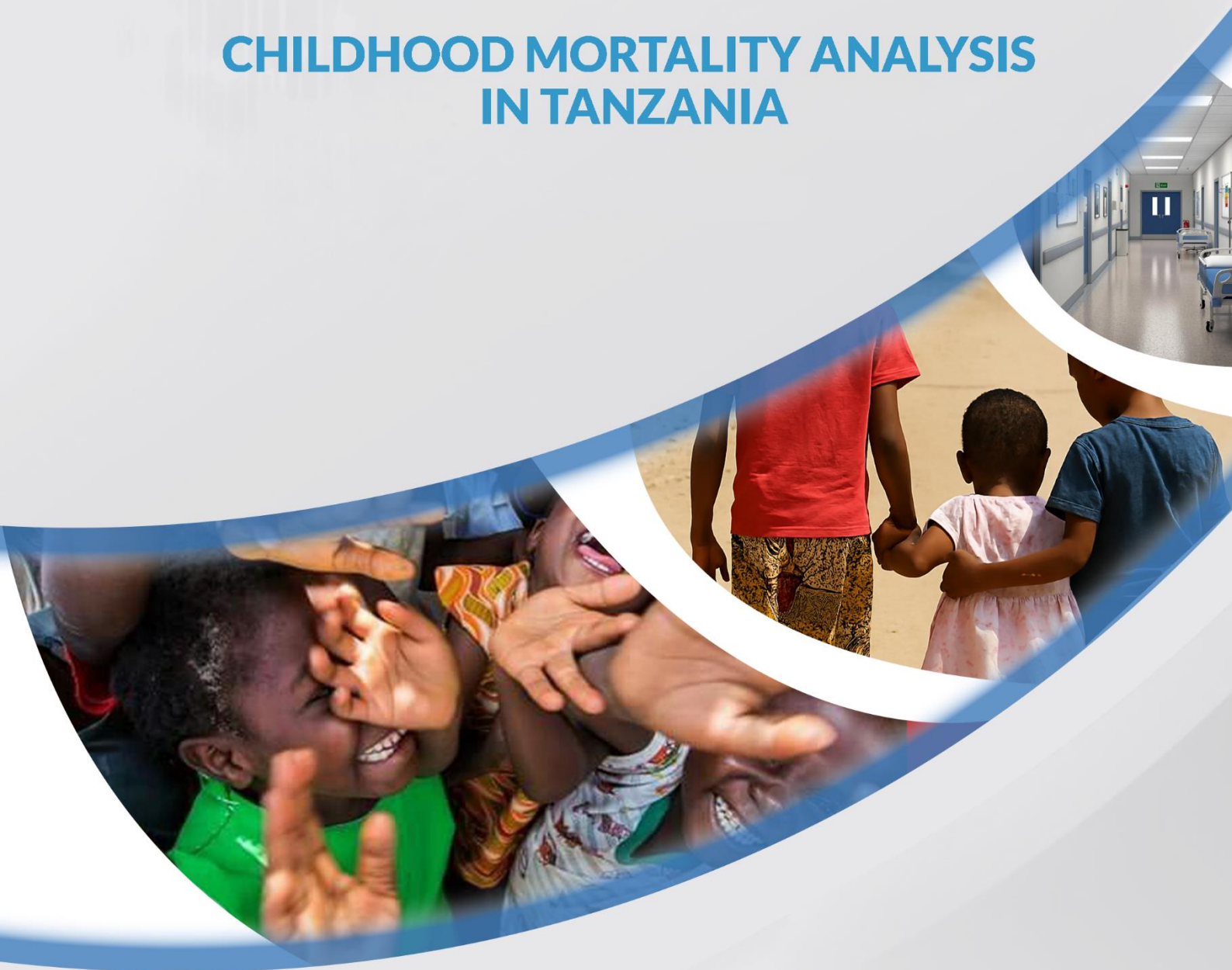




CHILDHOOD MORTALITY ANALYSIS IN TANZANIA



November, 2025



The United Republic of Tanzania

CHILDHOOD MORTALITY ANALYSIS IN TANZANIA



National Bureau of Statistics

Ministry of Finance

Dodoma

and



Office of the Chief Government Statistician

President's Office – Finance and Planning

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Preface

The 2022 Population and Housing Census (PHC) for the United Republic of Tanzania was conducted with a reference date of midnight between August 22 and 23, 2022. This marked both the sixth census since the Union of Tanganyika and Zanzibar in 1964, and the first digital census in Tanzania's history. The previous censuses took place in 1967, 1978, 1988, 2002, and 2012. The Sixth Phase Government of Tanzania, led by Her Excellency Dr. Samia Suluhu Hassan, along with the Eighth Phase Government of Zanzibar, under Dr. Hussein Ali Mwinyi, fulfilled their obligation to conduct the 2022 PHC in accordance with the United Nations Principles and Recommendations for Population and Housing Census. Their commitment and support throughout the census implementation deserve our gratitude.

The Government of the United Republic of Tanzania, through the Ministry of Finance in collaboration with the National Bureau of Statistics (NBS) and the Office of the Chief Government Statistician in Zanzibar (OCGS), successfully conducted the 2022 Population and Housing Census (PHC) in accordance with the Statistics Act Cap 351 and international standards set by the United Nations. This marked Tanzania's first fully digital census, utilizing advanced ICT tools for mapping, enumeration, data transmission, and processing.

The results of the 2022 PHC informs integrated planning, resource allocation, and monitoring of key development frameworks, including the Tanzania and Zanzibar Development Visions 2050, the Third National Five-Year Development Plans, regional strategies such as the EAC and SADC Visions 2050, and global agendas like the African Development Agenda 2063 and the UN Sustainable Development Goals (Agenda 2030). Census data will also support calculation of vital indicators such as literacy, maternal and infant mortality, and unemployment rates.

