The State of Mainland Tanzania's Children
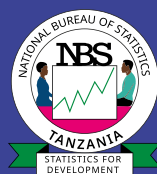
Evidence from the Mainland Household Budget Surveys (2007–2018)

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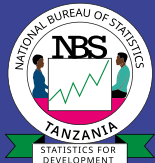
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Acronyms and abbreviations

COVID-19	coronavirus disease 2019
CIAF	Composite Index of Anthropometric Failure
DHS	Demographic and Health Survey
HBS	Household Budget Survey
ILO	International Labour Organization
MD	multidimensional
MODA	Multiple Overlapping Deprivation Analysis
MoHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children, Tanzania
NBS	National Bureau of Statistics
OCGS	Office of the Chief Government Statistician, Zanzibar
SDG	Sustainable Development Goal
TSh	Tanzanian shilling
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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Foreword

Children are the heart of our nation's future.

The State of Mainland Tanzania's Children: Evidence from the Mainland Household Budget Surveys (2007–2018) is a milestone in our commitment to children's well-being. It is the first report to comprehensively measure child poverty, considering both monetary and multidimensional aspects using data spanning over a decade.

Childhood poverty profoundly impacts development, education, job prospects, health and life choices. It's an enduring issue, shaping lives into adulthood.

This report – a collaborative effort between UNICEF and Mainland Tanzania's National Bureau of Statistics (NBS) – employs the robust Multiple Overlapping Deprivation Analysis (MODA) methodology, which delves beyond traditional measures to capture the complexity of child poverty. Our goal is to inform policies and programmes, aligning with the Sustainable Development Goals and improving the lives of Mainland Tanzania's children.

The report reflects a decade of progress across multiple dimensions of wellbeing, and highlights the need for early investments in children to develop skilled and healthy citizens of the United Republic of Tanzania. To this end, Productive Social Safety Net and other social assistance programmes, such as a universal child grant, represent effective tools to reduce inequalities and have the potential to significantly reduce multidimensional and monetary child poverty.

This report provides actionable recommendations on how to improve the collection of better data: data plays a crucial role in better understanding the needs and barriers faced by children and their families, and informs policy development and decision-makers.

Finally, this report unveils more than numbers: it shares stories of resilience, hopes and dreams, and the challenges our children face. It's a call to action, an invitation to unite in securing every child's opportunity to thrive. Together, we can forge a brighter future for our children and our nation.

Albina Chuwa
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Representative
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1 Introduction

Poverty hampers children's development, their educational outcomes and job prospects, their health and their life choices, often resulting in chronic intergenerational transmission of poverty. Ending child poverty is crucial for both fulfilling the rights of every child and the future economic and social development of Tanzania. If not effectively addressed, poverty prevents children from achieving their full potential and undermines national growth.

The transition from the United Nations' 2015 Millennium Development Goals to the 2030 Sustainable Development Goals (SDGs) reaffirms a strong commitment to tackling poverty in all its dimensions and addressing child poverty. Children can experience poverty even when their household income is above the poverty line; therefore, while monetary poverty provides a vital measure of child poverty and vulnerability, it does not sufficiently capture the nature and extent of material and social deprivations suffered by children and their families.

Measuring multidimensional (MD) child poverty effectively requires recognizing the importance of needs that are key to children's well-being beyond those reflected by monetary indicators such as income and expenditure. The so-called 'multidimensional approaches', using indicators of wider deprivation and unmet needs, are now recognized by United Nations agencies and the World Bank as important

complements to monetary measures of poverty (World Bank, UNICEF and UNDP, 2021). Researchers and policymakers have long recognized the value of combining information from monetary and non-monetary approaches to show how families can be exposed to the dangers of poverty from a position of low income and one of unmet basic needs. Such analysis uses data designed with children's particular needs in mind and holds great potential to yield a more coherent set of policy recommendations. This enhanced approach to poverty analysis enriches the discussion of poverty trends by drawing attention to aspects of poverty and well-being neglected by the simple construction of poverty indicators based on consumption expenditure, i.e., monetary poverty.

This report aims to assess the nature and extent of MD poverty and to reflect on how its patterning evolved between 2007 and 2018 using microdata from the Mainland Tanzania Household Budget Surveys (HBSs) for 2006/07, 2011/12 and 2017/18.

It begins by setting out the conceptual and measurement framework adopted for the analysis and explains (in Chapter 2) the data used, selection of key variables and development of the final index to reflect the prevalence and patterning of child MD poverty in Mainland Tanzania between 2007 and 2018. Chapter 3 begins with a presentation of trends in child poverty in Mainland Tanzania, using official estimates in National Bureau of Statistics (NBS) reports. This is then followed by the analysis of the HBS microdata to show trends between 2007 and 2018 for several

> Researchers and policymakers have long recognized the value of combining information from monetary and non-monetary approaches to show how families can be exposed to the dangers of poverty from a position of low income and of unmet basic needs.

different dimensions of deprivation (i.e., housing, communication, water and sanitation, education and health) presenting results by place of residence (urban/rural), zone and other key characteristics. Overlaps with monetary poverty are also provided. Chapter 4 is a more focused assessment of the patterning of child MD poverty in Mainland Tanzania in 2018 and includes additional information on protection and nutrition deprivations for children in 2018. Chapter 5 and Chapter 6 discuss policy suggestions and potential ways to improve MD poverty measurement using internationally validated methods and exploring how these might be incorporated into future surveys by the NBS.

This report shows how prevalence rates of deprivation for important basic needs among children have fluctuated. While the picture is one of general progress, there are areas that require attention. The United Nations Children's Fund's (UNICEF's) Multiple Overlapping Deprivation Anaylsis (MODA) framework is used to capture the deprivation of various goods and services crucial for children's survival and development (de Neubourg et al., 2012). Not all MODA indicators are available in the three HBSs, so the main contribution of this report is to provide robust and, where possible, comparable estimates of changes in MD poverty between 2007 and 2018 by drawing on the expertise of and work by Tanzania's NBS, which includes the collection and standardization of the HBSs. This means that estimates of MD child poverty may not be comparable with previous Mainland Tanzania reports that used different data sets and the wider set of indicators that were available in a given year. However, the indicators analysed allow policymakers to understand where progress has occurred and where it has stalled in the last 10 years.

1.1 Main findings

Analysis of the HBS data for 2007, 2012 and 2018 showed that MD poverty among children fell from 79 per cent in 2007 to 31 per cent in 2018. This pattern mirrored similar declines in child monetary poverty, which dropped from 37 per cent in 2007 to 30 per cent in 2018. The proportion of children who experienced both monetary and non-monetary poverty (i.e., a subset of those referred to above) fell from 34 per cent to 13 per cent in 2018.

There were evident disparities between zones of Mainland Tanzania. Roughly 35 per cent of all children in the Lake Zone are either multidimensionally or monetarily poor, compared to 20 per cent in the Coastal Zone. Children in rural areas were almost always more likely to be monetarily and multidimensionally poor. Children in households where the head reported not receiving any education were significantly more likely to be monetarily and multidimensionally poor.

Compared to 2007, children in Mainland Tanzania in 2018 benefited from considerable improvements. They were more likely to live in homes made from appropriate materials (74 per cent deprived in 2007 to 58 per cent deprived in 2018) and to have access to an improved toilet (from 96 per cent deprived in 2007 to 78 per cent deprived in 2018), less likely to live far away from a source of water (a decrease in deprivation from 28 per cent to 14 per cent) and more likely to have access to an improved one (from 50 per cent to 33 per cent without access). Their ability to communicate with the outside world via mobile phones also increased considerably (communication deprivation decreased from 76 per cent in 2007 to 20 per cent in 2018). Younger children (7–12 years old) were more likely to be enrolled in school, less likely to be behind in education and had better literacy levels.

However, a significant proportion of Tanzania's children remained (in 2018) exposed to deprivation of important basic needs. Overcrowding in housing is very widespread and has remained unchanged between 2007 and 2018, affecting 71 per cent of children. Moreover, although there have been improvements in all dimensions analysed, levels of water and sanitation and housing deprivation are still very high, with 78 per cent of children living in dwellings without improved sanitation and a third unable to access improved water sources throughout the year. Progress in the education dimension for older children is also unclear with some evidence that enrolment, attendance and literacy have declined among children above the age of 12 years.

Compared to 2007, children in Mainland Tanzania in 2018 benefited from considerable improvements.

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2 Conceptual and measurement framework

Conventional monetary measures of poverty that use either household income or expenditure data are recognized to 'miss' several important 'dimensions' or aspects of poverty that people worldwide are exposed to daily and that affect their quality of life and living standards. These aspects include elements that cannot easily be monetized, such as participation in important customary activities and social and caring obligations.

Monetary measures are also limited in their capacity to reflect the lived experience of children, since they are designed to reflect adult poverty. Following near global ratification of the 1989 United Nations Convention on the Rights of the Child (UN, 1989), the 2006 United Nations General Assembly's agreement on an international definition for child poverty, and SDGs, which call for poverty 'in all its dimensions' to be tackled with urgency for children and adults, countries and agencies like UNICEF and the World Bank are required to rethink how child poverty should and can be assessed, reflected and located within the policy space (World Bank, UNICEF and UNDP, 2021).

As part of this reconsideration, effort has gone into developing indicators and measures that are designed with the needs and rights of children in mind. UNICEF's 2007 Global Study of Child Poverty and Disparities initiative (UNICEF, 2007) was built on the pioneering work of sociologist Professor Peter Townsend (see Gordon et al., 2003). His theory of relative deprivation identified people as poor when

The MODA tool has been used successfully by UNICEF's Office of Research to examine MD poverty among children.

they lack 'sufficient command over resources' to participate in the customary norms and lifestyles of their societies at the time. This concept underpins most internationally accepted definitions of poverty and implies that poverty changes over time and across populations (Townsend and Gordon, 2002) owing to its relative nature.[1] This concept of poverty has seen poverty measures developed at the individual rather than household level and provided policymakers with disaggregated, 'decomposed' data relevant to programme development and delivery.

UNICEF's Office of Research built on the success of the Global Study to develop its own child MD poverty measurement tool, MODA. MODA examines both the prevalence and overlap of several child-relevant deprivations applicable across the life course, such as food/nutrition, education, health (care), information, water and sanitation, housing and other country-specific deprivation dimensions. Importantly, where data permit,[2] MODA can be used to examine the overlap between monetary and non-monetary poverty indicators.

The MODA tool has been used successfully by UNICEF's Office of Research to examine MD poverty among children. This study employed this methodology for Mainland Tanzania, using existing data from the HBSs. There are, of course, other methodologies that have been developed in recent decades to focus on the measurement of child poverty, including the Bristol Deprivations Approach (Gordon et al., 2003) and the Oxford Poverty and Human Development Initiative's Multidimensional Poverty Index, each with their strengths and limitations (e.g., not incorporating

measures of monetary poverty or questions about the relative weights accorded to different dimensions and sub-components).[3] Previous work on child poverty in Zanzibar and Mainland Tanzania has used the MODA tool effectively (NBS and UNICEF, 2019), and this report – using the most up-to-date survey data – continues this tradition.

The benefits of MODA include the following:
- It is explicitly designed to reflect child poverty and (importantly) is situated within UNICEF's conceptual framework of poverty as an infringement of children's rights.
- It has been tried and tested and used successfully in over 50 countries.[4]
- The results it produces are easy to understand and explain to policymakers, journalists and the general public.
- It generates policy-relevant information for planners, by identifying the presence and depth of need among children, with the child as the unit of analysis.
- The framework has already been piloted in Mainland Tanzania using 2014/15 National Panel Survey data (NBS and UNICEF, 2019) and Zanzibar 2014/15 HBS data (OCGS and UNICEF, 2019).

