanitation **facility** or it is improved but **shared** with other households.[6]	SDG 6	1/18
	Drinking water	The household's source of **drinking water** is **not safe** or safe drinking water is a **30-minute** or **longer walk** from home, round trip.[7]	SDG 6	1/18
	Electricity	The household has **no electricity**.[8]	SDG 7	1/18
	Housing	The household has **inadequate** housing materials in **any** of the three components: **floor**, **roof** or **walls**.[9]	SDG 11	1/18
	Assets	The household does **not own more than one** of these **assets**: radio, TV, telephone, computer, animal cart, bicycle, motorbike or refrigerator, and does not own a car or truck.	SDG 1	1/18

Notes: The global MPI is related to the following SDGs: No Poverty (SDG 1), Zero Hunger (SDG 2), Health and Well-being (SDG 3), Quality Education (SDG 4), Clean Water and Sanitation (SDG 6), Affordable and Clean Energy (SDG 7) and Sustainable Cities and Communities (SDG 11).

1 Children under five years of age (60 months and younger) are considered undernourished if their z-score of either height-for-age (stunting) or weight-for-age (underweight) is below minus two standard deviations from the median of the reference population. Children 5–19 years (61–228 months) are identified as deprived if their age-specific Body Mass Index (BMI) cutoff is below minus two standard deviations. Adults aged 20–70 years (229–840 months) are considered undernourished if their BMI is below 18.5 m/kg^2.

2 The child mortality indicator of the global MPI is based on birth history data provided by mothers aged 15–49. In most surveys, men have also provided information on child mortality, but this lacks the date of birth and death of the child. Hence, the indicator is constructed solely from mothers' responses. However, if the data from the mother are missing, and if the male in the household reported no child mortality, then we identify no child mortality in the household.

3 If all individuals in the household are in an age group where they should have formally completed six or more years of schooling, but none have this achievement, then the household is deprived. However, if any individuals aged 10 years and older reported six years or more of schooling, the household is not deprived.

4 The data sources for the age that children start compulsory primary school are Demographic and Health Surveys (DHS) or Multiple Indicator Cluster Surveys (MICS) survey reports, and the UNESCO Institute for Statistics data browser (http://data.uis.unesco.org).

5 If the survey report uses other definitions of solid fuel, we follow the survey report.

6 A household is considered non-deprived in sanitation if it has some type of flush toilet or latrine, or ventilated improved pit or composting toilet, provided that they are not shared. If the survey report uses other definitions of improved sanitation, we follow the survey report

7 A household is considered non-deprived in drinking water if the water source is any of the following types: piped water, public tap, borehole or pump, protected well, protected spring or rainwater. It must also be within a 30-minute walk, round trip. If the survey report uses other definitions of improved drinking water, we follow the survey report.

8 A small number of countries do not collect data on electricity because of 100% coverage. In such cases, we identify all households in the country as non-deprived in electricity.

9 A household is considered deprived if the floor is made of natural materials (mud/clay/earth, sand or dung) or if the dwelling has no roof or walls or if either the roof or walls are constructed using natural or rudimentary materials such as such as carton, plastic/polythene sheeting, bamboo with mud/stone with mud, loosely packed stones, uncovered adobe, raw/reused wood, plywood, cardboard, unburnt brick or canvas/tent. The definition of natural and rudimentary materials follows the classification used in country-specific DHS or MICS questionnaires.

In the case of health and education, each household member may be identified as deprived or not deprived according to the information available for other household members. For example, if any household member for whom data exist is undernourished, each person in that household is considered deprived in nutrition. Taking this approach – which was required by the data – is intuitive and assumes shared positive (or negative) effects of achieving (or not achieving) certain outcomes. Next, looking across indicators, each person's deprivation score is constructed by adding up the weights of the indicators in which they are deprived. The indicators use a nested weight structure: equal weights across dimensions and an equal weight for each indicator within a dimension.

2. The global MPI and its partial indices

In the global MPI, a person is identified as multidimensionally poor (MPI poor) if they are deprived in one-third or more of the weighted MPI indicators. After the poverty identification step, we aggregate across individuals to obtain the incidence of poverty, or headcount ratio (H), which represents deprivation score, or the average percentage of poor people in the population. We then compute the intensity of poverty (A), representing the average percentage of weighted deprivations experienced by poor people. We then compute the adjusted poverty headcount ratio (M_0) or MPI by combining H and A in a multiplicative form (MPI = H x A).

Both the incidence and the intensity of these deprivations are highly relevant pieces of information for poverty measurement. The incidence of poverty is intuitive and understandable by anyone. Yet, the proportion of poor people as a headline figure does little to shed light on the poorest of poor people. For example, multidimensional poverty trends between 2005–06 and 2015–16 indicate that the poorest states within India had slower progress according to the incidence of poverty. However, by MPI value, the poorest states showed the fastest reduction, because the intensity of deprivations experienced by the poorest people in these states reduced much faster compared to those who are less poor (Alkire, Oldiges and Kanagaratnam, 2021). By combining the two pieces of information – the change in intensity of deprivations and change in proportion of poor people – the MPI captures the progress observed among those in poverty. The MPI therefore highlights the poorest of poor people, affirming that they are not left behind in poverty reduction efforts.

A headcount ratio is also estimated using two other poverty cutoffs. The global MPI identifies individuals as **vulnerable** to poverty if they are not poor but are close to the one-third threshold; that is, if they are deprived in 20% to 33.32% of weighted indicators. The method also applies a higher poverty cutoff to identify individuals in **severe poverty**, meaning those deprived in 50% or more of the dimensions.

The Alkire-Foster method has a property that makes the global MPI even more useful – dimensional breakdown. This makes it possible to consistently compute the percentage of the population who are multidimensionally poor and simultaneously deprived in each indicator. This is known as the **censored headcount ratio** of an indicator. The weighted sum of censored headcount ratios of all MPI indicators is equal to the MPI value.

3. Changes over time methodology

Trends are estimated using indicators in the global MPI that are harmonised across time periods. Harmonisation is necessary to ensure that any differences observed are due to changes in the conditions of poverty in the country rather than changes in the questionnaire. We estimate the harmonised levels of the MPI and its partial indices using the harmonised indicators. This is important: in poverty analysis, the headline of interest is often the overall change in poverty. People want to know whether poverty has reduced, increased or remained unchanged over time. Note that while harmonisation makes estimates exactly comparable over time it may reduce comparability across countries. A prominent component of poverty comparisons is the absolute pace of change across periods or points in time.

3.1 Absolute rate of change

The absolute rate of change is the simple difference in poverty levels between two periods. We denote the initial period by t^0, the subsequent period by t^1, and the corresponding achievement matrices for these two periods by X_{t^0} and X_{t^1}, respectively. Note that the parameters of the poverty measure – deprivation cutoffs z, weights w_j and poverty cutoff k – used in each period remain unchanged. The absolute rate of change (Δ) is the difference in the MPIs between two periods and is computed as (and similarly for H and A, which are not presented):

$$\Delta MPI = MPI(X_{t^1}) - MPI(X_{t^0})$$

The significance of the difference is determined by t-tests and is reported at 90% (*), 95% (**) and 99% (***) confidence levels in OPHI's Data Table 6.

The absolute rate of change is indifferent to the initial level. For example, a 10-percentage point reduction could mean that the headcount ratio decreased from 80% to 70% or from 15% to 5%. To look at the proportion of the change with respect to the initial level, we use a relative measure.