The "Childhood Mortality Analysis in Tanzania" monograph is the thirteenth in a series of significant publications related to the 2022 PHC. Major reports produced so far include the Administrative Units Population Distribution Reports, Age and Sex Reports, the Tanzania Basic Demographic and Socio-economic Profile, Ripoti ya Idadi ya Watu katika Majimbo ya Uchaguzi (Constituency Population Distribution Reports) in two volumes for the United Republic of Tanzania and Tanzania Zanzibar and other Thematic Reports.

This report delivers an in-depth analysis of mortality indicators, disaggregated by sex, at national and regional levels. It provides detailed statistics relevant to local populations, aiding in evidence-based decision-making. The report is organized into six chapters: an introduction, analysis of general population mortality, trends in infant and child mortality, life

expectancy estimations, maternal mortality differentials, and finally, a summary with conclusions, policy implications, and recommendations.

We extend sincere appreciation to all government leaders, including Ministers, Members of Parliament, Members of the House of Representatives, Councillors/Sheha, and the Regional and District Census Committees. Special thanks go to Census Coordinators, Supervisors, Enumerators, local leaders, and all respondents for their active participation.

We are deeply grateful to our development partners United Nations Population Fund (UNFPA), the World Bank (WB), the United Nations Children's Fund (UNICEF), UN-Women, the International Organization for Migration (IOM), the International Labour Organization (ILO), the United States Agency for International Development (USAID), the Foreign, Commonwealth and Development Office (FCDO), the United States Census Bureau (USCB), the Republic of South Korea, the People's Republic of China, and others for their generous support in equipment, training, expertise, and funding. Special recognition is given to Honourable Anne Semamba Makinda and Honourable Ambassador Mohamed Haji Hamza for their exemplary leadership as Census Commissars.

Finally, We would like to extend our heartfelt gratitude to all the experts who contributed their time and effort to this report, including Dr. Rutasha Dadi, Technical Advisor; Mr Deogratius Malamsha, Lead Author; Dr. Ruth Davison Minja, Director of Population Census and Demographic Statistics; Fahima Mohamed Issa, Director of the Social Statistics Department, OCGS; Seif Ahmad Kuchengo, Manager of Population Census and Vital Statistics; Abdul-majid Jecha Ramadhan, Zanzibar Census Coordinator; Steven Lwendo, IT Expert for data processing; and the dedicated National Census Technical Team along with all the statisticians, demographers, IT specialists, and GIS officers. Their commitment played a crucial role in the success of producing this Thematic report.



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Executive Summary

This Childhood Mortality Report provides an in-depth analysis of the level, trend, and pattern of childhood mortality in Tanzania. Specifically, it analyses and includes information on infant, child, and under-five indicators using data from the 2022 Population and Housing Census (PHC). Where data allowed, comparisons are made with estimates of previous censuses, other sources, and other countries. The information is presented at the national level and, where necessary, disaggregated by rural or urban Tanzania Mainland and Tanzania Zanzibar. It is also disaggregated into the 31 administrative regions in the country (26 in Tanzania Mainland and 5 in Tanzania Zanzibar). The analysis presented in this volume generally indicates a decline in childhood mortality compared to the previous census.

Chapter one presents a brief history and objectives of the 2022 Tanzania Population and Housing Census, outlining the rationale for undertaking the exercise in the country and its significance in providing reliable demographic and socio-economic data for planning and policy. It further highlights the relevance of childhood mortality as a critical indicator of national development, health systems performance, and progress towards national and global commitments such as the Sustainable Development Goals (SDGs) and Tanzania's Vision 2050. In addition, the chapter sets out the objectives of the Childhood Mortality Analysis, which include examining the levels, trends, and differentials of infant, child, and under-five mortality across Tanzania, thereby providing essential evidence for monitoring progress, identifying disparities, and guiding effective interventions.

Chapter two outlines the methodology used to assess childhood mortality in Tanzania based on the 2022 Population and Housing Census. Due to the absence of complete vital registration systems, the study relied on indirect demographic techniques to estimate key indicators, including the Infant Mortality Rate (IMR), Child Mortality Rate (CMR), and Under-five Mortality Rate (U5MR). Childhood mortality data were collected through census questions on fertility and child survival, primarily from women aged 15–49 years, enabling indirect estimation using model life tables. The quality assessment highlighted potential limitations, including underreporting of deaths, misreporting of ages, and differences in reporting between rural and urban areas. To estimate mortality, the Brass method, refined by Coale and Trussell, was applied using MORTPAK software, which allowed for the generation of plausible estimates of IMR, CMR, and U5MR, disaggregated by region and residence, using age-specific multipliers from model life tables. Despite limitations such as reliance on indirect methods, lack of cause-of-death data, and potential reporting biases,

the methodology provided reliable and consistent estimates essential for monitoring child survival and informing health and social policy interventions.

Chapter three provides childhood mortality estimates. The infant mortality rate (IMR) is 34.3 deaths per 1,000 live births. The estimated rates for Tanzania Mainland and Tanzania Zanzibar are almost equal to national estimates. Urban areas reported lower IMR (33.4 deaths per 1,000 live births) than rural areas (34.9 deaths per 1,000 live births). Male children experienced higher mortality rates than females, with a male IMR of 39.6 compared with 29.0 deaths per 1,000 live births for females and under-five mortality rates (U5MR) of 60.3 for males and 47.8 for females. Significant regional differences are found in IMR, with Arusha and Kilimanjaro Regions having the lowest IMR (19.7 and 24.4 deaths per 1,000 live births, respectively), while regions like Rukwa, Mtwara, Kagera, and Lindi reported higher rates ranging from 40.7 to 42.8 deaths per 1,000 live births.

Chapter four presents the impact of socio-economic differentials, including child healthcare, women's literacy, nutrition, types of water and toilet facilities, and the mean age at first marriage, on childhood mortality. The chapter shows how these socio-economic differentials have impact on increasing or decreasing number of childhood death by pin pointing areas or regions that reported high percentage of socio-economic differentials like women literacy rate and improved source of water and toilet facility can lead to low childhood mortality rate in specific region. Regions with low percentage of socio-economic differentials can lead to high mortality rate in a particular area or region.