The HBSs contain sufficient information to compute comparable indicators to reflect the necessary dimensions required to conduct a comprehensive and longitudinal MODA for Mainland Tanzania. Importantly, the surveys include household income and expenditure data, making it possible to analyse the overlaps between household monetary poverty and non-monetary deprivations over time.

The MODA framework has been used to identify deprivation indicators most applicable to children in Mainland Tanzania, reflecting their needs and rights (e.g., a decent standard of living, education and health care). This report follows on earlier studies of MD child poverty in Mainland Tanzania and Zanzibar using data from the Demographic and Health Surveys (DHSs) and earlier rounds of the HBSs. For example,

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1   This concept is reflected in the definitions of absolute and overall poverty adopted by over 100 nations at the 1995 World Summit on Social Development and has been used effectively by UNICEF, the European Union and a host of other development partners to generate realistic, easily understood indicators of basic needs deprivation among children and their families.

2   That is, researchers have often used the MODA approach with household survey data from the Demographic and Health Surveys and UNICEF's Multiple Indicator Cluster Surveys; these platforms rarely, if ever, also collect data on monetary poverty.

3   See Alkire and Roche (2012). For further discussion of the Multidimensional Poverty Index and its use, see Nájera Catalán (2019), Nájera Catalán and Gordon (2020) and Santos and Villatoro (2020).

4   For example, Chzhen et al. (2016), Ferrone and de Milliano (2018, de Milliano and Plavgo (2018) and Shabir and Ur Rahim (2017).

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Minujin and Delamonica (2012) used a basic needs deprivations approach taking children as the unit of analysis in the 2004/05 Demographic and Health Survey (DHS) (NBS and ORC Macro, 2005), and found that just under two thirds (63 per cent) of children in Zanzibar were severely deprived of one or more basic human needs, compared to 88 per cent of children in Mainland Tanzania. If a different threshold (e.g., deprivation of two or more basic needs) is used, then the estimate of child poverty in Zanzibar falls to 49 per cent and 72 per cent in Mainland Tanzania. The most prevalent deprivations identified by NBS and UNICEF in Mainland Tanzania in 2014 (NBS and UNICEF, 2019), using the National Panel Survey, were housing and sanitation, in which almost 90 per cent of children were deprived.

The indicators and threshold used in this report to reflect MD child poverty may differ slightly from previous studies, which explains why the estimates presented here may differ from earlier ones. This is expected from methodologies like MODA that do not have fixed criteria on which indicators should be used or how many dimension deprivations (e.g., one or two or three or more) identify a child as multidimensionally poor. Therefore, the key messages for policymakers can be derived from the detailed analysis of each dimension and indicator and the suggestions for further data collection. All indicators in this report have been based on good social science and statistical principles and are in keeping with international guidance issued by United Nations agencies tasked with reporting on Sustainable Development Goal (SDG) target 1.2.2 (World Bank, UNICEF and UNDP, 2021). Furthermore, this report expands previous analyses by presenting estimates of both monetary and MD child poverty, as well as their overlap and changes between 2007 and 2018.

2.1 Data and methods

Data used, variable selection and final MODA composition

The MODA presented in this report has been explicitly designed to be as comparable over time as possible, using the Tanzania HBSs for the years 2006/07, 2011/12 and 2017/18. These surveys are the most authoritative (and up-to-date) data on living standards and household incomes in Mainland Tanzania, providing an excellent base with which to assess monetary and non-monetary poverty.

Following in-depth examination of the relevant variables, and their relationships to children's rights and basic needs, and inputs from the NBS and stakeholders at an inception meeting, it was decided to reflect potential deprivation across seven possible dimensions, i.e., (i) housing, (ii) water and sanitation, (iii) communication, (iv) protection, (v) education, (vi) nutrition and (vii) health, and to focus particularly on five of these dimensions – housing, water and sanitation, communication, education and health – whose underlying data are comparable across time.

Each dimension included between one and four sub-component indicators, and deprivation in any of these sub-components was sufficient to consider a child being deprived in that dimension. Sub-components were based on a combination of individual- and household-level variables:

1. **Housing**: Household-level indicators on overcrowding and dwelling construction materials.[5]
2. **Water and sanitation**: Household-level indicators on water source, time to water, and form of sanitation.
3. **Communication**: Household-level indicators on whether households have a modern means of communication, including landline or mobile telephones. This dimension reflects indicators related to Goal 6 of the SDGs (United Nations, n.d.).
4. **Education**: Individual-level indicators on school enrolment, attendance, literacy and grade for age.
5. **Health**: Individual-level indicator of whether a sick child received treatment.[6]
6. **Protection**: Individual-level indicators on birth registration and child labour (*for 2018 only*).
7. **Nutrition**: Household-level indicators of food insecurity, meal frequency and dietary diversity (*for 2018 only*).

In a few instances, some sub-component indicators were not available for an individual year, but on the whole, comparability was good for the final indicators selected (Table 1, page 15).

Indicators based on individual-level data (e.g., education) were computed for the appropriate age groups,[7] and household-level variables were assigned to all household members. Missing data represented a small percentage of all eligible responses and were therefore not considered an issue. Indicators were grouped into dimensions (e.g., education). In the case of the water and sanitation dimension, these indicators were grouped together, in line with SDG 6, as this will aid reporting progress in the future. To err on the side of caution, all respondents with missing data were counted as not deprived when counting the number of indicator deprivations in each dimension (leading to conservative estimates of deprivation). Following previous MODAs, an equal weighting approach was adopted, where a child was categorized as deprived in a given dimension if he or she showed deprivation in any of the dimension indicators. The threshold for determining multidimensionally poor children was set at three or more dimensions. Results using different thresholds were inspected and the overall results remained consistent (i.e., Mainland Tanzania experienced decreases in MD poverty).

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5 The housing dimension indicator has, in the past, included the type of cooking fuel; however, given almost universal prevalence of the use of polluting fuels across Mainland Tanzania, it was decided to exclude cooking fuel from the indicator, to allow for some differentiation of other housing deprivation elements across socioeconomic groups.

6 The data available in the HBS that reflect 'health deprivation' in a meaningful sense are limited; other sources of data, like the DHS, which include information about children's contact with public health services, for example, through receipt of basic vaccinations, may be more reliable to understand 'health deprivation' in a fuller, more comparable sense. In 2015/16, DHS data showed that 75 per cent of children aged 12–23 months in Tanzania received all eight vaccinations recommended by the World Health Organization (WHO) Expanded Programme of Immunization. Around half the number of children who reported having diarrhoea prior to the survey received treatment in the form of either oral rehydration solution or recommended home fluids. See <https://dhsprogram.com/pubs/pdf/FR321/FR321.pdf>.

7 All children of an age outside the relevant age bracket of age-specific indicators are considered not deprived. This means that with regard to education, young children are set as not deprived as they may be too young to have started school. This is primarily due to the lack of reliable data on preschool education and may understate the nature and extent of education deprivation among the very young. Similarly, all children younger than 16 years are considered not deprived in the school attendance indicator.

Table 1: Dimensions and sub-components for Mainland Tanzania MODA

Dimension	Indicator	2007	2012	2018
Housing	**Overcrowding** Households with a room occupancy of more than two adult equivalents per room	✓	✓	✓
	Building materials Dwellings with floors made of earth or palm bamboo; roofs of mud, grass or plastic; or walls of mud or grass	✓	✓	✓
Water and sanitation (SDG 6)	**Water source** Households using unimproved water sources (e.g., rivers/dams/lakes, unprotected wells and/or springs)	✓	✓	✓
	Time to water The time taken to collect water for the household (in dry or wet season) is more than 30 minutes	✓	NA	✓
	Sanitation facility Households using unimproved sanitation facilities (e.g., no facilities, seashore/bushes, open pit latrines without slabs) or sharing facilities with other households	✓	✓	✓
Communication	**Form of communication** Households have access to neither landline nor mobile telephone	✓	✓	✓
Education	**School enrolment** Children of school age (7–17 years) were not currently attending school	✓	✓	✓
	School attendance Older children (16–17 years) have never attended school	✓	✓	✓
	Literacy[8] Children of school age (9–17 years) reported not being able to read and write in any language or were not able to read a full sentence in either English or Swahili if tested	✓	✓	NA
	Grade for age Children (9–17 years) were more than two years over the regular/expected age for their current grade	✓	✓	✓
Health	**Untreated illness** A child who had a recent illness[9] failed to receive medical care or advice	✓	✓	✓
2018 only				
Nutrition (2018 only)	**Meal frequency** Households usually consumed fewer than three meals a day	NA	NA	✓
	Dietary diversity Households consumed fewer than 3 out of 10 food groups	NA	NA	+
Protection (2018 only)	**Birth registration** A child's birth had not been formally registered, and/or parents reported that they did not have birth certificates for their children	✓	✓*	✓
	Child labour A child (under 18 years of age) was economically active or absent from school due to having to work[10]	✓	✓*	+

Note: Nutrition and protection dimensions were not included in the MODA 2007–2018 trend analysis, but are discussed for 2018 in Chapter 5.
* Improbable value considering estimates for 2007 and 2018
+ Improbable and very low value (less than 2 per cent)
NA = not available
Source: Authors

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8   The literacy indicator is not strictly comparable between 2012 and 2018, as no data on literacy (question S6_2) are available for children below the age of 14 years in 2018.

9   These included illnesses like malaria, diarrhoea, anaemia, pneumonia, eye or skin diseases and accidents.

10 This is likely to underestimate child labour because of the limited information on the nature of work and unpaid work in the HBS. Child labour as well as child labour conditions can be further investigated using the Tanzania Integrated Labour Force Survey, which in 2006 (Tanzania Ministry of Labour, Employment and Youth Development et al., 2007) and 2014 (Department for International Development et al., 2015) included the specialized module known as the Child Labour Survey. Further recommendations are provided in Appendix 1.

The percentage of children who experienced one or more deprivations decreased from 99 per cent in 2007 to only 94 per cent in 2018, which suggests that MD poverty is still very prevalent in Mainland Tanzania, whereas the percentage of children who experienced deprivations across multiple dimensions (three or more) decreased considerably.

Nevertheless, the percentage of children who experienced one or more deprivations decreased from 99 per cent in 2007 to only 94 per cent in 2018, which suggests that MD poverty is still very prevalent in Mainland Tanzania, whereas the percentage of children who experienced deprivations across multiple dimensions (three or more) decreased considerably (from 79 per cent in 2007 to 31 per cent in 2018). This finding is discussed further in the next section, and individual dimensions and indicators are inspected to show which indicators are driving dimension deprivation.

Information on consumption was also used to calculate the percentage of children in monetary poverty and to explore the relationship between monetary poverty and MD poverty. Consumption, calculated by the NBS for each Mainland Tanzania HBS, includes everything purchased and consumed over 28 days in sampled households. This covers records on food and non-food items that were purchased, as well as food that was grown by the household. This was then converted into Tanzanian shillings (TZS), adjusted by household size and age and sex of household members,[11] and then used to measure the overall economic welfare. The NBS

uses two different poverty lines: basic needs poverty (generally referred to as poverty or monetary poverty) and food poverty (also referred to as extreme poverty). The poverty line for food poverty is lower than the one for monetary poverty, so by definition all food-poor households and all children within them are also (monetarily) poor. The analysis in this report focuses on basic needs poverty, calculated using NBS updated official monetary poverty thresholds. All selected indicators showed a positive association with monetary poverty, meaning that children in monetary poverty were more likely to be deprived of every single indicator, as shown in Figure 1 (page 17). These associations were tested using all three HBS surveys to provide a larger sample size and were all statistically significant at the 5 per cent level, with the exception of the health dimension indicator and the education dimension's school attendance indicator, both of which, however, showed a clear negative relationship with consumption quintiles, meaning that households with higher levels of consumption are less likely to be deprived.