3.2 Relative rate of change

The relative rate of change is the difference in poverty as a percentage of the initial poverty level. Interpreting the analysis of absolute and relative changes together provides a clear sense of overall progress. The relative rate of change (δ) is computed for the MPI (and similarly for H and A, which are not presented) as:

$$\delta MPI = \frac{MPI(X_{t^1}) - MPI(X_{t^0})}{MPI(X_{t^0})} \times 100$$

3.3 Annualised change

However, the absolute and relative changes are not comparable for different countries when the reference periods (the duration between survey years) are of different length. To compare the rates of poverty reduction across countries that have different reference periods, annualised changes are used. The annualised absolute rate of change $(\underline{\Delta})$ is computed for the MPI as:

$$\underline{\Delta} MPI = \frac{MPI(X_{t^1}) - MPI(X_{t^0})}{t^1 - t^0}.$$

The annualised relative rate of change $(\underline{\delta})$ is computed for the MPI as:

$$\delta MPI = \left[\left(\frac{MPI(X_{t^1})}{MPI(X_{t^0})} \right)^{\frac{1}{t^1 - t^0}} - 1 \right] \times 100$$

We use the same formula to compute and report annualised changes in the other partial indices, namely H, A and censored headcount ratios.

For surveys that are fielded between two or more years, the analysis takes the average of the years for calculating annualised change. For instance, in the case of India, we compute changes in poverty using harmonised data from three survey datasets: Demographic and Health Surveys (DHS) 2005–06, 2015–16 and the most recent survey, 2019–21. The annualised change between 2005–06 and 2015–16 is then 2015.5 – 2005.5 = 10 years, while the annualised change between 2015–16 and 2019–21 is 2020 – 2015.5 = 4.5 years.

As a measure of robustness, we also computed annualised change using two alternative approaches in the case of India (Table 2). We assess the implications of two alternative year policies on the change in the headcount ratio, as this is the most sensitive result. The first alternative approach is counting the mean of the month and year of the interviews to produce the annualised change, while the second alternative approach is counting the median instead of the mean. The results for

the current approach of the changes over time methodology, which takes the average across the survey years, indicate that we are going with a lower bound of possible absolute annual reduction.

Table 2. Comparing alternative approaches to estimating annualised change for India

		t^0 initial year		t^1 final year				Duration between t^0 and t^1	Multidimensional headcount ratio (HT)		
		Survey	Year	Survey	Year				t^0	t^1	Absolute annualised change
Current approach: for surveys fielded between survey years, the analysis takes the average of the years to compute annualised changes	India	DHS	2005–06	DHS	2015–16	2005.5	2015.5	10.0	55.07	27.68	-2.74
	India	DHS	2015–16	DHS	2019–21	2015.5	2020	4.5	27.68	16.39	-2.51
Mean approach: the average of the interview months and years used to compute the annualised changes	India	DHS	2005–06	DHS	2015–16	Mar 06	Dec 15	9.7	55.07	27.68	-2.83
	India	DHS	2015–16	DHS	2019–21	Dec 15	May 20	4.3	27.68	16.39	-2.60
Median approach: the median of the interview months and years used to compute the annualised changes	India	DHS	2005–06	DHS	2015–16	Mar 06	Dec 15	9.8	55.07	27.68	-2.81
	India	DHS	2015–16	DHS	2019–21	Dec 15	Feb 20	4.1	27.68	16.39	-2.76

Note: DHS surveys contain only the year and month of interview; the date of interview is not available.

3.4 Changes in deprivations among poor people

Changes in the MPI can be broken down by indicators. Analyses of changes in the MPI consider both changes in the raw or uncensored headcount ratios and in the censored headcount ratios. Changes in censored headcount ratios depict changes in deprivations among poor people.

3.5 Disaggregation by subgroups over time

Decomposable and subgroup-consistent poverty measures (Foster, Greer and Thorbecke, 1984; Foster and Shorrocks, 1991) fulfil the property that the change in overall (national) poverty is consistent with the changes in subgroup poverty. Suppose $MPI(X_{t^0})$ at time t^0 and t^1 can be expressed as

$$MPI(X_{t^0}) = \sum_{\ell=1}^{m} v^{\ell} MPI\left(\mathrm{X}_{t^0}^{\ell}\right)$$

$$MPI(X_{t^1}) = \sum_{\ell=1}^{m} v^{\ell} MPI\left(\mathrm{X}_{t^1}^{\ell}\right)$$

Where $MPI\left(X_{t^i}^{\ell}\right)$ denotes adjusted headcount ratio at time t^i and $v^{\ell} = n^{\ell}/\ n$ the populations share of subgroup ℓ. This enable us to analyse how different subgroups contribute to overall poverty and how poverty changes across population subgroups to ascertain if poorest sub-group reduced poverty faster than less poor sub-groups and to understand the dimensional composition of the reduction across subgroups (Alkire et al., 2015). The contribution of population subgroups to overall reduction of poverty between two time points t^0 and t^1 is given as

$$\Delta MPI = \sum_{\ell=1}^{m} \left(v^{\ell}{}_{t^1} MPI\left(X_{t^1}^{\ell}\right)\right) - \left(v^{\ell}{}_{t^0} MPI\left(X_{t^0}^{\ell}\right)\right)$$

Where ΔMPI represents total change in the MPI, which further can be decomposed by subgroup to show how each subgroup contributes to overall change in poverty levels between two time periods. For example, assume an entire society is divided into three population subgroups (e.g. subnational regions): region 1, region 2 and region 3. If poverty in region 1 remains unchanged while poverty in region 2 and region 3 decreases, overall poverty, that reflects subgroup poverty, must decrease.

In the harmonised global MPI, we have estimated changes in the MPI and its partial indices by age groups, urban and rural areas and subnational regions. Our analyses of poverty changes by population subgroups allow us to identify if the poorest subgroups reduced poverty faster than less-poor subgroups and to see the indicator composition of reduction across subgroups. Note that the population shares for each period must always be analysed alongside subgroup trends to consider demographic shifts such as migration or population growth, as these can significantly influence the interpretation of results.

4. Tool to estimate the global MPI

The global MPI harmonised level estimates and their changes over time estimates are produced using the Stata package `'mpitb'`, which is documented in Suppa (2023). `'mpitb'` facilitates the estimation of measures such as the MPI (adjusted headcount ratio), H (headcount ratio), A (intensity), and the censored and uncensored headcount ratios for each time period. It supports the estimation of change between time periods for each of the measures. The level and change estimates for harmonised datasets can be computed at the national level, by subnational regions, age cohorts and urban and rural areas, and could include other subgroup disaggregations. `'mpitb'` also simplifies estimations and analyses in cross-country settings. Suppa and Kanagaratnam (2023) present selected aspects related to the estimation procedures of the global MPI.

The package is available at the Statistical Software Components (SSC) Archive and on Gitlab. The MPI toolbox is distributed free of charge under an MIT licence. The package is installed by issuing `'ssc install mpitb'` in Stata. To access its comprehensive help files, issue `'help mpitb'` after installation. `'mpitb'` requires Stata 16 or higher.

5. Harmonised survey time periods and datasets

The global MPI trends over time have been released annually since 2021. The number of harmonised countries, datasets and survey periods will increase as we continue to harmonise earlier surveys and upcoming surveys.

5.1 Survey time periods

For this 2026 round, the analysis of changes in multidimensional poverty draws on 256 survey **micro datasets** from 89 countries.[1] Thirty-eight of these countries have two time points, and 33 have trends across three time points. Changes in multidimensional poverty in 13 countries (Benin, Bolivia, Congo (Democratic Republic of the), Eswatini, Kyrgyzstan, Malawi, Mali, the Philippines, Senegal, Tanzania, Thailand, Turkmenistan and Zambia) cover four points in time; three countries (Ghana, Nepal and Nigeria) cover five points in time, and Mexico and Peru have trends for seven points in time.

Table 3 provides an overview of coverage by country and subnational region for each release since 2021.