Chapter five compares the childhood mortality (infant and under-five mortality) indicators obtained from the 2022 PHC with those derived from Tanzania Demographic and Health Surveys (TDHS). The infant mortality rate for Tanzania was 34 and 33 deaths per 1,000 live births for PHC and TDHS, respectively. The chapter also compares Tanzania's childhood mortality indicators with those of other African Countries that participated in the 2020 round of census and the progress achieved towards the National and International Development Plans. It is noted that Tanzania has made significant progress in reducing infant and under-five mortality rates. However, still faces considerable challenges in achieving the national and international targets for both IMR and U5MR. Continued and targeted efforts will be essential to close these gaps and ensure that all children in Tanzania are surviving.

Chapter Six presents a summary of the key findings to inform the public and health stakeholders on current childhood mortality trends and health challenges. It includes a conclusion, policy implications, and recommendations on the mortality indicators such as infant and child mortality rates, life expectancy at birth, and maternal mortality ratio. These

findings provide baseline information on Tanzania's population for policy formulation and review, development planning, informed decision making, monitoring and evaluation, and reporting of development programmes at regional and national levels.

Census Results in Brief – Key Childhood Mortality Indicators, 2022 PHC

Indicator	Tanzania	Tanzania Mainland	Tanzania Zanzibar
Infant Mortality Rate	34.3	34.3	34.7
Rural	34.9	34.9	34.5
Urban	33.4	33.3	34.9
Male	39.6	39.6	40.0
Female	29.0	29.0	29.3
Child Mortality Rate	20.0	20.0	22.2
Rural	20.3	20.3	20.1
Urban	19.5	19.6	20.3
Male	20.6	20.6	20.3
Female	18.8	18.7	18.9
Under-Five Mortality Rate	54.3	54.3	54.9
Rural	55.2	55.2	54.6
Urban	52.9	52.9	55.2
Male	60.3	60.2	60.3
Female	47.8	47.7	48.2

Census Results in Brief – Key Childhood Mortality Indicators by Region, 2022 PHC

Region	Infant Mortality Rate	Child Mortality Rate	Under five Mortality Rate
Tanzania	34.3	20.0	54.3
Tanzania Mainland	34.3	20.0	54.3
Dodoma	32.6	19.1	51.7
Arusha	19.7	11.8	31.5
Kilimanjaro	24.4	14.4	38.8
Tanga	37.8	21.9	59.6
Morogoro	38.4	22.2	60.6
Pwani	38.4	22.2	60.6
Dar es Salaam	35.2	20.5	55.7
Lindi	42.8	24.6	67.4
Mtwara	40.9	23.6	64.4
Ruvuma	39.7	22.9	62.7
Iringa	36.4	21.1	57.5
Mbeya	33.4	19.5	52.9
Singida	26.3	15.5	41.8
Tabora	33.7	19.7	53.4
Rukwa	40.7	23.5	64.2
Kigoma	36.2	21.0	57.2
Shinyanga	32.4	18.9	51.3
Kagera	41.8	24.1	65.9
Mwanza	31.9	18.6	50.5
Mara	36.7	21.3	58.0
Manyara	25.2	14.9	40.1
Njombe	36.5	21.2	57.7
Katavi	35.5	20.6	56.1
Simiyu	32.2	18.8	51.0
Geita	35.1	20.4	55.5
Songwe	37.4	21.7	59.1
Tanzania Zanzibar	34.7	20.2	54.9
Kaskazini Unguja	38.7	22.3	61.0
Kusini Unguja	38.7	22.3	61.0
Mjini Magharibi	35.2	20.5	55.6
Kaskazini Pemba	34.2	19.9	54.1
Kusini Pemba	29.7	17.5	47.2

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Abbreviation and Acronym

ARI	Acute Respiratory Infection
BCG	Tuberculosis
CDR	Crude Death Rate
CEB	Child Ever Born
CMR	Child Mortality Rate (4q1)
CRVS	Civil Registration and Vital Statistics
CS	Children Surviving
DPT–HepB- Hib	Diphtheria, Pertussis, Tetanus, Hepatitis B, and Haemophilus influenzae type b
FCDO	Foreign Commonwealth and Development Office
FYDP	Five-year Development Plan
HDI	Human Development Index
HSSP	Health Sector Strategic Plan
ICT	Information and Communication Technology
IMCI	Integrated Management of Childhood Illness
IMR	Infant Mortality Rate (1q0)
IOM	International Organization for Migration
IPV	Inactivated Polio Vaccine
IYCF	Infant and Young Child Feeding
MPI	Multidimensional Poverty Index
MR	Measles-Rubella
NBS	National Bureau of Statistics
OCGS	Office of Chief Government Statistician
OPV	Oral Polio Vaccine
PCV	Pneumococcal Conjugate Vaccine
PHC	Population and Housing Census
SD	Standard Deviation
SDGs	Sustainable Development Goals
RV	Rotavirus Vaccine
TCEB	Total Child Ever Born
TDHS	Tanzania Demographic and Health Survey
TDHS-MIS	Tanzania Demographic and Health Survey and Malaria Indicator Survey
TBC	Tanzania Buildings Census
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children’s Fund
USCB	United States Census Bureau
USAID	United States Agency for International Development
U5MR	Under-5 Mortality Rate (5q0)
VIP	Ventilated Improved Pit
WB	World Bank
WHO	World Health Organization
WRA	Women of Reproductive Age
ZADEP	Zanzibar Development Plan

Concepts and Definitions

Child Mortality: The probability of dying between the first and the fifth birthday.

Crude Death Rate (CDR): is the number of deaths occurring in a calendar year per 1,000 population.