Given recent changes in the composition and number of regions in Tanzania, this report also presents results using the following harmonized geographical zones for Mainland Tanzania:[12]

- **Coastal** – Dar es Salaam, Morogoro, Pwani, Tanga
- **Northern Highlands** – Arusha, Kilimanjaro, Manyara;
- **Lake** – Geita, Kagera, Kigoma, Mara, Mwanza, Shinyanga, Simiyu, Tabora
- **Central** – Dodoma, Singida
- **Southern Highlands** – Iringa, Katavi, Mbeya (and Songwe in 2018), Njombe, Rukwa
- **South** – Lindi, Mtwara, Ruvuma.

Challenges in the selection of indicators

The final list of indicators in Table 1 (page 15) is the result of a long process which involved input and consultation with the NBS to provide robust and comparable estimates of changes in indicators between 2007 and 2018. Comparable data availability was the main limiting factor. Appendix 2 provides further details on the indicators that could not be created for this analysis because of data limitations.

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11 To account for the fact that, for example, a single-person household requires less consumption than a household with two adults and three children.

12 Regional maps are also provided for 2018.

This thorough exploration of the data comparability across the three HBS data sets was only possible with the advice and collaboration of NBS staff, who were an invaluable resource throughout the process. In Chapter 6 and in Appendix 1, dimension-specific knowledge and data gaps are identified and suggestions are made for additional indicators that will inform future data collection by the HBS to obtain further insights into the extent and causes of MD poverty.

Figure 1: Percentage of children deprived of each dimension indicator by monetary poverty status in Mainland Tanzania, 2007, 2012 and 2018 (pooled samples)

Legend: ■ Not monetarily poor   ■ Monetarily poor

Communication

Communication	Not monetarily poor	Monetarily poor
Communication	37	62

Education

	Not monetarily poor	Monetarily poor
Attendance	34	35
Enrolment	14	17
Grade for age	33	49
Literacy	9	12

Health

	Not monetarily poor	Monetarily poor
Sick	6	7

Housing

	Not monetarily poor	Monetarily poor
House material	59	83
Overcrowding	64	79

Water & sanitation

	Not monetarily poor	Monetarily poor
Sanitation	84	95
Water source	40	48
Time to water	20	25

Percentage

Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

3 Trends in monetary and MD child poverty

3.1 Child monetary poverty in Mainland Tanzania

This initial section presents what is known about the extent and patterning of child monetary poverty in Mainland Tanzania between 2007 and 2018. The monetary poverty data presented here relate to basic needs poverty and are calculated from HBS data for the 2007, 2012 and 2018 rounds.

The official food poverty line (TSh33,748 per adult per month in 2018) is based on the cost of a food basket that delivers 2,200 calories per adult per day. This is considered adequate to meet the energy needs for maintaining a healthy life and carrying out light physical activity. Consumed quantities are converted into calories using calorie conversion factors and valued at national median prices. The basic needs poverty line, referred to as the monetary poverty line in this report, also allows for basic non-food goods and was TSh49,320 in 2018 (NBS, 2020). Between 2007 and 2018, child monetary poverty decreased from 37 per cent to 30 per cent (Table 2).

Table 2: Basic needs child monetary poverty headcount rate in Mainland Tanzania, 2007–2018

	2007	2012	2018
Percentage children	37	32	30

Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

Between 2007 and 2018, child monetary poverty decreased from 37 per cent to 30 per cent.

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Disaggregating child monetary poverty data – geography

Figure 2 shows the changes in rates of child monetary poverty between 2007 and 2018 across zones of Mainland Tanzania, calculated from HBS data. It is apparent that rates of child monetary poverty behaved in several ways. Firstly, there were zones with a consistent decline over the decade (Central and South). Secondly, in the Southern Highlands, a decline between 2012 and 2018 followed an increase between 2007 and 2012, meaning that little overall improvement occurred over the decade. Lastly, poverty in some zones stalled or increased in 2018, following a decline between 2007 and 2012 (Coastal, Northern Highlands and Lake). Overall, the Central Zone saw the largest overall decline, while the Southern Highlands zone experienced little or no change.

When the data are disaggregated by place of residence (Figure 3, page 21), i.e., Dar es Salaam, other urban areas and rural areas, distinct differences emerge. Child monetary poverty rates fell across all areas between 2007 and 2018, but progress was mixed. Poverty nearly halved in Dar es Salaam over the period, but between 2012 and 2018 it effectively doubled, from 5 per cent to 10 per cent. In other urban areas and in rural areas poverty rates were higher, but these areas witnessed sustained declines over the decade.

Figure 2: Child monetary poverty headcount (percentage) by zone, 2007–2018
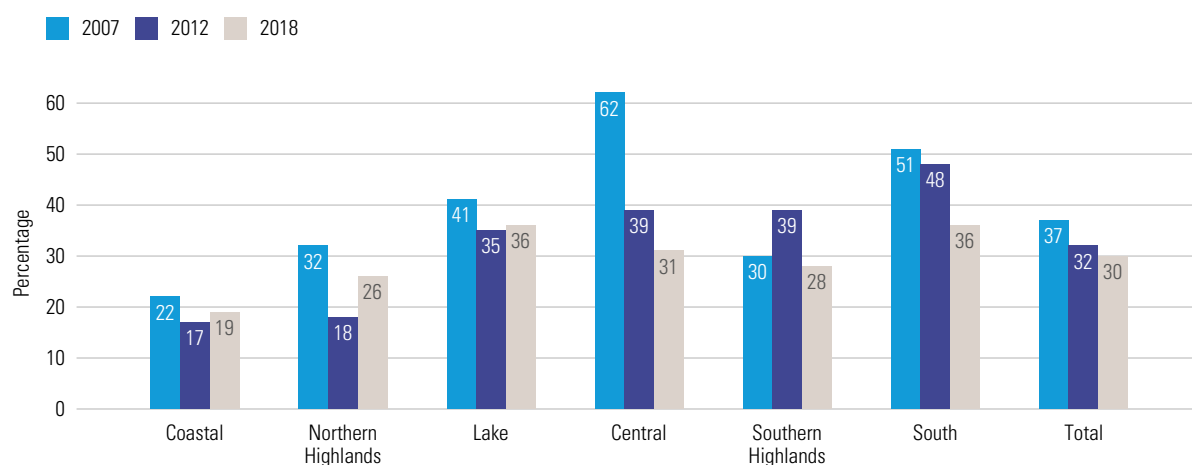
Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

Figure 3: Child monetary poverty headcount (percentage) by place of residence, 2007–2018
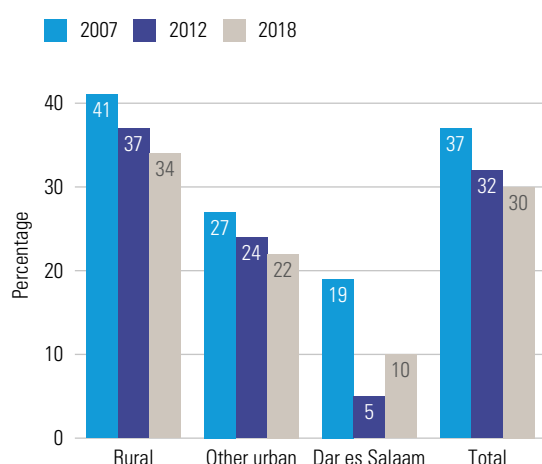
Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

Figure 4: Child monetary poverty headcount (percentage) by sex, 2007–2018
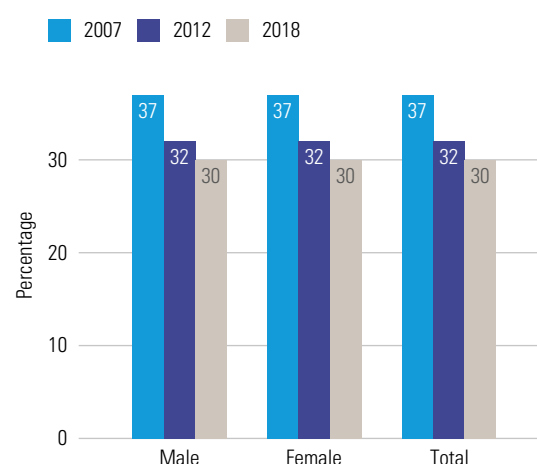
Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

Disaggregating child monetary poverty – child and household characteristics

While geographic differences are apparent, they are less noticeable at the levels of child and household characteristics. Across each round of the HBS, gender differences in basic needs poverty between children were negligible, with similar reductions over the 2007–2018 period for boys and girls (Figure 4).

Figure 5 shows rates of monetary poverty in different age groups for children. In general, the youngest children had the lowest rates of poverty and older children had higher rates across the three survey years. This figure illustrates part of the problem of using monetary poverty as an indicator of child poverty since it fails to reflect the different needs of children across the different stages of their life course. Older children may need items that require a greater share of household resources (e.g., materials for school or socializing with their peers), while younger children's needs centre around visits to the health-care centre, early childhood education and more basic items such as nappies and milk powder. These important differences cannot be adequately reflected or accounted for by monetary measures.

When data on child monetary poverty are presented according to the education level and sex of the head of the household, much larger group differences are observed.

Figure 5: Child monetary poverty headcount (percentage) by age group, 2007–2018

Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

In most analyses of poverty, the education of the head of household is taken as a proxy measure of socioeconomic status, with the expectation that more-educated household heads are likely to have secured a better job and thus resources for the household, thereby reducing the household's chance of being poor. As Figure 6 (page 22) shows, in 2018, there was a clear gradient in poverty rates, with those children in households where the head had more than

a primary education much less likely to be monetarily poor (9 per cent) compared to those whose head had no education (39 per cent). Over time, the greatest relative reductions in child poverty rates were among those households where the head had more than a primary education (47 per cent decrease, compared

Figure 6: Child monetary poverty headcount (percentage) by education of head of household, 2007–2018

Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

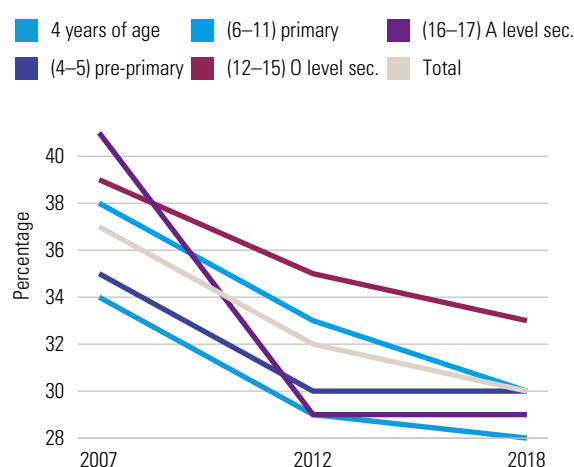**Figure 7:** Child monetary poverty headcount (percentage) by sex of head of household, 2007–2018
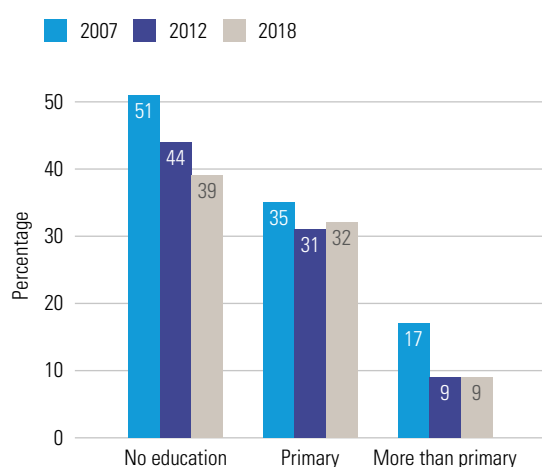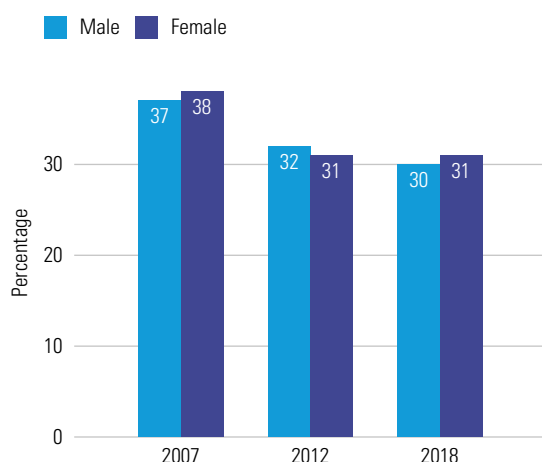

Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

to a 24 per cent decrease for those where the head had no education). Overall, the pattern of child monetary poverty and education levels holds as one would expect. It is worth noting that for children in households whose heads reported no education there was a sustained decline in child monetary poverty across the decade, but not so for children whose household heads reported either primary or more than primary education, where reductions in poverty levelled off after 2012.

Differences in child poverty in terms of the sex of the head of household (Figure 7) were not pronounced across each survey year.

Good progress was made in reducing child monetary poverty in Mainland Tanzania between 2007 and 2018, with a relative decline of 23 per cent. When the data are disaggregated by place of residence, zone and household- or individual-level characteristics, interesting patterns of progress, regress and inertia become apparent.

Policymakers in different ministries, such as health, education and housing, need clear information on how and where people lack access to key services. Poverty in its very nature is 'multidimensional' and, as such, measures of MD poverty need to be policy-relevant and actionable. Data on how many children are out of school, not receiving adequate health care or living in households lacking access to safe water and sanitation are of more direct use than information on household-level estimates of resources falling under an arbitrary threshold that may not adequately explain why people lack access to basic services. More importantly, such measures and thresholds often fail to consider the needs of children and, as such, misrepresent the nature and extent of child poverty in Mainland Tanzania today. The following section sets out a measure of MD child poverty developed with children as the unit of analysis and their needs at the forefront of the design of indicators.

3.2 Child MD poverty in Mainland Tanzania

Figure 8 (page 23) shows that both monetary and MD child poverty have decreased substantially between 2007 and 2018 in Mainland Tanzania. The percentage of children who experienced deprivation in three or more dimensions (up to a

total of five) dropped from 79 per cent to 31 per cent between 2007 and 2018. Figure 8 also shows the percentage of children who experienced monetary poverty, which followed a similar trajectory to that of children's experience of MD poverty, decreasing from 37 per cent to 30 per cent in 2018. The percentage of children who experienced joint MD and monetary poverty also dropped from 34 per cent to 13 per cent.

Although this is a remarkable change over a period of just 10 years, it is important to point out that these overall findings show that 31 per cent of all children are still experiencing deprivation in at least three out of five dimensions. These dimensions aim to measure children's basic needs but, as argued in this report, generally underestimate the level of deprivation in the health dimension. Moreover, the MD poverty headcount, which includes all comparable dimensions between 2007 and 2018, does not include protection and nutrition dimensions and therefore underestimates MD poverty.

Despite these measurement shortcomings, roughly a third (31 per cent) of all children are experiencing three or more deprivations simultaneously, which should be a matter of great concern. Moreover, it is important to note that, although there have been reductions in MD poverty using a cut-off of three or more deprivations, the vast majority (94 per cent) of children in Mainland Tanzania in 2018 experienced deprivation in at least one of the five dimensions explored in this report (Table 3), regardless of whether they lived in households considered monetarily poor.[13]

Table 3: Trends in the percentage of multidimensionally poor children by different thresholds, 2007–2018

| Year | Number of dimensions | | | |
	One or more	Two or more	Three or more	Four or more
2007	99	95	79	29
2012	97	87	49	12
2018	94	79	31	5

Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

Figure 8: Trends in MD and monetary poverty, 2007–2018
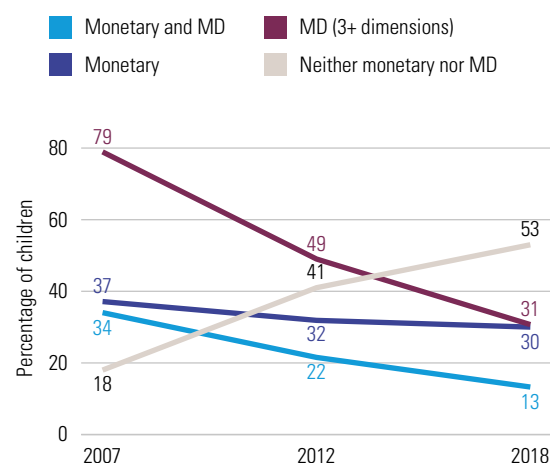
Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

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13 Specifically, 99 per cent of children living in monetarily poor households experienced one or more deprivations, compared to 92 per cent of children who lived in households above the monetary poverty line.

Finally, although this decrease in poverty has been witnessed across zones, the situation varies considerably, with roughly 35 per cent of all children in the Lake Zone either multidimensionally or monetarily poor in 2018, compared to 20 per cent in the Coastal Zone (Figures 9–15 below).

Figure 9: Percentage of poor children by zone in Mainland Tanzania, 2018
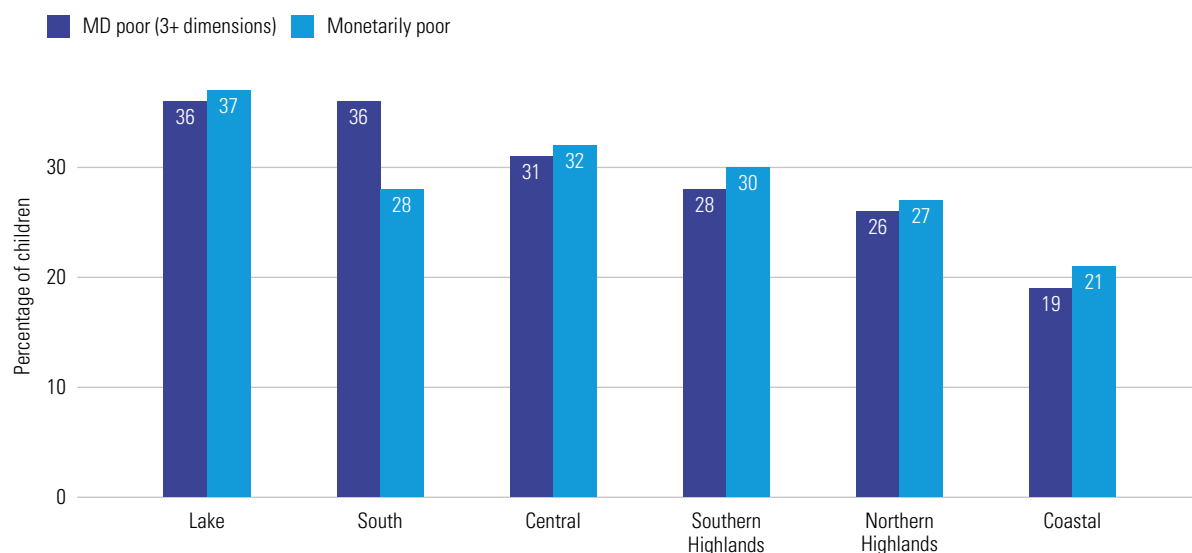
Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

Figure 10: Percentage of children in Mainland Tanzania in MD poverty (three or more dimensions), by zone, 2018
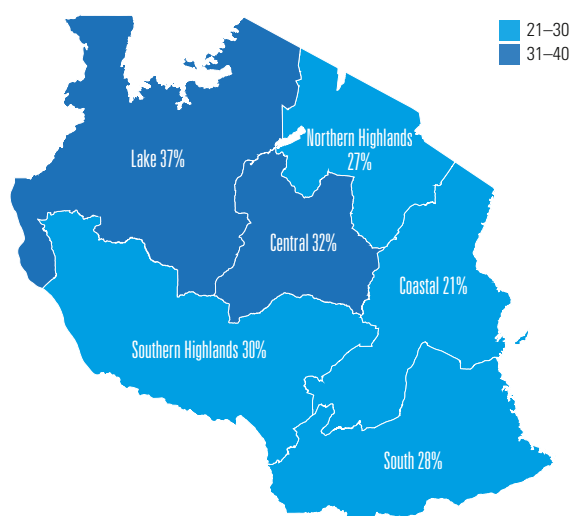
Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

Figure 11: Percentage of children in Mainland Tanzania in MD poverty (three or more dimensions), by region, 2018

Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

Figure 12: Percentage of children in Mainland Tanzania in monetary poverty, by zone, 2018

Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

Figure 13: Percentage of children in Mainland Tanzania in monetary poverty, by region, 2018

Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

Figure 14: Percentage of children in Mainland Tanzania in MD and monetary poverty, by zone, 2018

Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

Figure 15: Percentage of children in Mainland Tanzania in MD and monetary poverty, by region, 2018

Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

Figure 16: Prevalence and overlap between child monetary and MD poverty (three or more dimensions) in Mainland Tanzania, 2018