Table 3. Harmonised survey details for each publication round, 2021–25

Publication year	Country coverage	Countries with subnational regions	Country coverage in terms of survey time points	Survey micro datasets
2026	89	81 (907 regions)	51 (three or more points in time) 38 (two points in time)	256
2025	88	79 (882 regions)	48 (three or more points in time) 40 (two points in time)	244

[1] Twenty-five countries – Argentina, Barbados, Bhutan, Botswana, Brazil, Costa Rica, Cuba, El Salvador, Fiji, Georgia, Guatemala, Kiribati, Libya, Maldives, Myanmar, Papua New Guinea, Paraguay, Saint Lucia, Samoa, Seychelles, South Africa, Sri Lanka, Tonga, Tuvalu and Uzbekistan – have surveys for one period and so are part of the countries covered in our current release (Alkire, Mishra and Suppa, 2026a); see results in OPHI's Data Table 1). However, these countries are not part of the harmonisation and changes over time analysis because we have yet to identify relevant comparable surveys from an earlier time period. We continue to explore survey options for these countries, with the aim of including them in the Global MPI Harmonised Level Estimates and their Changes over Time database.

2024	86	78 (863 regions)	46 (three or more points in time) 40 (two points in time)	233
2023	84	77 (814 regions)	39 (three or more points in time) 45 (two points in time)	211
2022	84	76 (810 regions)	36 (three or more points in time) 48 (two points in time)	205
2021	84	77 (793 regions)	28 (three points in time) 56 (two points in time)	196

For the 2026 round, we standardised and harmonised 256 survey datasets [(38*2) + (33*3) + (13*4) + (3*5) + (2*7)] to produce harmonised MPI estimates for 89 countries at the national level, and by age groups and urban and rural areas.

In addition, we produced harmonised MPI estimates for 907 subnational regions in 81 of the 89 countries, using 234 of the 256 harmonised survey datasets.

5.2 Survey datasets

In 29 countries, we harmonised DHS datasets across all time points, while in 21 countries we used only Multiple Indicator Cluster Surveys (MICS) datasets. For four countries (China, Ecuador, Jamaica and Mexico), the harmonisation is exclusively based on national datasets, while for Morocco we used the Pan Arab Project for Family Health (PAPFAM) survey across two time points. For Egypt, Bolivia and Peru, the harmonised datasets include a combination of DHS surveys and national surveys. We used a mix of DHS and MICS across time points for 31 countries: Afghanistan, Azerbaijan, Bangladesh, Benin, Cameroon, Chad, Comoros, Congo, Congo (Democratic Republic of the), Côte d'Ivoire, Dominican Republic, Eswatini, Gambia, Ghana, Guinea, Guyana, Honduras, Kyrgyzstan, Madagascar, Malawi, Mali, Mauritania, Moldova, Nepal, Nigeria, São Tomé and Príncipe, Sierra Leone, Togo, Ukraine, Yemen and Zimbabwe. The decision to use mixed data sources between time points was possible because MICS and DHS have comparable sample designs and survey questionnaires (Khan and Hancioglu, 2019).

It is not unusual for survey providers to change the sampling design of long-running surveys over time. Such cases present an issue where the older and newer surveys have incomparable sample designs. For example, the sample design for the Jamaica Survey of Living Conditions (JSLC) 2018 was revised and therefore direct comparisons with previous survey rounds, JSLC 2010 and 2014, are not recommended (PIOJ and STATIN, 2021, p.139). However, we continue to include JSLC 2010 and 2014 in our harmonised estimates, while restricting JSLC 2018 to the non-harmonised recent estimates presented in OPHI's Data Table 1 (Alkire, Mishra and Suppa, 2026a). A similar limitation is evident in the Niger ENAFEME 2021 survey, which, despite adopting a survey design

reportedly similar to DHS, did not provide strata variables in the dataset, thereby preventing harmonisation with earlier Niger surveys (DHS 2006 and DHS 2012). In practical terms, while it is not possible to construct consistent poverty trends using the recent survey data for Niger, Jamaica and Namibia, we continue to report changes in the MPI estimates from earlier periods for each country.

6. Harmonisation principles and decisions

It is common for indicator definitions to vary across survey years, as survey providers may have changed how questions are asked, from whom these are collected, or the response categories. Another reason may be that we are using different survey sources with comparable sampling designs to capture changes over time in a country and, as such, indicator definitions may require adjustment across these survey sources (e.g. comparing DHS and MICS). Harmonisation seeks to make two or more MPI estimations comparable by aligning the indicator definitions as closely as possible. The next section describes the indicator-specific decisions required in the harmonisation process.[2]

6.1 Indicator-specific harmonisation decisions

6.1.1 Nutrition

In recent surveys, there are often two variables – age in days and age in months – which can be used to compute nutrition statistics for children under 5 years of age, while many earlier surveys, notably DHS, do not include the age in days variable. We continue to use children's age in days for surveys that have this information, given its accuracy for nutrition statistics. For surveys that lack data on 'age in days', we use the 'age in months' variable when calculating the nutrition statistics for children. We do not harmonise this information between surveys.

Most MICS surveys used in this analysis collect anthropometric measurements only for children under five years of age. In comparisons where one year is a DHS survey and the other year a MICS survey, the nutrition indicator is harmonised to include anthropometric information only for children under five years of age.

[2] Indicator-specific decisions are also summarised in Suppa and Kanagaratnam (2023).

Following this principle, adult nutrition is excluded from the harmonised nutrition indicator for 30 of the 89 countries, involving 50 of the datasets.[3] For surveys for which we used information from children and adults to construct the nutrition indicator, if the reference populations were changed, the harmonised estimates follow the year with the more limited eligibility conditions.[4] This restricted condition principle also applies when one year includes nutrition information from men and the other year does not; in this case, men's nutritional information would be excluded from the harmonised indicator.

If one year the survey did not collect the information needed to construct the nutrition indicator and the other year it did, the nutrition indicator is dropped from the year that includes the information, and the indicators within the dimensions are reweighted to maintain equal weights across dimensions and match the survey with the restricted data. In our sample of 89 countries, nine countries dropped the nutrition indicator from one year to match the year that did not collect anthropometric measurements.[5]

6.1.2 Child mortality

The child mortality indicator was constructed using birth history information – whether the mother gave birth in the five years preceding the survey and how old the child was when they died. A few surveys do not include a birth history questionnaire and thus do not have information on the age and date of death of the child. When one year includes birth history information and the other does not, the restricted condition principle is followed, and information on age and year of death are not considered in the survey that has these. The child mortality indicator then takes the

[3] These countries and datasets are: Armenia DHS 2015–16, Azerbaijan DHS 2006, Bangladesh DHS 2014 and 2022, Burkina Faso DHS 2010, Benin DHS 2026 DHS 2017–18, Cameroon DHS 2011 and 2018, Comoros DHS 2012, Republic of Congo DHS 2005, Congo (Democratic Republic of the)DHS 2007, 2013–14 and 2023-24, Eswatini DHS 2006–07, Ethiopia DHS 2011 and 2016, Gambia DHS 2013 and 2019–20, Guinea DHS 2018, Ghana DHS 2008, 2014 and 2022, Guyana DHS 2009, Honduras DHS 2005–06 and 2011–12, Kyrgyzstan DHS 2012, Madagascar DHS 2008–09 and 2021, Mali DHS 2006, 2018 and 2023–24, Moldova Republic DHS 2005, Mauritania DHS 2019–21, Malawi DHS 2010, 2015–16 and 2024, Nepal DHS 2016 and 2022, Senegal DHS 2010–11, São Tomé and Príncipe DHS 2008–09, Sierra Leone DHS 2019 and 2013, Togo DHS 2013–14, Vanuatu MICS 2023, Zambia DHS 2007, 2013–14 and 2024, and Zimbabwe DHS 2010–11 and 2015.

[4] For example, in the Peru ENDES 2018, 2019, 2021, 2022, 2023 and 2024 surveys, eligible females for height and weight measurements included all females aged 12–49 years, whereas in Peru DHS 2012, eligible females included all females aged 15–49 years. Therefore, in Peru, only females aged 15–49 years are considered eligible for the nutrition measurement for both years.