Death (mortality): refers to the occurrence of deaths in a population. A death is a complete absence of any signs of life at any time after a live birth has occurred.

Infant Mortality Rate (IMR): refers to number of deaths of children (between birth and the first birthday) per 1,000 live births.

Child Mortality Rate (CMR): refers to number of deaths of children (between the first and the fifth birthday) per 1,000 live births.

Under 5 Mortality Rate (U5MR): refers to number of deaths of children (between birth and fifth birthday) per 1,000 live births.

CHAPTER ONE

INTRODUCTION

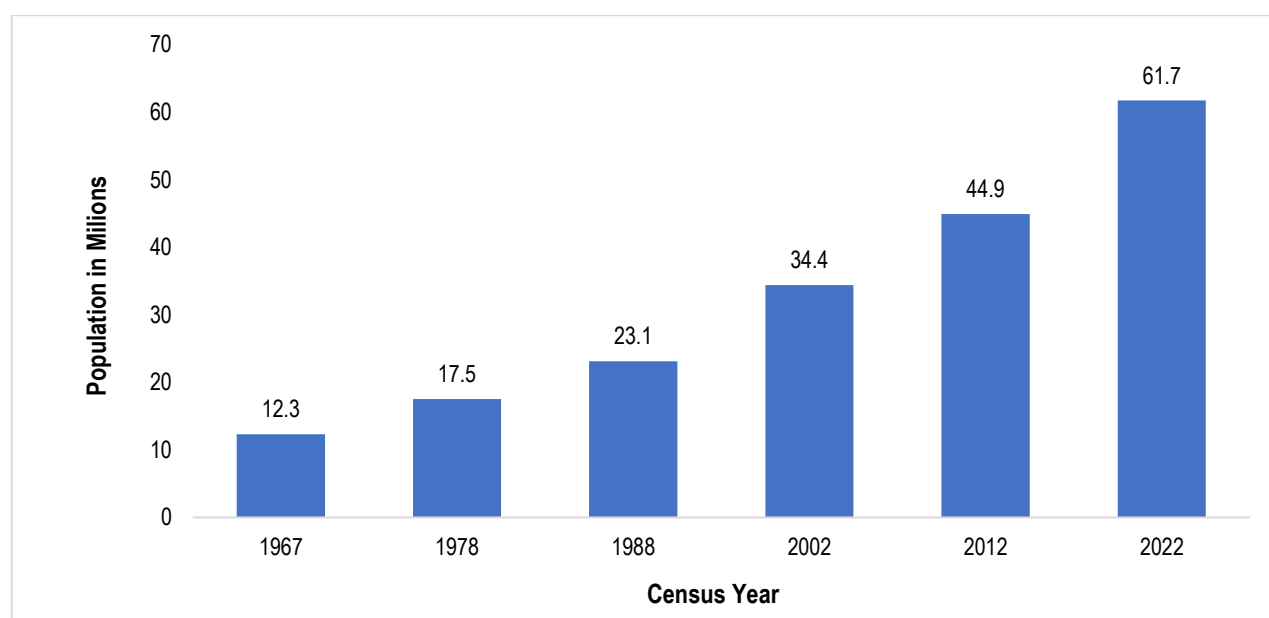
1.2 Background on the 2022 Population and Housing Census

National Bureau of Statistics (NBS), in collaboration with Office of the Chief Government Statistician (OCGS) Zanzibar, conducted Population and Housing Censuses (PHC) in the United Republic of Tanzania in accordance with the Statistics Act CAP 351, which requires a census to be conducted in every ten years. This is the sixth Census after the Union of Tanganyika and Zanzibar in 1964, conducted in accordance with international standards, particularly the United Nations Principles and Recommendations for population counts. The five censuses were conducted in 1967, 1978, 1988, 2002, and 2012.

The Census referenced date is the night of 22nd/23rd August 2022, and the Census was undertaken on a de facto basis. Unlike the previous censuses, the 2022 PHC enumerated people based on place of residence on the census night. All persons found in the country were enumerated, regardless of nationality or citizenship. The enumeration was planned for seven days however; it took nine days. The 2022 PHC utilized mobile technology in the collection of census data and information, marking the first digital census in Tanzania.

The censuses show that Tanzania's population increased from 12.3 million in 1967 to 61.7 million in 2022 (Figure 1.1). The average annual population growth rate of Tanzania rose from 2.7 percent in 2002-2012 to 3.2 percent in 2012-2022, during the intercensal periods.

Figure 1.1: Tanzania Population Count During the Population Censuses



1.2 Objectives of the 2022 Population and Housing Census

The main objective of the 2022 PHC is to provide information to the Government on the population size, distribution, composition, and other socioeconomic characteristics of the population, as well as information on housing conditions. It would improve accessibility to reliable, high-quality data for policy formulation, development planning, evidence-based decision-making, and service delivery, as well as for monitoring and evaluating population and socio-economic programmes in the country. Ultimately, enhance the achievement of an improved quality of life in Tanzania.

The specific objectives of the 2022 PHC were to:

- a) Increase availability and accessibility of accurate, timely, and reliable data on demographic, socio-economic characteristics, and environment;
- b) Promote better knowledge management on Tanzanian socio-economic, demographic characteristics, and environment as well as patterns and trends of population growth;
- c) Promote better use of lower administrative levels disaggregated socio-economic, demographic and environmental data;
- d) Enhance the capacity of NBS and OCGS in carrying out population and housing censuses and other statistical data; and
- e) Establish a comprehensive buildings and National Physical Addresses database that enables evidence-based decisions as a key tool for enhancing access to social services, expansion of the tax base, and quality of development programmes in general.