53%
Not poor

17%
Monetary

13%
Monetary
and MD

17%
MD only

Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

Figure 17: Trends in deprivation by dimension in Mainland Tanzania, 2007–2018

■ 2007 ■ 2012 ■ 2018

Percentage

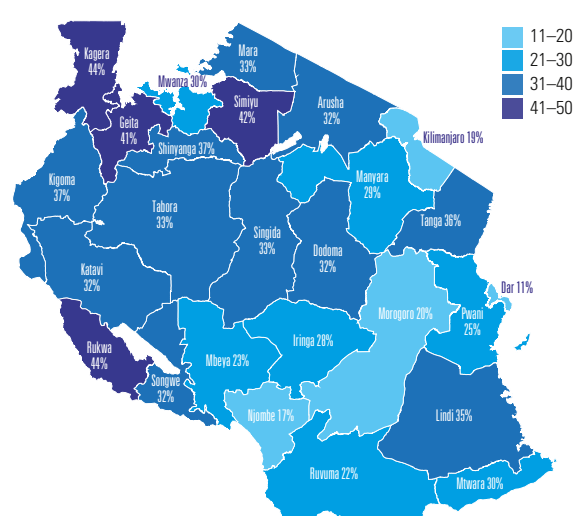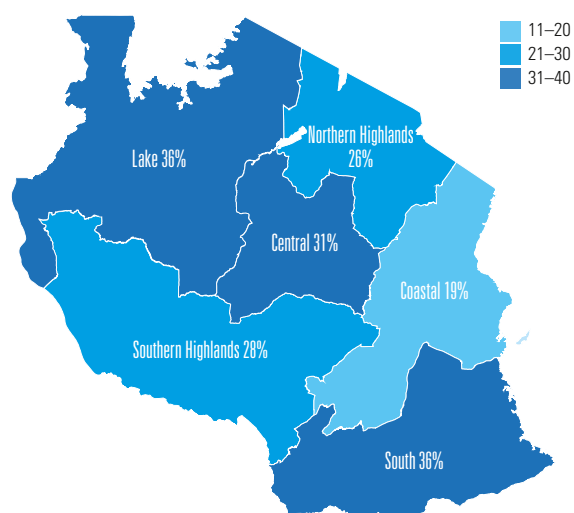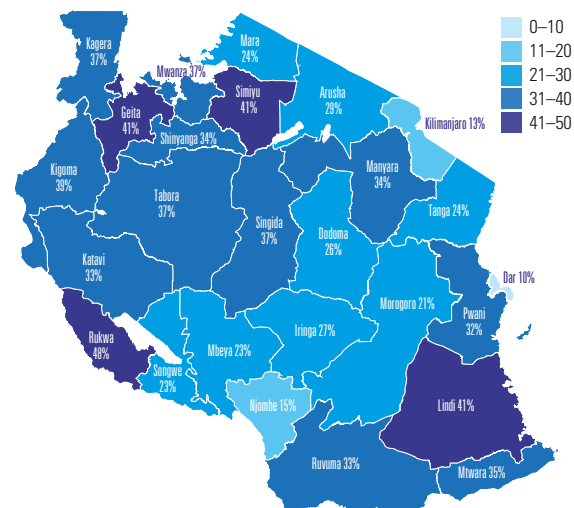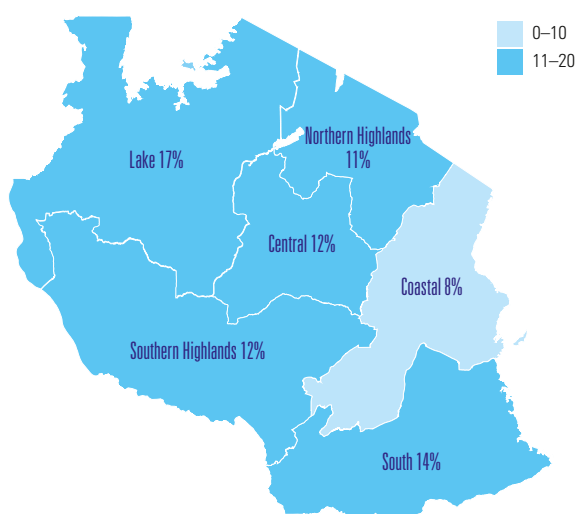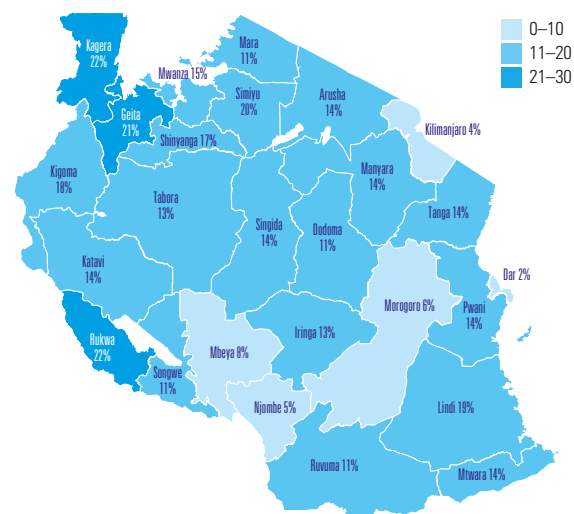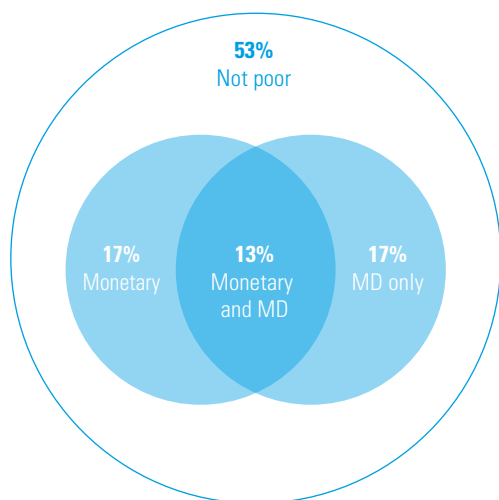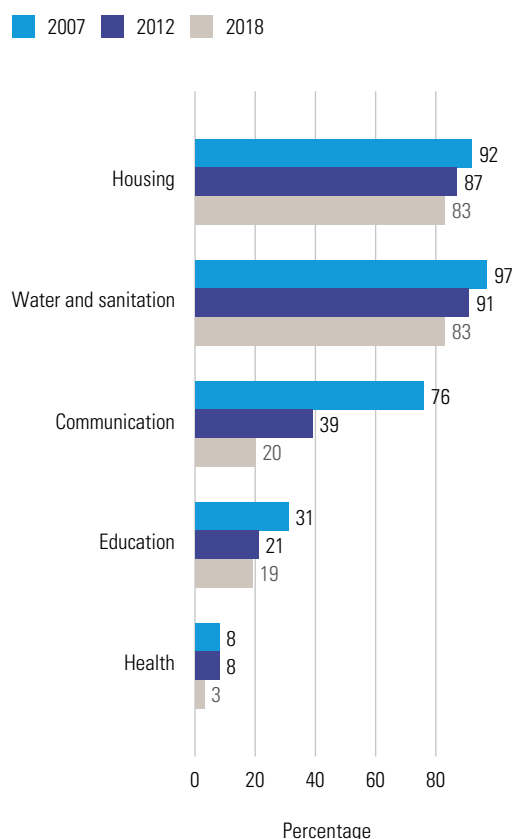Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

Although the overall reduction in poverty is clear when using the Mainland Tanzania official poverty line (monetary poverty) and the MD poverty threshold (3 or more out of five dimensions), almost half of all children (47 per cent) experienced either only monetary poverty or only MD poverty, or a combination of both, as shown in Figure 16. Thirteen per cent of children experienced both monetary and MD poverty and these are the most vulnerable in Mainland Tanzania. As Figure 8 (page 23) shows, the percentage of children jointly affected by monetary and MD poverty has decreased considerably, from 34 per cent in 2012 to 13 per cent in 2018, and the percentage of children who experienced neither has increased from 18 per cent in 2012 to 53 per cent in 2018. Furthermore, the percentage of children who are only multidimensionally poor or only monetarily poor has also decreased, from 48 to 34 per cent, over this period.

3.3 Overall trends by dimension

Figure 17 shows how the prevalence of deprivation across each dimension has changed over time in Mainland Tanzania, while Figure 18 (page 27) shows trends in the underlying dimension-specific indicators and whether the changes between 2007 and 2018 are statistically significant. The dimensions with the highest deprivation in Mainland Tanzania in 2018 are housing (83 per cent) and water and sanitation (83 per cent). The most marked improvement is observed in the communication dimension, which decreased from 76 per cent in 2007 to 20 per cent in 2018. Rates of health deprivation fell from 8 per cent in 2007 to 3 per cent in 2018, suggesting widespread availability of health care for children in need in Mainland Tanzania, but also the need to monitor this dimension alongside other indicators, such as anthropometric failure, in future HBSs. These estimates are very likely to underestimate health deprivation as they do not consider whether children were able to visit a health facility, dentist, optician or specialist, or whether they were able to obtain the required medication to treat the illness. The survey also lacks information on whether children received essential vaccines such as those prescribed in SDG 3 on good health and well-being.

Figure 18: Trends in deprivation prevalence by indicator in Mainland Tanzania, 2007–2018
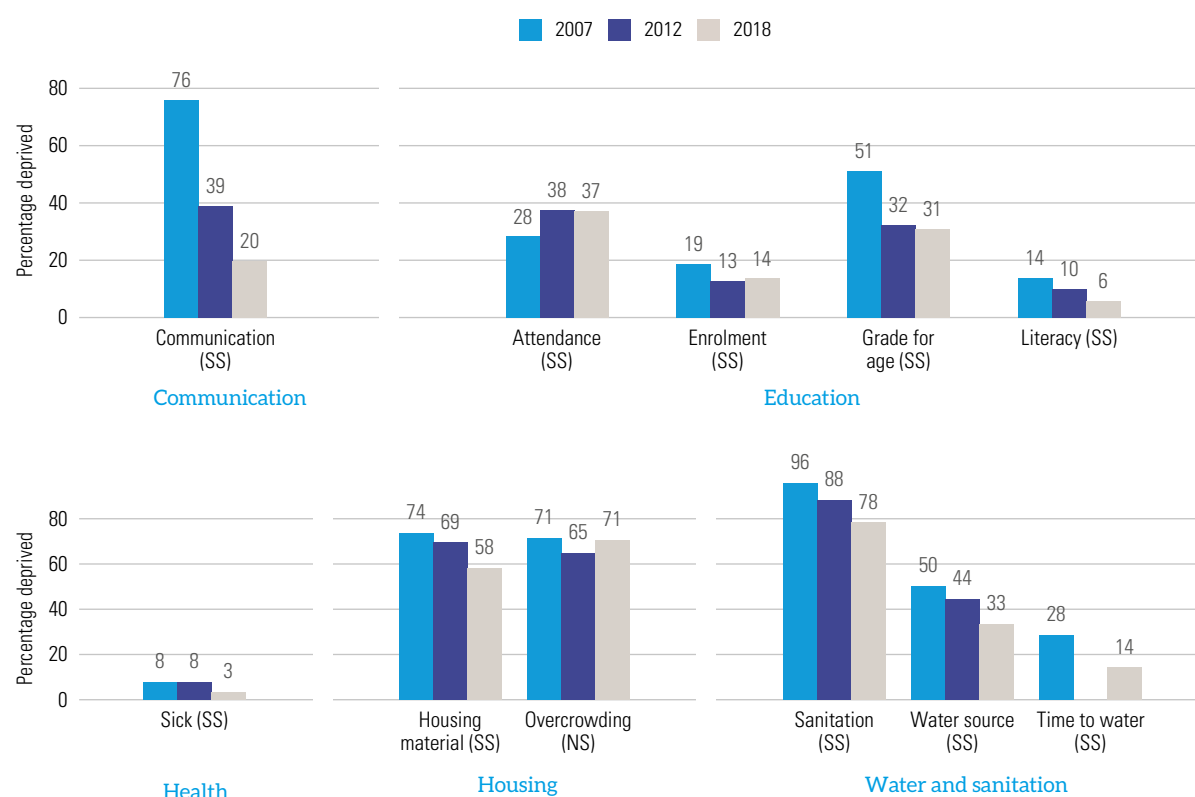
Note: SS = Statistically significant change between 2007 and 2018 (p ≤ 0.001); NS = Not significant
Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

Progress has also been made in the education dimension, where deprivation fell from 31 per cent in 2007 to 19 per cent in 2018. This overall decrease is due to decreases over the period 2007 to 2018 in the percentage of children over the age for their grade, which fell from 51 per cent to 31 per cent; the percentage of those not enrolled, which decreased from 19 per cent to 14 per cent; and literacy deprivation, which dropped from 14 per cent to 6 per cent (Figure 18). It is worth noting that assessments of deprivation across health and education dimensions are based on individual child-level data and are thus not reliant on household-level data which in some instances may mask intra-household inequalities.