[5] These countries are Afghanistan, Colombia, Dominican Republic, Indonesia, Nigeria, the Philippines, Trinidad and Tobago, Ukraine and Vietnam.

deprivation cutoff from the 2010 global MPI specifications, which considers whether any child has died in the household.[6]

However, the issue of missing birth history information is usually limited to a single survey, largely the first survey period. It may not be reasonable to continue to exclude birth history information from more recent datasets as we continue to increase the survey period coverage of a given country. In this case, we may review the restricted condition principle. A sensitivity analysis can be conducted by comparing estimates between two specifications. The first specification applies the restricted condition principle across the datasets if at least one survey has missing birth history information. The second specification retains the birth history information in all datasets that have this information, despite its unavailability in a single survey year. If there are significant differences in the levels of the MPI and H estimates between both specifications, then a decision may be made to exclude the single dataset with missing birth history information from the analysis of poverty trends of the given country.

Birth history information was consistently not collected across all the survey datasets of four countries. For these countries, we applied the 2010 global MPI specifications, which considers whether any child has died in the household.[7]

In addition, attention was also paid to which individuals provide information on child mortality to ensure the applicable populations match between survey years. For instance, in the Bolivia 2023 dataset, women who are eligible to provide child mortality information are all women aged 12 to 49 years, while in the Bolivia 2016 dataset the same information is provided by women aged 14-49 years, and in the 2008 and 2003 datasets, eligible women were aged 15–49 years. Therefore, only child mortality information from women aged 15–49 years is included in the indicator for all four years, following the restricted condition principle. However, child mortality information from eligible men was not excluded even when not present in the other year, as it is used only to identify zero child mortality at the household level in the absence of information from eligible women.

If the surveys did not collect the information needed to construct the child mortality indicator in one year and did in the other year, the indicator was dropped from the year that includes the information and the indicators within the dimensions reweighted to maintain equal weights across

[6] Birth history information is excluded from the harmonised child mortality indicator for 10 of the 89 countries, involving 15 of the datasets: Belize MICS 2015–16, Central African Republic MICS 2019, Chad DHS 2014–15 and MICS 2019, Ecuador ENSANUT 2018, Morocco PAPFAM 2017–18, Mongolia MICS 2013 and 2018, Turkmenistan MICS 2024, 2019 and 2015–16, Togo MICS 2017 and DHS 2013–14, Trinidad and Tobago MICS 2022, and Vanuatu MICS 2023.

[7] These datasets are Kazakhstan MICS 2010–11, 2015 and 2024, Montenegro MICS 2013 and 2018, Serbia MICS 2019, 2014 and 2010, and Thailand MICS 2022, 2019, 2015–16 and 2012.

dimensions and to match the survey with the restricted data. This occurred in two countries (North Macedonia and Suriname) in our sample of 89 countries.

6.1.3 Years of schooling

For the years of schooling indicator, DHS data contain a variable that states the total number of years of education for the individual, but MICS data do not provide an equivalent variable. Instead, when using MICS data, the total number of years of schooling is computed by combining the education level and highest-grade variables, taking into consideration the country's national education system, as described in the survey report. In cases where this information is not included in the survey report, we refer to the UNESCO Institute for Statistics (UIS) data browser. Where there is a mismatch between the survey report and the national guidance, we investigate this issue with the respective national statistical offices or survey providers. For the DHS and MICS comparisons, the DHS variable was treated as equivalent to the MICS composite variable (e.g. six years of schooling in the DHS variable corresponds to the first six years of education in MICS).

All adults are eligible for the years of schooling indicator, while the youngest eligible people are now specified using country-specific age cutoffs that correspond to the age at which they are expected to complete class six (Alkire, Kanagaratnam and Suppa, 2020). For example, in India, children start school at six years old, so we would expect a 12-year-old child to have completed six years of schooling. Hence, the minimum age of eligibility for the years of schooling indicator for India is 12 years old. In Indonesia, children start school at seven years old and so would complete six years of schooling by the time they are 13. Hence, the minimum eligibility for the years of schooling indicator in Indonesia is 13 years old. However, if a child aged 10 or above (but younger than the eligibility threshold) has completed 6 years of schooling, then this information is considered.

6.1.4 School attendance

Eligibility for the school attendance indicator is computed using the age range based on the national entry age to compulsory schooling. The official national entry age to compulsory schooling is selected using the survey report where possible, or UNESCO Institute for Statistics data if this is not available in the survey report. Where there is a mismatch between the report and UNESCO guidance, we consult the national statistical offices or survey providers.

For most countries included in the changes over time analysis, the official entry age for primary schooling is six years, although this differs for a few countries. For example, the official entry age is seven years old in Indonesia and five years old in Pakistan. When the official entry age changes between surveys, often due to education policy changes, we retain the exact official entry age in

each survey and do not harmonise across the years, in order to fully capture the range of eligible children.

Additionally, we construct school age eligibility using information on age at the beginning of school year, if surveys have this information. Most MICS datasets have the 'schage' variable, which represents this information. For surveys that lack information on age at the beginning of school year, we use information on age that was collected from the household roaster to construct the school age eligibility. We do not harmonise school age eligibility across survey years in order to reduce the bias we usually observe with the general age variable from the household roster, compared to the more accurate variable on age at the beginning of school year.

6.1.5 Electricity

The electricity indicator does not have any indicator-specific harmonisation decisions, beyond the general principle of using only information that is available in datasets from both survey years.

6.1.6 Sanitation

For the sanitation indicator, two conditions are used – whether other households share the toilet facility and whether the toilet facility is considered an improved or unimproved facility – to define a household's access to improved sanitation. If there is no information on whether the facility is shared in one year, but the other years do have that information, the principle of restricted condition may be considered. In the future, if data on sharing a facility are not collected in recent surveys because almost 100% of households in the country use private toilet facilities, as indicated by the survey provider, then we may consider that all households do not share toilet facilities.

If survey report classifications of types of toilet facilities as improved or unimproved differ between the two years, we consider the more recent data's definition of improved facilities for both years. If a first-year survey specifies a category for sanitation facilities that the second year does not, we leave the category labelled as in the first year.

6.1.7 Drinking water

For the drinking water indicator, there are two conditions to consider in defining a household's access to basic drinking water. First, whether the main drinking water source is considered an improved or unimproved source. Second, how long it takes the respondent to fetch water from the main drinking water source of the household.

In cases where different main drinking water sources are considered improved between the two years, we follow the standard in the more recent survey. For example, in surveys released since

2020, bottled water and water delivered via truck are considered to be improved sources of drinking water.

If one year does not have information on how long it takes to fetch water but the other year does, this information may be dropped to accord with the year that has the more limited information.[8] Alternatively, we may also review the restricted condition principle to consider variables that may inform whether access to drinking water is within or outside of dwellings.

6.1.8 Cooking fuel

If, in one year, there is no information on the type of fuel used for cooking, but the other year does have that information, the information may be dropped to accord with the year that has the more limited information.[9] In the future, if data on cooking fuel are not collected in recent surveys because almost 100% of households in the country use clean fuel, as indicated by the survey provider, we may consider all households to be not deprived in cooking fuel.

6.1.9 Housing

For the housing indicator, a household is considered deprived if they live in inadequate housing, where the floor is of natural materials, or the roof or walls are of natural or rudimentary materials. Following the principle of differing classifications reverting to the more recent standard, when the first year considers a housing material as natural or rudimentary and the more recent year does not, both years are coded to consider that material as an improved housing material.

When information on one or two of the three housing components (floor, roof or walls) is missing in one year, the information from the year where it exists is removed to match the missing year.[10] However, the issue of missing components is usually limited to a single survey, usually the earliest survey period. It may not be reasonable to continue to exclude housing components from more recent datasets as we continue to increase the survey period coverage of a given country.