1.3 Relevance of the Childhood Mortality Monograph

Childhood mortality is a critical indicator for assessing both general and national socio-economic development. It reflects the broader health equity environment, including disease prevalence, nutritional status, environmental and socioeconomic conditions, and the effectiveness of healthcare systems. Goal 3 of the Sustainable Development Goals (SDGs) aims to reduce under-five mortality to below 25 deaths per 1,000 live births. Despite global efforts, childhood mortality remains alarmingly high in regions such as sub-Saharan Africa and South Asia, with over 50 percent of global childhood deaths reported in sub-Saharan Africa in 2017 alone (Heckman, 2015). Since 2000, the global under-five mortality rate (U5MR) has declined by more than half, while between 2000 and 2023, 170 million children died before reaching their fifth birthday (UN IGME, 2024).

In the context of national goals, Tanzania's Vision 2050, specifically Goal 2: Quality Life and Well-being for All, and Target 3, commits to eliminating preventable deaths among pregnant women, newborns, and children under five years of age. Monitoring levels and trends in childhood mortality is, therefore, essential for policy formulation, strategic planning, and the evaluation of health-related and socio-economic programmes. A Childhood Mortality Analysis monograph provides vital evidence for identifying disparities, tracking progress toward national and global targets, and guiding resource allocation. Moreover, these indicators contribute to the computation of composite indices, such as the Human Development Index (HDI) and the Multidimensional Poverty Index (MPI), thereby reinforcing their importance in evaluating broader development achievements.

The information on deaths and other socio-economic characteristics collected in the population census questionnaires over the past five decades has evaluated the level and pattern of childhood mortality in Tanzania. Some of the information from the 2015/16 and 2022 Demographic and Health Surveys was utilized for triangulation in analysing childhood mortality data in this monograph.

1.4 Objective of Childhood Mortality in Tanzania

The main objective of the monograph is to analyse and provide information on levels, trends, and differentials of childhood mortality in Tanzania, specifically, to:

- i. To analyse the levels and trends in infant, child, and under-five mortality in Tanzania;
- ii. Estimate of infant, child, and under-five mortality; and
- iii. Determine the childhood mortality differentials by place of residence and other characteristics.

This volume provides an estimation of the levels and trends of various mortality indicators in Tanzania. These include Infant Mortality Rate (IMR), Child Mortality Rate (CMR), and Under-five Mortality Rate (U5MR). These measurements, presented at the national level and for Tanzania Mainland and Tanzania Zanzibar, are further disaggregated by rural and urban areas, as well as the 31 administrative regions in the country (26 regions in Tanzania Mainland and five regions in Tanzania Zanzibar) comparison with previous censuses or estimates from other sources, including other countries, where data are available.

CHAPTER TWO

METHODOLOGY

2.1 Introduction

This chapter presents the methodological approach used in assessing childhood mortality based on data from the 2022 Population and Housing Census of Tanzania. Given the absence of complete and reliable vital registration systems, this report relies on indirect demographic techniques to estimate key childhood mortality indicators, specifically the Infant Mortality Rate (IMR), Child Mortality Rate (CMR) and the Under-five Mortality Rate (U5MR). The chapter outlines the questions included in the census for collecting childhood mortality data, assesses the quality of the data obtained, and describes the demographic models employed in estimating childhood mortality levels.

2.2 Census Questions on Childhood Mortality

In the 2022 Population and Housing Census, Tanzania collected information on childhood mortality through a set of indirect questions designed to estimate levels and trends of infant, child, and under-five mortality. Recognizing the limitations in vital registration systems, particularly in rural and underserved areas, the census employed a standard demographic approach that relies on women's reports of their fertility and child survival experiences. This method is widely used in censuses and surveys across low- and middle-income countries.

There were questions on fertility which sought information on the number of children ever born alive and surviving to women aged 10 and above years (I02: How many males/females were born alive; I04: How many males/females were born alive and now are unfortunately dead) but the analysis was based on women aged 15 -49 years. Such information is useful in the indirect estimation of childhood mortality, which relies partially on model life tables in deriving childhood mortality and life expectancy. More details on questionnaires are provided in Appendix 2.

2.3 Quality of Childhood Mortality Data

Data on mortality from censuses were scrutinized all along. This is due to possible errors in reporting or measurement biases that may affect the quality of data. Respondents in households may be reluctant to report a recent death of a household member, or if it occurred to an infant, especially in the first few days of birth, or if the death occurred elsewhere, which often leads to underreporting.

There are also problems in identifying causes of death or misreporting age of the deceased, or the way questions were asked, or the probing on deaths coupled with characteristics of the respondents may cause errors in the reported deaths.

2.4 Demographic Models Used in Estimating Childhood Mortality Using Census Data

To estimate and evaluate childhood mortality from the 2022 Population and Housing Census, a combination of indirect demographic techniques was employed due to limitations in the availability of complete and accurate vital registration data. The primary method used was the Brass method, as refined by Coale and Trussell (1968), which is well-suited for estimating infant, child, and under-five mortality in contexts where direct data on births and deaths are incomplete or unreliable.

This method utilizes information collected from Women of Reproductive Age (WRA), typically those aged 15–49 years, specifically the number of Children Ever Born (CEB) and Children Surviving (CS). By applying age-specific multipliers derived from model life tables, the method converts these proportions into estimates of the probability of dying before certain exact ages, most commonly before age 1 (infant mortality), age 1 to 4 (child mortality), and before age 5 (under-five mortality).

The proportion of children dead, $D(i)$ for each five-year age group of women (15–19, 20–24, ..., 45–49), was given by the ratio of the total number of dead children, $CD(i)$ to the total number of children ever born, $CEB(i)$ for each age group. Thus

$$D(i) = \frac{CD(i)}{CEB(i)}$$

The Brass method applies multipliers $k(i)$ derived from model life tables to convert these proportions into probabilities of dying $q(x)$ before certain exact ages (1, 2, 3, or 5 years). Multiplying factor $k(i)$ is determined by the parity ratio.

$$q(x) = k(i) \times D(i)$$

To enhance the reliability of these estimates, the analysis was conducted using the MORTPAK application, a specialized software developed by the United Nations for demographic estimation. Within MORTPAK, the CEB-CM module (Children Ever Born and Children Surviving to estimate Childhood Mortality) was used to apply the Brass method efficiently. The software also allowed for the selection of appropriate model life tables (the

Coale-Demeny or United Nations model life tables) based on regional mortality patterns, thus improving the accuracy of the indirect estimates.