As already noted, there was an impressive decline in communication deprivation, from 76 per cent in 2007 to 20 per cent in 2018, driven most likely by rapid expansion in access to mobile telephones

(Figure 18); the 2015/16 DHS reported 78 per cent of households in Mainland Tanzania having a mobile telephone (Tanzania Ministry of Health, et al., 2016).

Progress is less pronounced, however, for those dimensions that affect far larger proportions of children. An examination of the housing dimension (which reflects aspects such as overcrowding and unimproved house materials) reveals that the proportion of children who live in overcrowded dwellings (71 per cent) has remained unchanged between 2007 and 2018 (Figure 18). Household living conditions (e.g., overcrowding and suitable construction materials) are critical determinants of child health and survival, and are set out as fundamental rights in the United Nations' Convention on the Rights of the Child (UN, 1989), yet the percentage of children living in unimproved housing (with floors of earth or palm bamboo; or roofs of mud, grass or plastic; or walls of mud or grass) is still high

(58 per cent). Although there has been progress in the housing dimension, deprivation in this dimension remained high, affecting 83 per cent of children in 2018 (Figure 17, page 26).

With regard to water and sanitation (which reflect aspects such as source of water, time to collect water and form of sanitation), the proportion of children deprived in this dimension decreased from 97 per cent in 2007 to 83 per cent in 2018. Figure 18 (page 27) demonstrates that high levels of water and sanitation deprivation are driven primarily by sanitation deprivation, with 78 per cent of all children in Mainland Tanzania deprived of access to improved sanitation in 2018. A third of all children also lacked access to improved water sources, while a minority (14 per cent) lived more than 30 minutes away from their main water source.

The fact that such a large proportion of Mainland Tanzania's children are deprived in these critical dimensions should be a source of ongoing concern and should form an important element of any child-relevant measure of child poverty going forward.

Children in Mainland Tanzania can experience a wide range of combinations of different deprivations. The correlation between dimensions is generally low,[14] except for water and sanitation and housing, which is primarily explained by a higher-than-average correlation between house material and sanitation indicators. This means that children living in houses made of unimproved materials in Mainland Tanzania are disproportionately more likely to live in households without improved sanitation and vice versa. Nevertheless, even a correlation of 0.6 is still considered low in many disciplines and does not show that these deprivations always occur together. Indeed, these findings suggest that overall, these dimensions need to be addressed with bespoke policies. This is addressed in Chapter 5.

The lack of strong correlation should not be mistaken for lack of clear deprivation patterns. Virtually all children (98 per cent) experiencing MD poverty (three or more deprivations) in 2018 in Mainland Tanzania experienced both water and sanitation and

housing deprivations (Table 4), despite the progress that has been made in the last decade. Reducing deprivation in these two dimensions is identified as one of the key challenges for the future of Mainland Tanzania's children.

Considering the overall trend of MD child poverty in Mainland Tanzania, the following sections examine deprivation trends in greater detail using three standardized cross-breaks: the place of residence (urban/rural), zone of residence, and monetary poverty status (relative to the year of the survey). Data are presented in order of the most prevalent deprivation in 2007.

Table 4: Composition of children experiencing MD poverty (deprived in three or more dimensions) in Mainland Tanzania, 2018

Types of deprivation experienced by poor children	Percentage	Cumulative percentage
Housing; water and sanitation; and communication (no other dimension)	42.5%	42.5%
Housing; water and sanitation; and education (no other dimension)	35%	77.5%
Housing; water and sanitation; and education or communication (no other dimension)	11.6%	89%
Other types (including both water and sanitation and housing)	9%	98%
Other types (not including both water and sanitation and housing)	2%	100%

Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

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14 The authors inspected tetrachoric correlations between dimensions for all children, which were below 0.4 for all dimensions, except for the housing and water and sanitation dimensions, which showed a correlation of 0.6. This exercise was repeated for children in MD poverty (experiencing deprivation in three or more dimensions). The correlations among the latter are higher, but this is to be expected because focusing on children who are experiencing three or more deprivations simultaneously artificially inflates the correlation between dimensions. Nevertheless, even within this subset of children, correlations were generally low.

3.4 Trends in deprivation in the housing dimension

Access to decent housing is a fundamental determinant of children's living standards and their chances of growing up safely and healthily. Indicators of housing deprivation can take several forms, including information about tenancy security, levels of overcrowding and the types of material used to construct the dwelling. Some measures incorporate indicators of access to basic services such as water, sanitation and electricity. For this 2007–2018 MODA, the housing dimension is represented by two indicators:

1. Overcrowding (i.e., where households had a room occupancy of more than two (>2), adult equivalents per room). As per UNICEF's previous use of such an indicator (NBS and UNICEF, 2019), children aged 0–5 years were counted as 0.5, and household members older than 5 years counted as 1. The number of rooms excluded kitchens, bathrooms and storage rooms.

2. Construction materials used for the roof, floor and walls of the main dwelling. Living in dwellings with floors made of earth or palm bamboo; or roofs of mud, grass or plastic; or walls of mud or grass was considered deprived.

Housing deprivation by place of residence

As shown in Figure 19, there have been considerable improvements between 2007 and 2018, yet deprivation in the housing dimension remains widespread in Mainland Tanzania, across other urban and rural locations and also in Dar es Salaam. Despite these improvements, housing deprivation has been and remains the most prevalent deprivation affecting children in Mainland Tanzania, with around two-thirds of all urban children and more than 90 per cent of rural children deprived in this dimension in 2018. Such exposure has implications for child health and broader development (Wolff et al., 2001; Shreshtha et al., 2020).

The prevalence of housing deprivation is most likely due to the choice and use of traditional construction materials (e.g., mud floors and walls) and ongoing cultural practices of large households

Figure 19: Trends in housing deprivation by place of residence in Mainland Tanzania, 2007–2018
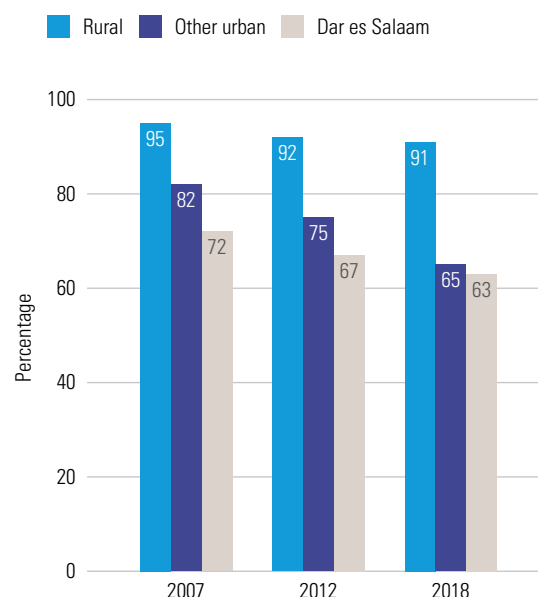
Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

sharing a few (bed)rooms. Policy responses could entail support for improving construction materials and encouraging smaller households, which would help tackle overcrowding.

Housing deprivation by zone

Figure 20 (page 30) presents prevalence rates of deprivation in the housing dimension, by (harmonized[15]) zone of residence. In no zone were rates in 2018 higher than in 2007 or 2012.

In 2007 rates of housing deprivation were over 90 per cent in all but one of the harmonized zones (Coastal). By 2018, over 75 per cent of Mainland Tanzania's children remained deprived in respect of housing. It should be noted though that the use of a harmonized zonal variable may well mask more significant improvements, as illustrated by the progress made in Dar es Salaam (Figure 19), an aspect that is explored further in Figures 20–26 (pages 30–31).

15 See page 16 (Section 2.1, Data and methods) for more detail.

Figure 20: Trends in housing deprivation by zone in Mainland Tanzania, 2007–2018
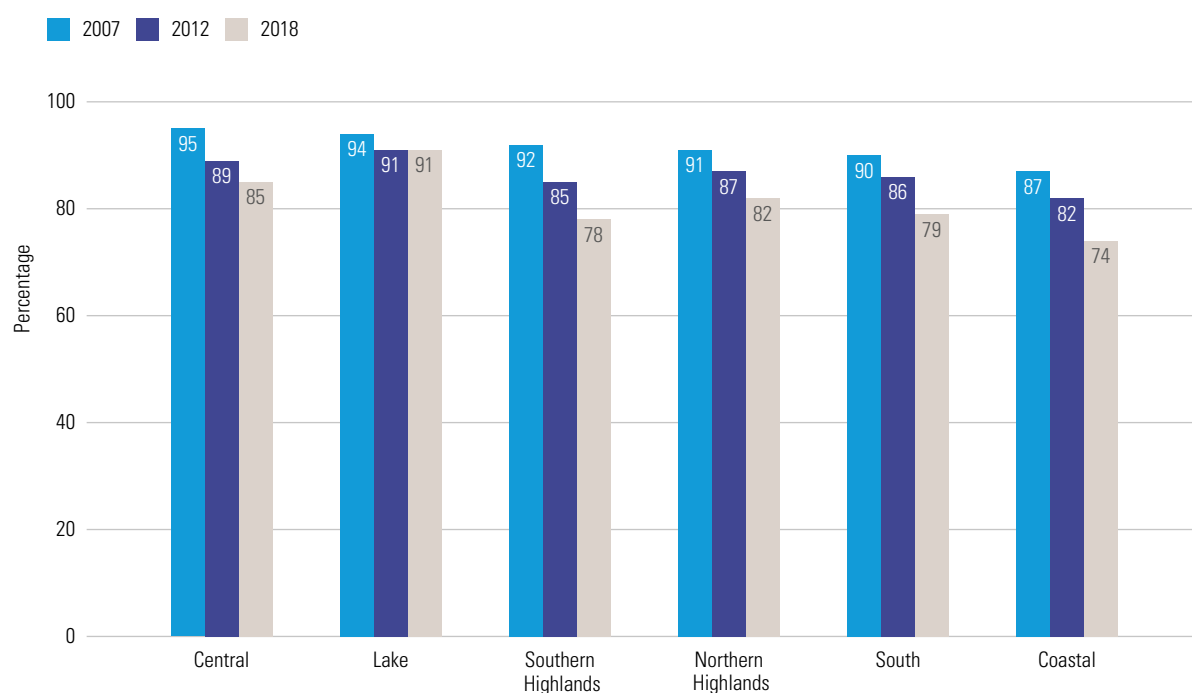
Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

Figure 21: Housing dimension: percentage of children in Mainland Tanzania deprived, by zone, 2018
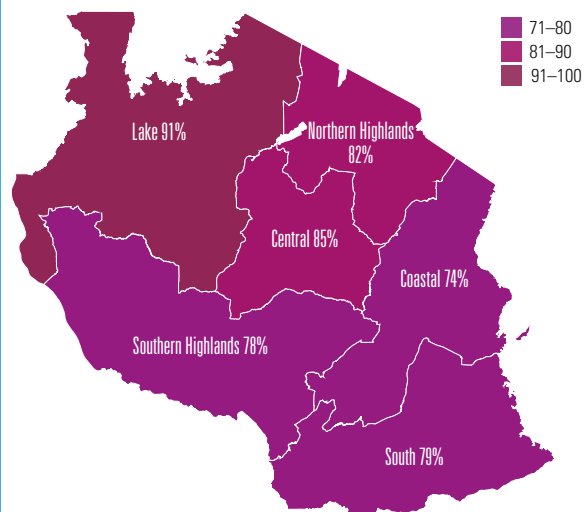
Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