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[8] We currently adopt the restricted condition principle, where information on time taken to collect water is excluded from the harmonised drinking water indicator for four countries involving six datasets: Bangladesh 2019 and 2014, Jordan 2023, Republic of Moldova MICS 2012 and the State of Palestine MICS 2019–20 and 2014.

[9] We removed the cooking fuel indicator in six countries: Afghanistan, Bangladesh, Egypt, Eswatini, Kazakhstan and Turkmenistan.

[10] This restricted condition principle was applied on the harmonised housing indicator for eight countries involving 17 datasets: Congo (Democratic Republic of the) DHS 2013–14, 2017–18 and 2023-24, Egypt DHS 2008 and 2014 and Egypt EFHS 2021, Mali MICS 2015, DHS 2018 and DHS 2023–24, Mozambique DHS 2022 and 2011, Niger DHS 2012, the State of Palestine MICS 2014 and 2019–20, São Tomé and Príncipe MICS 2014 and 2019, and Yemen DHS 2013.

In this case, we may review the restricted condition principle. A sensitivity analysis can be conducted by comparing estimates between two specifications. The first specification excludes information on missing housing components across all survey datasets of a given country if it has a missing component in at least one survey period. The second specification retains the components in all datasets that have the information, despite its unavailability in a single survey year. If there are significant differences in the levels of the MPI and H estimates between both specifications, then a decision may be made to exclude the single dataset with a missing housing component from the analysis of the country's poverty trends.

6.1.10 Assets

The assets indicator considers whether a household owns a radio, television, telephone, computer, animal cart, bicycle, motorbike, refrigerator or car/truck. When in one year there is no information on certain assets, those assets are dropped from the indicator in the later years to accord with the more limited information available. The most common missing asset item is a computer, followed by an animal cart. In 31 countries, across 46 datasets, we excluded computers from the harmonised assets indicator because this information was not available in at least one of the surveys.[11]

However, in the case of asset-related items the restricted condition principle should be reviewed as the survey period coverage of each country increases, with sensitivity analysis applied to ascertain whether there is value in excluding asset items from a series of survey years simply because the data were not collected in an earlier survey. The analysis may show that there are no significant differences in estimates, either by excluding or retaining items in the aggregated asset indicator, if these items are consistently available in newer surveys but missing in one or two of the older surveys.

Our definition of telephone ownership includes information on whether a household owns a landline or mobile phone. In earlier surveys, as with Mozambique DHS 2003, the questionnaire did not ask whether the household owned a mobile phone (as they were not as common as they are today). In these cases, for the second year, as in the case of Mozambique DHS 2011, we kept the information from both the landline and mobile phone questions (as opposed to excluding the

[11] These datasets are Afghanistan MICS 2022–23, Azerbaijan DHS 2006, Bosnia and Herzegovina MICS 2011–12, Burkina Faso DHS 2010, Cambodia DHS 2021–22, Central African Republic MICS 2010 and 2019, Chad MICS 2019, Comoros MICS 2022, Colombia DHS 2015–16, Eswatini MICS 2021–22, Congo (Democratic Republic of the) DHS 2013–14, 2017–18 and 2023-24, Republic of Congo DHS 2005, Ethiopia DHS 2016 and 2019, Gabon DHS 2012, Gambia DHS 2013, MICS 2018 and DHS 2019–20, Guinea MICS 2016 and DHS 2018, Indonesia DHS 2017, Kenya DHS 2022, Madagascar MICS 2018 and 2021, Malawi DHS 2015–16, MICS 2019–20 and DHS 2024, Mozambique DHS 2022–23, Namibia DHS 2013, Niger DHS 2012, Suriname MICS 2006 and 2018, Tanzania DHS 2022 and 2015–16, Timor-Leste DHS 2016, Togo DHS 2013–14 and MICS 2017, Uganda DHS 2016, Zambia DHS 2013–14, 2018 and 2024, Yemen MICS 2022–23 and Vanuatu MICS 2023.

information on whether the household owns a mobile phone), as we believe that changes in phone ownership are best reflected with the inclusion of all available information on devices, as individuals may own a mobile phone instead of, rather than in addition to, a landline.

6.2 Principles for subnational disaggregation of harmonised trends

The principles for subnational disaggregation using harmonised datasets build on those discussed in Alkire, Mishra and Suppa (2026b) for standardised datasets. The decision whether a country qualifies for a harmonised subnational disaggregation was determined by three criteria: (1) the sample was representative at the subnational level across harmonised surveys; (2) the subnational unit definitions are comparable across harmonised surveys; and (3) the sample size after the treatment of missing data was reasonably high across harmonised surveys.

The first criterion is that the survey report must establish that the sample is representative at the subnational level, following the survey metadata on sample design. Two countries – Armenia and Bosnia and Herzegovina – have surveys in one or both years that did not satisfy this principle according to their survey reports and are therefore excluded from subnational analysis. The remaining 87 countries met this principle.

The second criterion requires subnational units to be comparable across harmonised surveys. In three countries – Côte d'Ivoire, Morocco and Sudan – subnational regions have changed boundaries or been split into new regions over the years. We exclude subnational disaggregations for these countries where changes in the subnational unit definitions between time periods cannot be made comparable. In the future, we may renew this policy to recognise that some periods may permit comparable subnational disaggregation whereas other periods do not.

Besides these cases, a number of countries had regional changes between the time points that did not violate the principle of comparability, and we were therefore able to harmonise and obtain subnational estimates for these countries. To ensure comparable estimates are derived across time periods, where possible, regions were aggregated to recreate the regions presented in the survey with the more limited regional classification. For instance, with India DHS 2019–21 and 2015–16, we aggregated the regions of Andhra Pradesh and Telangana to recreate the Andhra Pradesh region; and aggregated the regions of Punjab and Chandigarh to recreate Punjab, as presented in DHS 2005–06. Similarly, we aggregated the regions of Jammu and Kashmir and Ladakh in the most recent survey to recreate the Jammu and Kashmir region that is present in DHS 2015–16 and 2005–06.

In a few exceptional cases, a different number of regions were surveyed across years due to accessibility, physical security, or cost issues. For example, India DHS 2015–16 and 2019–21 surveyed additional regions (union territories) that are not available in the DHS 2005–06 survey. This was a problem for the estimation of trends over time as we aimed to preserve the national estimates while ensuring that subnational estimates are comparable between the two times. Our approach was to estimate national poverty using all available regions in both years (even if some were not present earlier) in order to preserve the weighting scheme for obtaining the national estimates. Subnational estimates utilise the individual regional weights and, in cases where additional regions were surveyed in one year compared to those in the other, our analysis omits the extra regions in its estimation of the regional results, but the weights and sample are retained for national analyses.

The third criterion emphasises that the sample size after the treatment of missing data must be reasonably high at the national and subnational levels. For borderline cases, bias analyses are conducted to exclude those cases where the sample reduction leads to statistically significant bias. We apply bias tests across subnational regions in countries where a) the retained national sample size is lower than 85% of the original, or b) retained sample size is lower than 75% of the original in one or more subnational regions. This occurs in three steps.

First, the national sample size for all surveys must be at least 85% of the original sample after missing data is treated. This is because a lower sample size may affect accurate comparability across subnational estimations. We identified three datasets representing three countries that did not meet this cutoff. In the Montenegro MICS 2018 dataset, we retained 80% of the weighted sample for estimation after dropping observations that had missing data in any of the 10 global MPI indicators. In the Vanuatu MICS 2007 dataset, we retained 82% of the weighted sample for estimation, while for Mexico ENSANUT 2012 we retained 86% of the weighted sample.