Through this approach, the study generated plausible and consistent estimates of the Infant Mortality Rate (IMR), Child Mortality Rate (CMR), and Under-five Mortality Rate (U5MR), disaggregated by key demographic and geographic characteristics. These estimates are essential for monitoring progress in child survival and informing health and social policy interventions aimed at reducing preventable child deaths.

2.5 Limitations

The assessment of childhood mortality using the 2022 Population and Housing Census data is subject to several limitations that may affect the accuracy and completeness of the estimates:

- i. Underreporting of Deaths – Respondents may be reluctant to report recent deaths, particularly those of infants in the first few days of life or deaths occurring outside the household. This results in systematic underestimation of mortality levels.
- ii. Reporting Errors and Biases – Misreporting of the age at death, omission of deceased children, and recall errors during interviews can distort mortality patterns. The phrasing of questions, probing techniques, and respondent characteristics may also influence the quality of responses.
- iii. Absence of Complete Vital Registration Data – Due to the lack of a comprehensive and reliable civil registration and vital statistics (CRVS) system, the census relied on indirect demographic methods rather than direct measurement, which introduces model-based assumptions.
- iv. Limitations of Indirect Estimation Methods – The Brass method, although widely used, depends on assumptions embedded in model life tables (e.g., Coale-Demeny, UN models). If actual mortality patterns differ from these models, estimates may be biased or less representative of actual mortality experiences.
- v. Rural–Urban Differences in Data Quality – Variations in literacy levels, awareness, and exposure to survey processes may result in inconsistent reporting between rural and urban areas, influencing both fertility and mortality estimates.

- vi. Inability to Capture Cause of Death – The census questions focus on fertility and survival history but do not provide information on causes of death, limiting the ability to link mortality to specific health or socio-economic factors.

Despite these limitations, the combination of indirect demographic techniques and specialized applications such as MORTPAK allowed the production of plausible and consistent estimates of infant, child, and under-five mortality, providing a valuable basis for monitoring child survival and informing policy.

CHAPTER THREE

LEVELS, TRENDS AND DIFFERENTIALS OF CHILDHOOD MORTALITY

Key Points

- The national IMR is 34 deaths per 1,000 live births, with male children having higher mortality rates (40 deaths per 1,000 live births) than females (29 deaths per 1,000 live births).
- The national CMR is 20 deaths per 1,000 live births, with male children having higher mortality rates (21 deaths per 1,000 live births) than females (19 deaths per 1,000 live births).
- The national U5MR is 54 deaths per 1,000 live births with male children having 60 deaths versus 48 deaths per 1,000 live births in females.
- Urban areas report lower IMR (33 deaths per 1,000 live births) than rural areas (35 deaths per 1,000 live births), reversing the trend from 2012, where urban areas had higher mortality rates than rural areas.
- Significant regional differences exist in Arusha and Kilimanjaro IMRs showing lowest (20 and 24 deaths per 1,000 live births respectively), while regions like Rukwa, Mtwara, Kagera and Lindi reported higher rates ranging from 41 to 43 deaths per 1,000 live births.
- On one hand, the decrease in Tanzania's Infant Mortality Rate (IMR) and U5MR in Tanzania shows a significant improvement in childhood health. On the other hand, it also shows that there is a necessity to continue with ongoing policy efforts to address the remaining challenges so as to achieve the national and global health targets.

3.1 Introduction

Childhood mortality remains one of the most critical indicators of a country's health and socio-economic development. It reflects the cumulative impact of various social determinants of health, including maternal health, equitable access to quality healthcare, nutrition, environmental conditions, and socio-economic disparities. Understanding the levels, trends, and differentials of childhood mortality is vital for assessing progress towards national and international development goals, including the Sustainable Development Goals (SDGs), particularly Goal 3, which aims to ensure healthy lives and promote well-being for all at all ages.

This chapter presents a detailed analysis of childhood mortality in Tanzania, focusing on the patterns and changes observed over time, as well as the differences among various population subgroups. It draws primarily on data from the 2022 Population and Housing Census and other complementary sources, and it explores three key indicators: infant mortality (death before the first birthday), child mortality (the probability of dying between the first and the fifth birthday), and under-five mortality (death before the fifth birthday). This chapter analyses information on mortality levels, trends, and differentials in infant and under-5 mortality.

By highlighting disparities and identifying areas with persistently high childhood mortality, the analysis aims to inform policy and guide targeted interventions that can reduce preventable child deaths. Ultimately, the findings provide a foundation for strengthening child survival strategies and enhancing health outcomes for all Tanzanian children.

3.2 Levels and Trends of Infant and Under-Five Mortality in Tanzania

The analysis of infant and under-five mortality trends provides critical insights into the progress made in improving child health and survival in Tanzania over time. These trends reflect the combined effects of households' socioeconomic development, access to quality healthcare, nutritional improvements, maternal health interventions, and broader public health initiatives. Monitoring changes across different periods helps to identify gains achieved through national policies and programmes, while also highlighting persisting inequalities across regions, residence, and socioeconomic groups. Understanding these patterns is essential for guiding evidence-based interventions and sustaining progress toward national and global child survival goals.

Over the past few decades, Tanzania has made significant progress in reducing infant and under-five mortality rates; however, the pace of decline has not been uniform across time or regions, and disparities persist among population subgroups.

3.2.1 Levels of Infant and Under-Five Mortality in Tanzania

Understanding the levels of infant, child, and under-five mortality is essential for assessing the health status of the under-five population in Tanzania. These indicators are widely recognized as key measures of child survival and overall development, reflecting the quality of maternal and child healthcare, nutrition, and socio-economic conditions. The 2022 Population and Housing Census (PHC) provides comprehensive estimates on these

indicators, disaggregated by geographical areas and sex, offering valuable insights for evidence-based planning and targeted health interventions.