Figure 22: Housing dimension: percentage of children in Mainland Tanzania deprived, by region, 2018
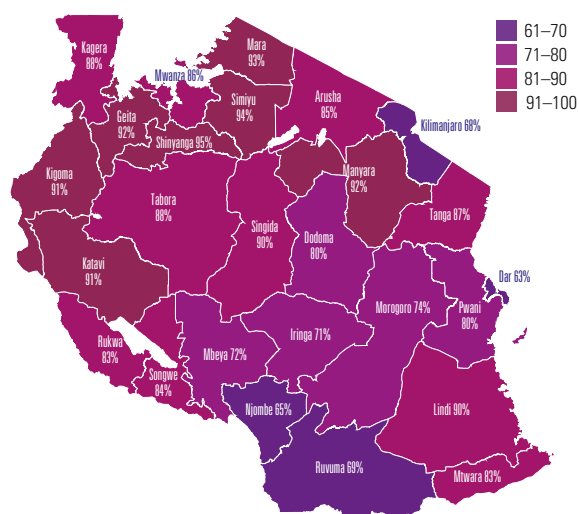
Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

Figure 23: Housing material: percentage of children in Mainland Tanzania deprived, by zone, 2018

Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

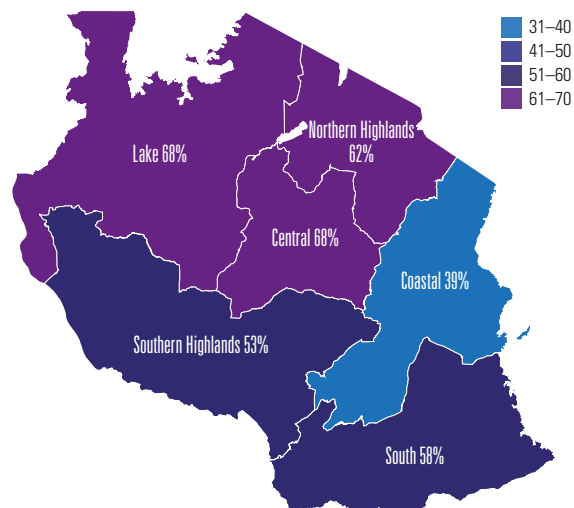**Figure 24:** Housing material: percentage of children in Mainland Tanzania deprived, by region, 2018
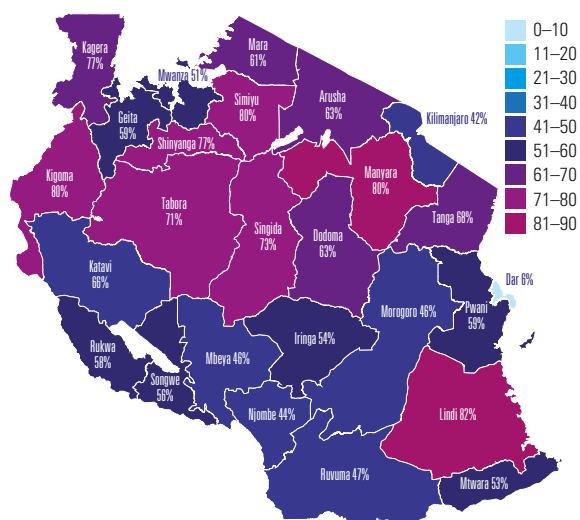

Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

Figure 25: Overcrowding: percentage of children in Mainland Tanzania deprived, by zone, 2018
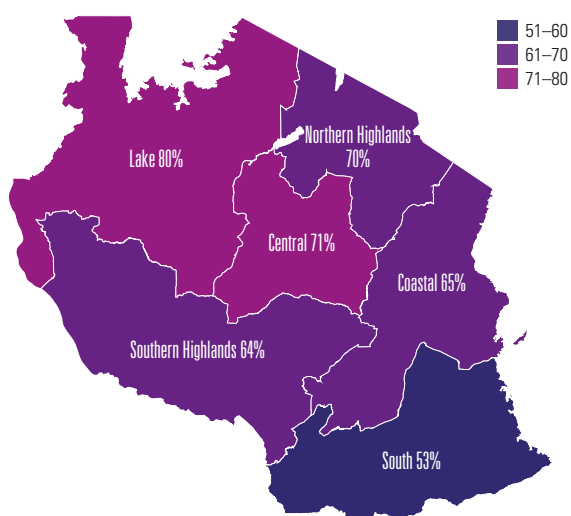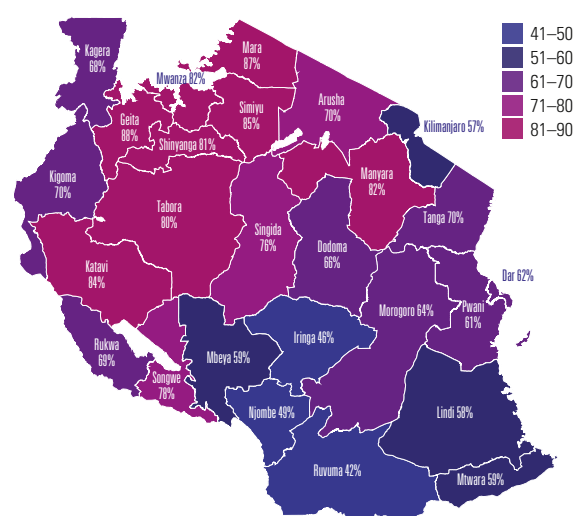

Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

Figure 26: Overcrowding: percentage of children in Mainland Tanzania deprived, by region, 2018
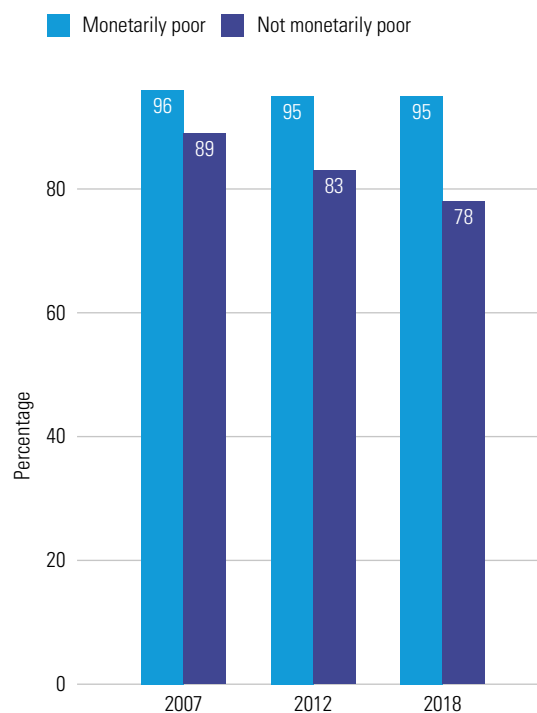

Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

Housing deprivation by monetary poverty status

The HBSs include data on the monetary poverty status of households. This information can then be used in conjunction with data on material deprivation in different dimensions to effectively show overlaps between monetary and non-monetary poverty, thus revealing the MD nature of child poverty in Mainland Tanzania.

Figure 27 shows that 96 per cent of children in monetary-poor households in 2007 were also deprived in the housing dimension. This overlap did not change across the 11 years, such that the overlap between the two was 95 per cent in 2018. Among those children whose households were not identified as monetarily poor in the year of the survey (i.e., their household incomes were above the poverty line or threshold for each year), the overlap with housing deprivation was also high, ranging from 89 per cent in 2007 to 78 per cent in 2018. These patterns demonstrate that significant proportions of children who are not monetarily poor are in fact housing-deprived, with clear implications for children's health development and survival. This could impact the targeting of anti-poverty programmes and policies, limiting their impact in the medium and longer term, since the clearly deprived may be missed due to their 'monetarily non-poor' status.

Figure 27: Trends in housing deprivation by monetary poverty status in Mainland Tanzania, 2007–2018

Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

Figure 28: Indicator deprivation rate by consumption quintile for urban and rural children in Mainland Tanzania, 2018
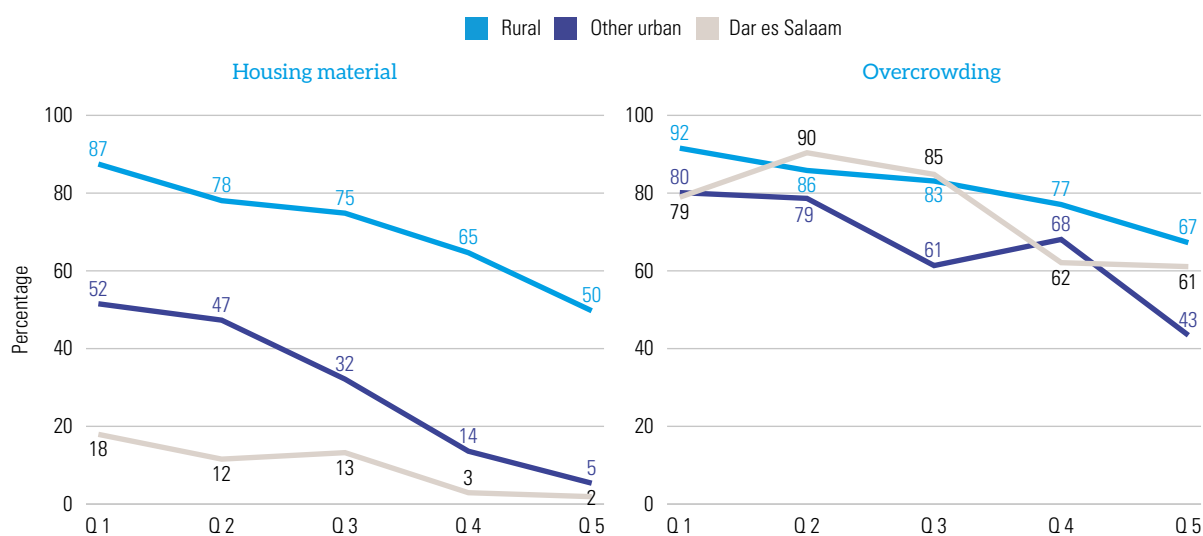
Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

We can further unpack these findings by looking at the percentage of children deprived in the housing dimension according to their household consumption (Figure 28, page 32). Consumption includes everything that was purchased and consumed over 28 days in sampled households. This included records on food and non-food items that were purchased and food that was grown by the household. Instead of simply looking at those below the poverty line, the overall consumption distribution could be split into groups (in this case five groups, known as quintiles) – from poorest to richest. Figure 28 (page 32) shows that children living in the poorest households are considerably more likely to live in dwellings with floors made of earth or palm bamboo; or roofs of mud, grass or plastic; or walls of mud or grass. They are also more likely to live in overcrowded households than richer households. The high rate of housing material deprivation is primarily driven by (poorer) rural households.

Figure 28 (page 32) also shows that overcrowding remains prevalent (over 50 per cent) in rural and urban areas, including Dar es Salaam. Although richer households are less likely to endure these deprivations, overcrowding remains widespread even among richer households, regardless of the area they live in.

Finally, it is worth exploring further the problem of housing deprivation.[16] In both rural and urban environments, roughly 65 per cent of children live in dwellings with adequate roofs and walls but unimproved floor materials (NBS, 2020). The remaining 35 per cent of children live primarily in houses where floors, walls and floors are all unimproved. In other words, the major persistent problem in both rural and urban areas remains inadequate flooring, while walls and roofs account for roughly a third of the housing material deprivation (NBS, 2020).