Second, every subnational region in a country must have a retained sample size of at least 75% of the original sample. A smaller sample creates a problem of representativeness for that particular subnational region, which may distort the subnational comparisons. Our analyses indicate that the Central Region in Montenegro MICS 2018 dataset, Torba in Vanuatu MICS 2007 and México City in Mexico ENSANUT 2012 recorded sample drops of 27%, 25% and 29%, respectively.

Third, a bias analysis test is carried out for each region whose sample size is lower than 75% and whose national sample size is lower than 85% of the original. We identify the major cause of the sample reduction (in these cases, child mortality for Montenegro and child nutrition for Vanuatu and Mexico), divide the entire sample into two groups based on this cause and check the headcount ratios of the other indicators across these two groups. Suppose there is a systematic and statistically

significant difference (at a 1% significance level) between the headcount ratios across these two groups. In this case, that region does not satisfy the bias analysis test. If a region with a large population share (more than 20%) within a country does not pass the test, we exclude the country from our subnational analysis.

In line with this sub-criterion, we conducted the bias test for the Central Region of Montenegro. Results indicate that the likelihood of being deprived in child mortality differs between those who are missing the nutrition indicator and those who are not. Those with a nutrition indicator are systematically more likely to be deprived in child mortality. This suggests that the sampling structure would need to be revised to ensure representativity. In addition, 55% of the population live in the Central Region. Following the bias observed in the Montenegro MICS 2018 dataset and given that the region accounts for a high share of the population, we exclude the harmonised dataset for Montenegro from the subnational analysis and limit the estimates to the national level (Alkire, Kanagaratnam and Suppa, 2024). In Vanuatu, bias test results indicate a higher likelihood of missing nutrition data among those with missing child mortality data; however, the differences are not statistically significant. The Torba region constitutes 11% of the Vanuatu population and has 19% missing cases in child nutrition. Due to the combination of low retained sample and missing data, Vanuatu was excluded from the subnational harmonisation, and only national estimates were retained. In the Mexico ENSANUT 2012 dataset, for all indicators except access to water and years of schooling, the difference between missing and non-missing nutrition was not statistically significant, indicating the absence of systematic bias. The Cd México and EdMexico regions constitute 8% and 14% of the Mexican population, respectively, and have around 30% missing cases in child nutrition. For access to water and years of schooling, missing cases in nutrition are associated with lower deprivation, indicating a small potential bias in the retained sample. Mexico is therefore not included in disaggregations.

In the 2026 global MPI, although subnational disaggregation is theoretically possible for 87 of the 89 countries, only 81 countries, comprising 907 regions, meet the subnational disaggregation principles and are therefore used to estimate subnational changes in poverty over time.

7. Country-specific considerations

This section details the country-specific harmonised decisions concerning indicator availability and data treatment for each country with an updated survey.

7.1 Angola

The most recent survey for Angola is DHS 2023–24. This is harmonised with the earlier DHS 2015–16 survey.

The DHS 2023–24 dataset includes anthropometric data for children under 5 years of age, females aged 15–49 years, and males aged 15–54 years, whereas DHS 2015–16 collected anthropometric data only for children under 5 years of age. Therefore, for harmonisation purposes, the nutritional indicators include only anthropometric information from children under 5 years of age across the survey rounds.

In DHS 2015–16, water delivered using a three-wheel motorcycle, cart or truck/tanker is described as an unimproved source, whereas, for harmonisation, it is considered an improved source to align with the DHS 2023–24 definition of improved drinking water. At the subnational level, we estimated the MPI and its partial indices for 18 provinces of the country, as the samples across the harmonised datasets are representative at this level (INE, MINSA, MINPLAN and ICF, 2025; 2017).

7.2 Congo (Democratic Republic of the)

The most recent survey for Congo (Democratic Republic of the) is DHS 2023–24. This is harmonised with three earlier surveys, MICS 2017–18, DHS 2013–14 and DHS 2007.

The DHS 2023–24 dataset contains anthropometric information for children under 5 years of age, females aged 15–49 years and men aged 15–59 years. However, the harmonised nutrition indicator utilises only anthropometric data for children under 5 years of age across the DHS surveys to align with the MICS 2017–18 dataset.

For the harmonised housing indicator, we excluded the wall component from DHS 2023–24, MICS 2017–18 and DHS 2013–14 to accord with the DHS 2007 definition of housing. Additionally, the harmonised assets indicator omits computers and animal carts because this information is unavailable in DHS 2007. For harmonisation purposes, these assets are excluded across all four surveys.

At the subnational level, we computed the MPI and its partial indices for 11 administrative provinces – Bandundu, Bas-Congo, Équateur, Kasaï Occidental, Kasaï Oriental, Katanga, Kinshasa, Maniema, Nord-Kivu, Orientale and Sud-Kivu. The 26 administrative provinces in the DHS 2023–24 and MICS 2017–18 datasets were harmonised by aligning these provinces with the 11 administrative regions from DHS 2013–14 and DHS 2007, ensuring that the samples remain representative at this level (INS, École de Santé Publique de Kinshasa and ICF, 2025; MPSMRM,

MSP, and ICF International, 2014; INS and UNICEF, 2019; Ministère du Plan and Macro International, 2008).

7.3 Egypt

The most recent survey is the Egypt Family Health Survey (EFHS) 2021. This is harmonised with two earlier surveys, DHS 2014 and DHS 2008.

The EFHS 2021 and DHS 2014 datasets include anthropometric data from children under 5, never-married children and young adults aged 5–19, and eligible women aged 15–49. For harmonisation of nutrition indicators, we use only anthropometric information from children aged 0–5 years, females aged 15–49, and youths aged 10–19, to align with DHS 2008.

Neither the DHS nor EFHS surveys provide data on the wall and roof components of housing indicators; therefore, the housing indicator in all three surveys excludes these items. In DHS 2008, vented improved pit latrine was classified as an unimproved sanitation facility. However, we now categorise this type of facility as improved, to align with the classifications used in the 2014 and 2021 data. Additionally, bottled water in DHS 2008 was categorised as improved drinking water to match the recent classification in DHS 2014 and EFHS 2021.

The harmonised asset indicator excludes radio from DHS 2014 and 2008 as it was not collected in EFHS 2021. Since the DHS 2014 dataset does not include information on cooking fuel, we compute the harmonised MPI excluding a cooking fuel indicator and adjust the weights of the other living standards indicators accordingly.

We produced harmonised MPI results and their partial indices for 23 administrative governorates of the country, with the Frontier Governorates combined into one group, as the survey sample is representative at this level (CAPMAS, 2022; Ministry of Health and Population, El-Zanaty and Associates and ICF International, 2015; El-Zanaty and Way, 2009).

7.4 Kazakhstan

The most recent survey for Kazakhstan is MICS 2024. This is harmonised with two earlier surveys, MICS 2015 and MICS 2010–11.

The MICS 2024 dataset contains anthropometric information for children under 5 years of age and for those aged 5–9 years. Harmonised estimates include anthropometric data for children under 5 years of age to ensure consistency with the previous two MICS datasets. Because MICS 2015 and 2010–11 lack birth history data, the child mortality indicator is harmonised to include only child deaths reported by mothers from the household roster.

The MICS 2024 dataset lacks data on cooking fuels. For harmonisation purposes, the cooking fuel indicator was removed from the MICS 2015 and 2010–11 datasets, and the weights of the remaining living standards indicators were adjusted accordingly. MICS 2010-11 does not include information on whether the household owns an animal cart; accordingly, the harmonised assets indicator does not include this item.

At the subnational level, we recoded and harmonised the regions into 16 subnational regions in MICS 2024 (14 oblasts and two cities, Astana and Almaty) to align with the administrative boundaries used in the MICS 2015 and 2010–11 datasets. To support subnational harmonisation, the MICS 2024 classification mapped Abay and East Kazakhstan to East Kazakhstan; Almaty and Zhetysu to Almaty Oblast; Karaganda and Ulytau to Karaganda; and Shymkent City and Turkistan to South Kazakhstan, since the samples across all harmonised datasets are representative at this level (BNS and UNICEF, 2025; Agency of Statistics, UNICEF and UNFPA, 2016; Agency of Statistics, RK and UNICEF, 2012).