According to the 2022 PHC, the Infant Mortality Rate (IMR) for Tanzania was 34 deaths per 1,000 live births, meaning that approximately 34 infants out of every 1,000 live births did not survive to their first birthday. The Child Mortality Rate (CMR), which refers to the probability of dying between the first and fifth birthday, stood at 20 deaths per 1,000. Consequently, the Under-Five Mortality Rate (U5MR), which combines both infant and child mortality, was estimated at 54 deaths per 1,000 live births. These figures indicate that just over five children out of every 100 live births in Tanzania die before reaching their fifth birthday.

Disaggregated analysis reveals notable disparities in mortality outcomes by place of residence. Rural areas consistently exhibited higher mortality rates compared with urban areas, underscoring the rural-urban gap. Specifically, the rural IMR was 35 compared with 33 in urban areas; the rural CMR was 20 against 19.5 in urban settings; and the rural U5MR was 55, slightly higher than the 53 reported in urban areas. These differences emphasize the need for targeted interventions to improve healthcare delivery and child survival in rural communities.

Sex disaggregation further shows a consistent pattern of higher mortality among male children across all indicators. The IMR for males was 40, significantly higher than the 29 recorded for females. Similarly, the CMR was 21 for males compared to 19 for females, and the U5MR was 60 among males, while females had a lower rate of 49. These findings align with well-documented biological and epidemiological evidence that male children are generally more vulnerable to early childhood illnesses and mortality, despite often receiving equal or preferential care in many cultural contexts. (Hill & Upchurch, 1995; Drevenstedt et al., 2008).

A comparison between Tanzania Mainland and Zanzibar shows relatively similar mortality levels, although some marginal differences are observed. In Mainland Tanzania, the IMR and U5MR were both 34.3 and 54.3, respectively, whereas in Zanzibar, they were slightly higher at 35.0 and 55.0, respectively. The CMR was higher in Zanzibar (22) than in the Mainland (20), and unlike the general national pattern, urban Zanzibar exhibited the same levels of IMR (35) and its rural counterpart (35).

Table 3.1: Infant, Child and Under Five Mortality Rates by Place of Residence and Sex; Tanzania, 2022 PHC

Indicator	Tanzania	Tanzania Mainland	Tanzania Zanzibar
Infant Mortality Rate	34.3	34.3	34.7
Rural	34.9	34.9	34.5
Urban	33.4	33.3	34.9
Male	39.6	39.6	40.0
Female	29.0	29.0	29.3
Child Mortality Rate	20.0	20.0	22.2
Rural	20.3	20.3	20.1
Urban	19.5	19.6	20.3
Male	20.6	20.6	20.3
Female	18.8	18.7	18.9
Under-Five Mortality Rate	54.3	54.3	54.9
Rural	55.2	55.2	54.6
Urban	52.9	52.9	55.2
Male	60.3	60.2	60.3
Female	47.8	47.7	48.2

3.2.2 Trends of Infant, Child, and Under Five Mortality in Tanzania

Monitoring the levels and trends of childhood mortality over time provides essential evidence for evaluating the impact of national and subnational health interventions, socio-economic changes, and policy reforms aimed at improving child survival.

In Tanzania, sustained efforts have been made to reduce childhood mortality through expanded access to maternal and child health services, immunization programmes, nutrition interventions, and improvements in water and sanitation. These interventions, combined with broader development progress, have contributed to a steady decline in infant and under-five mortality rates over the past several decades.

According to data from successive population and housing censuses, both infant mortality, child mortality, and under-five mortality have shown a downward trend from the late 1970s to 2022.

Results indicate that, at national level, Infant mortality declined from about 137 deaths per 1,000 live births in 1978 to approximately 34 deaths per 1,000 live births in 2022, child

mortality fell from about 94 deaths per 1,000 live births in 1978 to 20 deaths per 1,000 live births in 2022, while under-five mortality dropped from around 231 deaths per 1,000 live births to about 54 deaths per 1,000 live births during the same period. Infant mortality contributes almost 69 percent of under-five mortality. A similar pattern is observed for Tanzania mainland (Figures 3.1 – 3.2).

For Tanzania, Zanzibar, IMR, CMR, and U5MR have consistently declined from 120, 82, and 202 deaths per 1,000 live births to 46, 21, and 67 deaths per 1,000 live births, respectively, in 1988 to 2012 Census (Figure 3.3).

This reduction is attributed to interventions such as increased immunization coverage, introduction of Integrated Management of Childhood Illness (IMCI), promotion of exclusive breastfeeding, malaria prevention, and the scale-up of community-based health services.

Despite these achievements, the pace of decline has slowed in recent years, and further efforts are needed to accelerate progress, especially in hard-to-reach and underserved regions. Emerging challenges, including health system capacity constraints, socio-economic inequalities, and climate-related health risks, pose threats to sustaining these gains.