3.5 Trends in deprivation in the water and sanitation dimension

Water and sanitation are critical basic services for all households and are particularly important for children's health and the prevention of waterborne diseases. Hygiene and basic sanitation were important in protecting people during the coronavirus disease 2019

(COVID-19) pandemic, and having user-friendly and functional hand hygiene stations at or near dwellings is important. While the sharing of water, sanitation and hygiene facilities is common practice in many places, particularly at water sources, it is important to consider the time taken to collect water from such sources and the implications of multiple households sharing sanitation facilities. The World Health Organization (WHO) and UNICEF (WHO, 2014a) have categorized water and sanitation facilities as either improved or unimproved and these definitions are used in this MODA report. Priority in developing the indicators has been placed on comparability and on reflecting deprivation in a meaningful sense. Three household-level indicators represent the water and sanitation dimension:

1. The household's main source of water for drinking, where households using unimproved water sources (e.g., rivers, dams or lakes, unprotected wells and/or springs) are counted as deprived.
2. The time taken to collect water for the household, where households take more than 30 minutes to collect water are counted as deprived.
3. Household sanitation facilities, where households using unimproved sanitation facilities (e.g., no facilities, rivers or bushes or open pit latrines without slabs) or are sharing facilities with other households are counted as deprived.

Children deprived in any one of these three indicators were counted as deprived in the water and sanitation dimension.

Water and sanitation deprivation by place of residence

Progress in tackling deprivation in this important dimension has not been as forthcoming as for other dimensions. As seen in Figure 29 (page 34), between 2007 and 2012, there was some progress in reducing deprivation in rural areas, with little change in the situation between 2012 and 2018. In 2018, over 90 per cent of rural children in Mainland Tanzania experienced water and sanitation deprivation. In urban areas, including Dar es Salaam, progress was clearer, with deprivation rates decreasing from 88 per cent to 67 per cent in Dar es Salaam and from 89 per cent to 62 per cent in other urban areas.

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16 Note that the figures in this paragraph are not depicted in the graphs or tables in Section 3.4.

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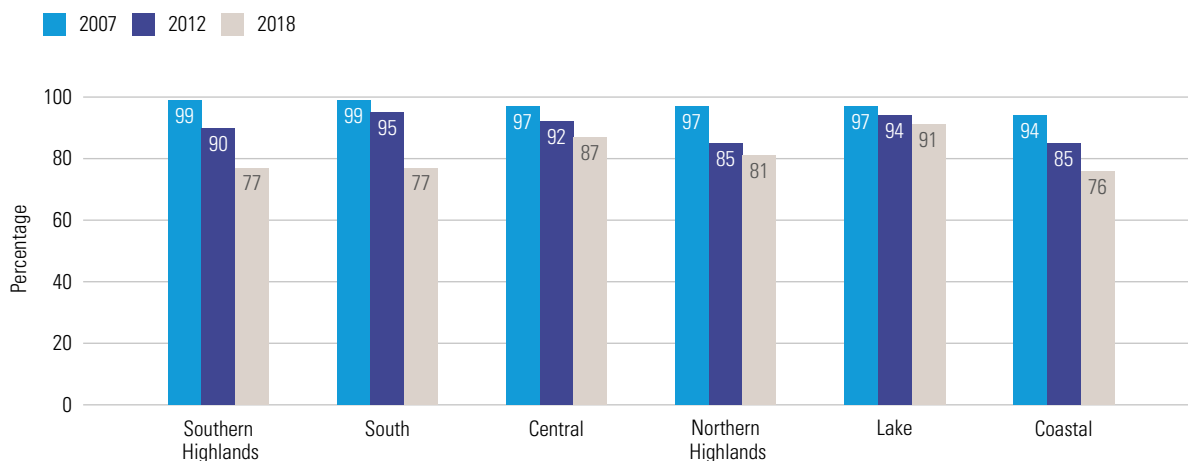## Water and sanitation deprivation by zone

Trends in deprivation at zonal and regional levels (Figures 30–38 below and pages 35–36) essentially present a picture of high but steadily declining deprivation. Progress is least apparent in the Lake and Central zones and most apparent in the Coastal zone. Again, the harmonized grouping of zones will mask greater variations in progress. Generally, though, there have been improvements, although less so in predominantly rural communities.

Figure 29: Trends in water and sanitation deprivation by place of residence in Mainland Tanzania, 2007–2018
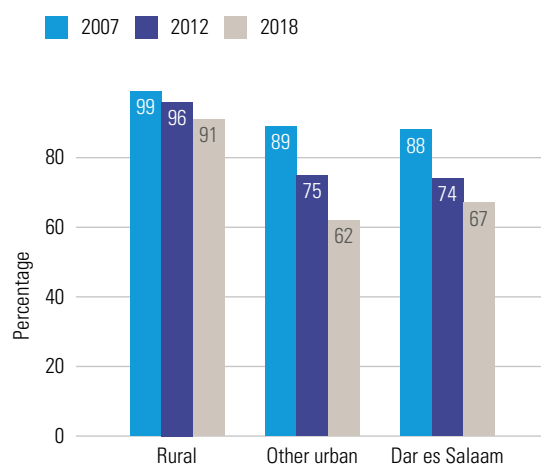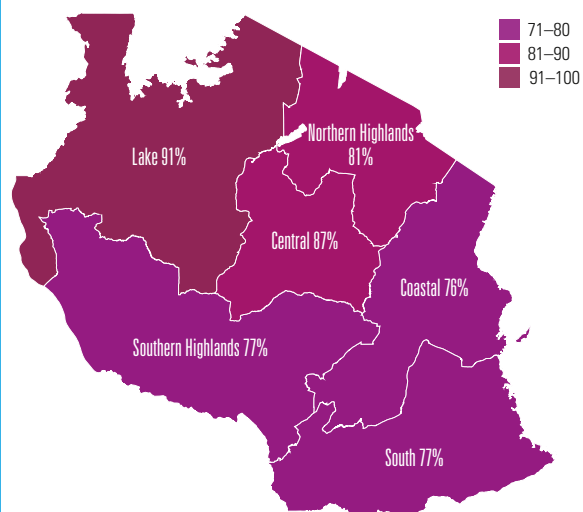

Source: Authors' analysis of HBS 2007 (NBS, 2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

Figure 30: Trends in water and sanitation deprivation by zone of residence in Mainland Tanzania, 2007–2018
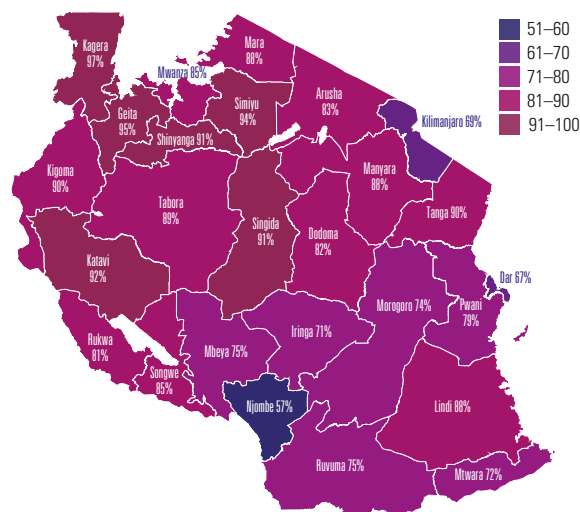

Source: Authors' analysis of HBS 2007 (NBS,2009), HBS 2011/12 (NBS, 2013) and HBS 2017/18 (NBS, 2020)

Figure 31: Water and sanitation dimension: percentage of children in Mainland Tanzania deprived, by zone, 2018
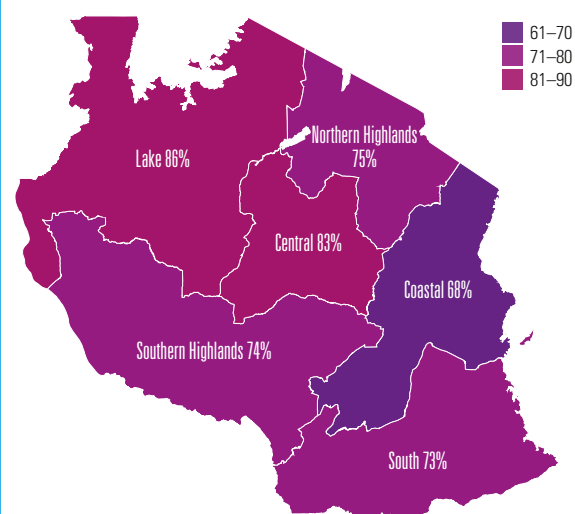

Legend:
- 71–80
- 81–90
- 91–100

Lake 91%
Northern Highlands 81%
Central 87%
Coastal 76%
Southern Highlands 77%
South 77%

Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

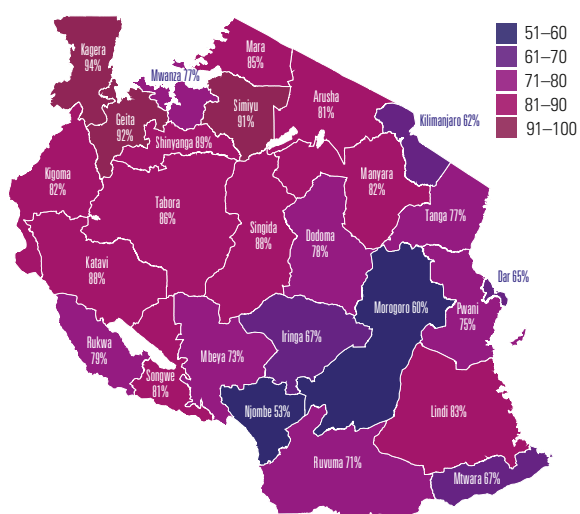**Figure 32:** Water and sanitation dimension: percentage of children in Mainland Tanzania deprived, by region, 2018

Legend:
- 51–60
- 61–70
- 71–80
- 81–90
- 91–100

Kagera 97%
Mwanza 85%
Mara 88%
Geita 95%
Simiyu 94%
Arusha 83%
Shinyanga 91%
Kilimanjaro 69%
Kigoma 90%
Tabora 89%
Manyara 88%
Tanga 90%
Katavi 92%
Singida 91%
Dodoma 82%
Dar 67%
Morogoro 74%
Pwani 79%
Rukwa 81%
Iringa 71%
Songwe 85%
Mbeya 75%
Njombe 57%
Lindi 88%
Ruvuma 75%
Mtwara 72%

Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

Figure 33: Sanitation: percentage of children in Mainland Tanzania deprived, by zone, 2018

Legend:
- 61–70
- 71–80
- 81–90

Lake 86%
Northern Highlands 75%
Central 83%
Coastal 68%
Southern Highlands 74%
South 73%

Source: Authors' analysis of HBS 2017/18 (NBS, 2020)

Figure 34: Sanitation: percentage of children in Mainland Tanzania deprived, by region, 2018

Legend:
- 51–60
- 61–70
- 71–80
- 81–90
- 91–100

Kagera 94%
Mwanza 77%
Mara 85%
Geita 92%
Simiyu 91%
Arusha 81%
Shinyanga 89%
Kilimanjaro 62%
Kigoma 82%
Tabora 86%
Manyara 82%
Tanga 77%
Katavi 88%
Singida 88%
Dodoma 78%
Dar 65%
Morogoro 60%
Pwani 75%
Rukwa 79%
Iringa 67%
Songwe 81%
Mbeya 73%
Njombe 53%
Lindi 83%
Ruvuma 71%
Mtwara 67%

Source: Authors' analysis of HBS 2017/18 (NBS, 2020)