7.5 Malawi

The most recent survey for Malawi is DHS 2024. This is harmonised with MICS 2019–20, DHS 2015–16 and DHS 2010.

In the DHS 2024 datasets, anthropometric information is collected from children under 5 years of age, and females aged 15–49 years. In the other two DHS surveys, anthropometric information was collected from children under 5 years of age and women aged 15–49 years. For harmonisation purposes, we use anthropometric information only for children under 5 to align with the MICS 2019–20 datasets. The drinking water from sources such as tanker trucks and carts has been classified as improved in the latest survey. Over time, bottled water has also come to be recognised as an improved source of drinking water. Notably, the DHS 2010 datasets lack information on household computer ownership. Consequently, computers are not included in the asset indicator for harmonisation purposes.

At the subnational level, the MPI and its partial measures are harmonised for 27 district groups. To ensure consistency across DHS survey rounds, Zomba/Zomba City was recoded as Zomba district; Lilongwe/Lilongwe City as Lilongwe district; Mzuzu/Mzimba as Mzimba district, Blantyre/Blantyre City as Blantyre district; and Nkhata Bay/Likoma as Nkhata Bay (NSO, Utica International, and ICF, 2025; 2017; NSO, 2021; NSO and ICF Macro, 2011). The MPI and all related estimates in the harmonised datasets are representative at the regional level.

7.6 Mali

The most recent survey for Mali is DHS 2023–24. This is harmonised with three earlier surveys, DHS 2018, MICS 2015 and DHS 2006.

Anthropometric information was collected from sampled households in the DHS surveys for children and women aged 15–49 years. To harmonise nutrition indicators, anthropometric data for children are used across surveys to align with the MICS 2015 data. Bottled water has consistently been treated as an improved source of drinking water, consistent with the DHS 2018 and 2023–24 classifications. For the housing indicator, information on walls and roofs was not available in DHS 2006; therefore, the housing indicator across the other survey rounds excludes these two components for harmonisation purposes.

At the subnational level, disaggregated results are presented for eight harmonised regions. The Kidal region was not surveyed in the MICS 2015 due to security reasons. Therefore, to ensure full comparability between the surveys, we estimated the MPI and its partial indices for eight harmonised regions since the survey sample across all four harmonised datasets is representative at this level (INSTAT, CPS/SS-DS-PF and ICF, 2025; 2019; INSTAT, 2016; CPS et al., 2007).

7.7 Mexico

The most recent survey for Mexico is the National Health and Nutrition Survey (ENSANUT) 2024. This is harmonised with six earlier surveys, in 2023, 2022, 2021, 2020, 2016 and 2012. These are open-access, nationally representative surveys (Shamah-Levy et al., 2025; Shamah-Levy et al., 2024; 2023; 2022; 2021; 2020; Gutiérrez et al., 2012).

The sample designs differ between the five most recent surveys and the two earlier surveys, but the estimates by geographic region (urban and rural localities) are comparable because the sampling is probabilistic and the survey questions are comparable (Shamah-Levy et al., 2021, p. 28; 2022).

For harmonisation purposes, we use only anthropometric data from children under 5 years of age to compute the nutrition indicator across all datasets. Anthropometric data were collected from individuals aged 5 years and older across the datasets but were not used in the MPI estimation due to a high non-response rate and potential bias, particularly in the 2020, 2021, 2022, 2023 and 2024 datasets. For example, in the 2021 dataset, if the nutrition indicator was constructed using a combination of children under 5 years of age and selected individuals aged 5 and older, then the sample size after treating missing data would be quite small at the national level – only 64%.

The bias test compared whether those with and those without a missing value in the nutrition indicator experience other deprivations similarly. If this is the case, we may assume that the missing

nutrition value is distributed randomly. However, if those with and those without a missing value in the nutrition indicator experience other deprivations in significantly different ways, then the estimates are potentially biased. The bias analysis based on the 64% retained sample from the 2021 dataset indicates that the likelihood of being deprived in housing and sanitation, and of living in urban areas, is not the same for those with a missing value in the nutrition indicator and those without. In addition, a probit regression shows that exogenous variables are significant predictors of the risk of a missing value in the nutrition indicator.

Those most likely to have a missing nutrition value are males aged 18–59 years, living in urban areas, residing in the central regions of the country, and in male-headed households. This suggests that the missing values in the nutrition indicator are not entirely random, and that there is a high risk of bias in the national-level estimates. As such, we opted to construct the nutrition indicator using anthropometric data from only children under 5 years of age, consistently across the Mexico datasets, which resulted in a much lower sample drop, and bias analysis indicates that the missing nutrition values are random.

All seven surveys lack information on the time required to fetch water from the source; hence, the construction of the drinking water indicator is limited to the drinking water source. Similarly, all surveys do not collect information on whether the household owns a bicycle or an animal cart, so the construction of the assets indicator does not include these two items.

We do not report estimates for Mexico's subnational regions because they failed to satisfy the low retained sample principle of harmonisation. As such, Mexico was excluded from subnational estimations for the 2026 release of the global MPI.

7.8 Nepal

The most recent survey for Nepal is MICS 2024–25. This is harmonised with DHS 2022, MICS 2019, DHS 2016 and MICS 2014.

In the MICS, anthropometric data are collected for children under 5 years of age. The DHS surveys collected anthropometric data for adults and children under 5 years of age. Therefore, for harmonisation purposes, the construction of the nutrition indicator relies solely on anthropometric information for children under 5 years of age.

The MICS 2024–25, DHS 2022, MICS 2019 and DHS 2016 datasets present representative estimates in seven provinces in the country (NSO, 2026; MoH, New Era and ICF, 2023; MoHP, New ERA and ICF, 2017; CBS, 2020). These provinces replaced the earlier 14 administrative zones, which in DHS 2006 were grouped into five development regions (MoHP, New ERA and ICF,

2007), and into 13 regions in DHS 2011 (MoHP, New ERA and ICF, 2012). In MICS 2014, the number of regions grew to 15 (CBS, 2015). Since district-level data are not available in the DHS 2006 and 2011 microdata, it is not possible to map these development regions to the current seven provinces. Consequently, the global MPI tables for Nepal have never included subnational disaggregated results, hampering detailed spatial analysis and creating gaps in understanding of poverty trends over time and across subnational regions. Additionally, Nepal's seven provinces were officially established in late 2015, hence these provinces did not exist as separate territories in the 2014 MICS. However, it is possible to create these provinces using data from the primary sampling units (PSUs) that comprise the provinces in MICS 2014 (NPC Nepal and OPHI, 2018; CBS and OPHI, 2021). Therefore, to facilitate harmonised subnational MPI and related aggregates, we have removed trends from DHS 2006 and 2011 in the 2026 tables. The 2006 and 2011 estimates at the national level – which can be found in the 2025 tables and in OPHI's Data Table 6 – are comparable to the present trends and show the MPI values of 0.300 to 0.186 and incidence of 58.27% to 39.16%, respectively, with both absolute changes being significant at the 99% confidence level. Similarly, the age and area disaggregations for those datasets published previously are comparable to those published in 2026. The 2026 tables present only trends from with MICS 2014 onwards to harmonise the subnational MPI and all its partial estimates for seven provinces of Nepal, as the survey is representative at this level (NSO, 2026; MoH, New Era and ICF, 2023; CBS, 2020; MoHP, New Era and ICF, 2017; CBS and UNICEF Nepal, 2015).

7.9 Nigeria

The most recent survey for Nigeria is DHS 2024. This is harmonised with four earlier surveys, MICS 2021, DHS 2018, MICS 2016–17 and DHS 2013.

The Nigeria DHS 2024 dataset includes anthropometric measurements from all children under 5 years old, plus for women aged 15–49 in the subsample selected for men's questionnaire (p.2). All three DHS datasets (2013, 2018, and 2024) contain anthropometric information for children under 5 years of age and for females aged 15–49. MICS 2016–17 includes anthropometric information for children under 5 years of age, whereas MICS 2021 does not include any anthropometric information. Therefore, the nutrition indicator is excluded from harmonised estimates across all five survey rounds to ensure comparability with MICS 2021, with the child mortality indicator carrying the full weight of the health dimension. In DHS 2013, for sanitation facilities, we code the 'flush to don't know where' response, which indicates an unimproved sanitation facility as per the 2013 definition, as improved to match the more recent classification in the DHS and MICS data. Drinking water sources such as 'tanker truck' and 'cart with small tank' are unimproved in DHS 2013

and MICS 2016-17, but we code them as improved to match the DHS (2018 and 2024) and MICS (2021) definition of improved drinking water sources. The question classifying non-drinking water sources is not included in the DHS 2013 survey; thus, 'bottled water' was considered an improved source of drinking water. Sachet water is considered an improved source of drinking water over time. In the 2016-2017 MICS survey dataset, we noted that about 10 per cent of school-aged children, specifically those aged 6-14 years, attended non-formal school. We count these children as attending school even if it is non-formal schooling. No other indicator-specific harmonisation decision was applied across all five datasets.

At the subnational level, we estimated the MPI and its partial estimates for the 36 states and Federal Capital Territory (37 regions) of the country, as the survey sample across all five harmonised datasets is representative at this level (FMoHSW, NPC and ICF, 2025; NPC and ICF, 2019; NBS and UNICEF, 2022; 2017; NPC and ICF International, 2014).

7.10 Peru

The most recent survey for Peru is ENDES 2024. This is harmonised with the 2023, 2022, 2021, 2019, 2018 ENDES and 2012 DHS survey datasets. ENDES are publicly available, nationally representative surveys.

Anthropometric measurements were obtained from all children under 5 years of age and from females aged 12–49 years in the ENDES surveys, whereas in the DHS survey, data were collected from females aged 15–49 years. The harmonised nutrition indicator includes data solely from children under 5 and females aged 15–49. Similarly, child mortality information was provided by females aged 12–49 in the 2019 and 2018 ENDES surveys, while ENDES 2022 and 2021 and the 2012 DHS covered females aged 15–49. The harmonised child mortality indicator across the surveys therefore considers only data from females aged 15–49. No other indicator-specific harmonisation decision was applied across all seven datasets.

The sample for each survey period is representative of the 24 administrative regions and the Callao capital district. We estimated the harmonised MPI results and its partial indices for all 25 regions of the country across the surveys (INEI, 2025, 2024, 2023, 2022, 2020, 2019, 2013).

7.11 Tajikistan

The most recent survey for Tajikistan is DHS 2023. This is harmonised with DHS 2017 and DHS 2012.

The DHS 2023 dataset collects anthropometric data on children under 5 years of age and females aged 15–49 years. The harmonised nutrition indicators across all three DHS rounds include indicators for children and females. In drinking water, 'bottled water' was considered as improved source to match the DHS 2012 and DHS 2023 classification. No indicator-specific harmonisation was required across all three datasets.

We presented the harmonised MPI results and their partial indices for five regions of the country (Dushanbe, Khatlon, Sughd, Gorno-Badakhshan (GBAO) and Regions of Republican Subordination (RRP)) across the three survey datasets, as the survey sample is representative at this level (Agency on Statistics and ICF, 2025; Statistical Agency, Ministry of Health and Social Protection of Population, and ICF, 2018; Statistical Agency, Ministry of Health and ICF International, 2013).

7.12 Turkmenistan

The most recent survey for Turkmenistan is MICS 2024. This is harmonised with three earlier surveys, MICS 2019, 2015–16 and 2006.

For all four MICS surveys, anthropometric measurements were collected from children under 5 years of age (State Committee of Statistics of Turkmenistan and UNICEF, 2026; 2020; 2016; Turkmenmillihasabat, 2006). The harmonised nutrition indicator is restricted to child nutrition. MICS 2006 lacks birth history information; instead, information on child deaths was collected from eligible females in the household roster. Following the restricted condition principle, we removed birth history details from the three most recent surveys to align with the 2006 definition of child mortality data and harmonised the dataset to include a variable indicating whether any child died in the household. Similarly, the latest two surveys did not collect information on cooking fuel. Therefore, for harmonisation purposes, the cooking fuel indicator was removed from MICS 2015-16 and 2006 datasets, and the weights of the remaining living standards indicators were adjusted accordingly.

Drinking water has been harmonised to include water obtained from sources such as tanker trucks and carts, classified as improved water sources in the most recent survey. Bottled water has consistently been regarded as an improved source of water. All MICS surveys do not include information on whether the household owns an animal cart. Therefore, the harmonised assets indicator does not include these items.

At the subnational level, harmonised MPI results and their partial indices are produced for six subnational regions. Notably, MICS 2024 covers seven regions, whereas previous MICS (2006, 2015-16, and 2019) include six regions. In 2023, Arkadag was established as a new administrative

unit from territory formerly belonging to the Ahal region. For the purpose of regional harmonisation, Arkadag was therefore merged back into the Ahal region. Accordingly, subnational analysis was harmonised to six regions (Ahal, Ashgabat, Balkan, Dashoguz, Lebap and Mary), as the surveys are representative at the regional level (State Committee of Statistics of Turkmenistan and UNICEF, 2025; 2020; 2016; Turkmenmillihasabat, 2008).

7.13 Zambia

The most recent survey for Zambia is DHS 2024. This is harmonised with DHS 2018, DHS 2013–14 and DHS 2007.

Across DHS 2024, 2013–14 and 2007, anthropometric measurements were collected from children under 5 years of age and females aged 15–49 years, whereas in DHS 2018, anthropometric information was collected only from children under 5 years of age. Therefore, we include only nutrition information for children under 5 in the harmonised nutrition indicator across the four survey periods.

Drinking water obtained from sources such as tanker trucks and carts has been classified as improved sources to match the recent survey. Bottled water is consistently recognised as an improved drinking water source over time, according to DHS 2018 and 2024. The earlier DHS 2007 survey does not include information on whether the household owns a computer. Therefore, the harmonised assets indicator does not include these items, despite the availability of information on computer ownership in the latest survey.

At the subnational level, we produced disaggregated, harmonised MPI results and related indices for nine provinces (Central, Copperbelt, Eastern, Luapula, Lusaka, Northern, North-Western, Southern, and Western, combining Muchinga and Northern into Northern). Muchinga Province was created in 2011 from districts in the Northern and Eastern Provinces, comprising the original five districts. Of these five districts, Chama was transferred from Eastern Province while the other four districts (Chinsali, Isoka, Mpika and Nakonde) were transferred from Northern Province. For this analysis, we have grouped Muchinga under Northern Province, as most of its districts originated from Northern Province. Although this classification is not entirely accurate, since Chama District originated from Eastern Province, it allows us to include these areas in the subnational disaggregation (Zambia Statistics Agency, Ministry of Health and ICF, 2025; 2019; CSO and ICF, 2015; CSO and Macro International, 2009).

8. Concluding remarks

The global MPI 2026 includes harmonised levels and changes over time estimates for 89 countries. We estimated how multidimensional poverty changed by four major age categories – 0–9 years, 10–17 years, 18–59 years, and 60 years and over – in 89 countries using harmonised datasets. In addition, we published the disaggregation by two major age groups: children aged 0–17 years and adults aged 18 years and older. At the area level, we were able to produce changes in multidimensional poverty by urban or rural area for all countries. At the subnational level, we reported changes in the MPI estimates by 907 subnational regions in 81 countries.

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