Figure 3.1: Trends in Childhood Mortality Rates; Tanzania, 1978-2022 PHCs

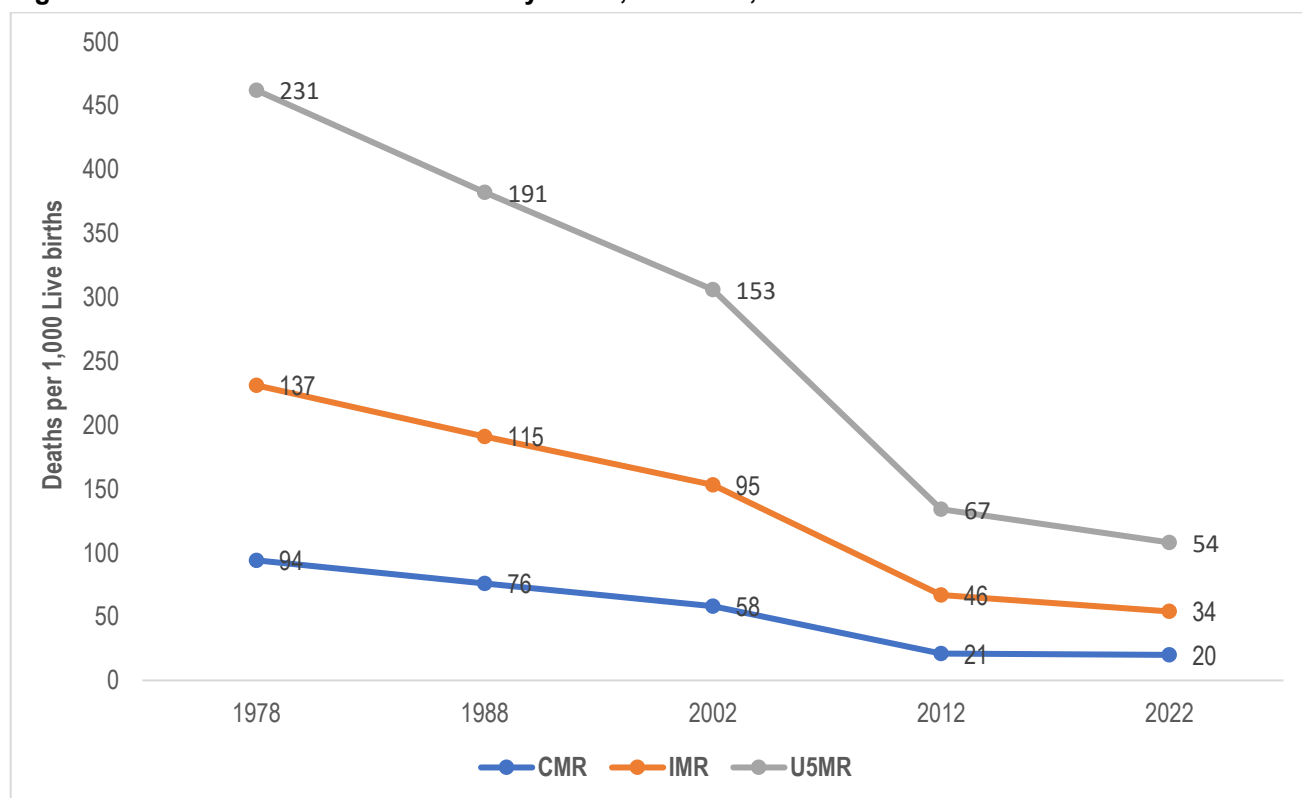


Figure 3.1.1: Trends in Childhood Mortality Rates; Tanzania Mainland, 1978-2022 PHCs

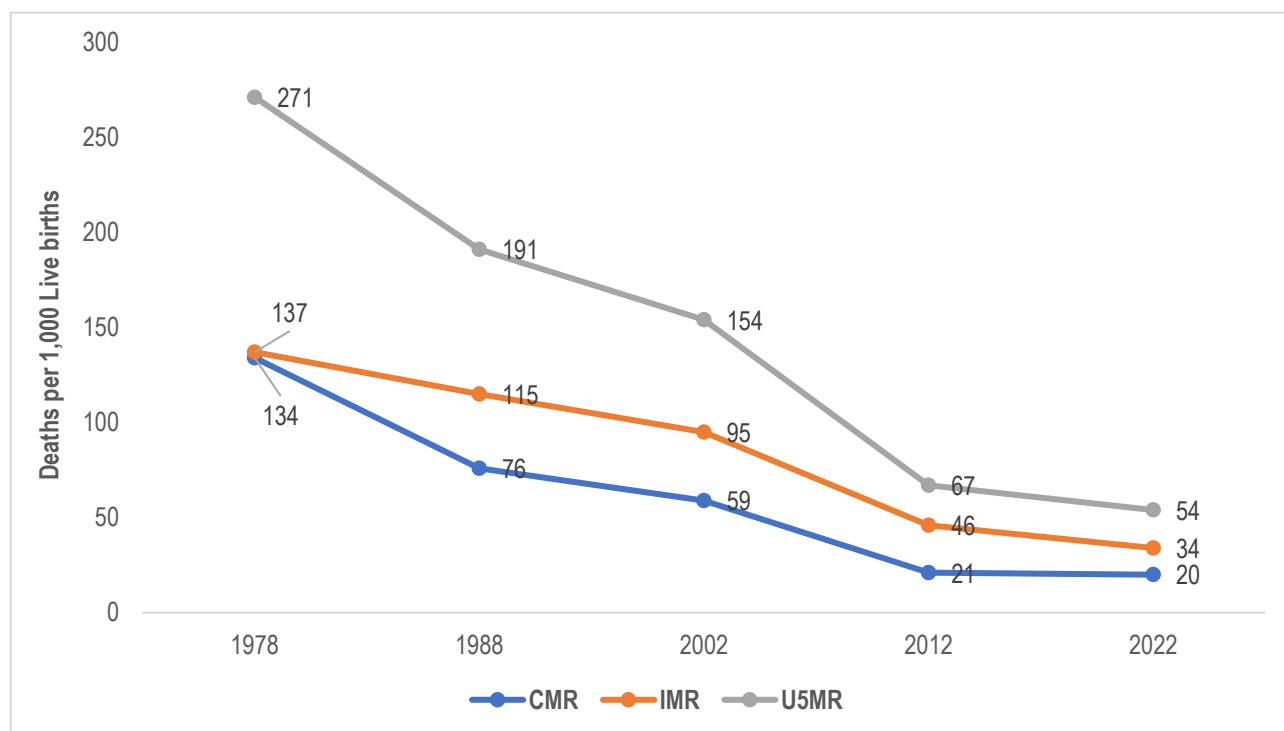
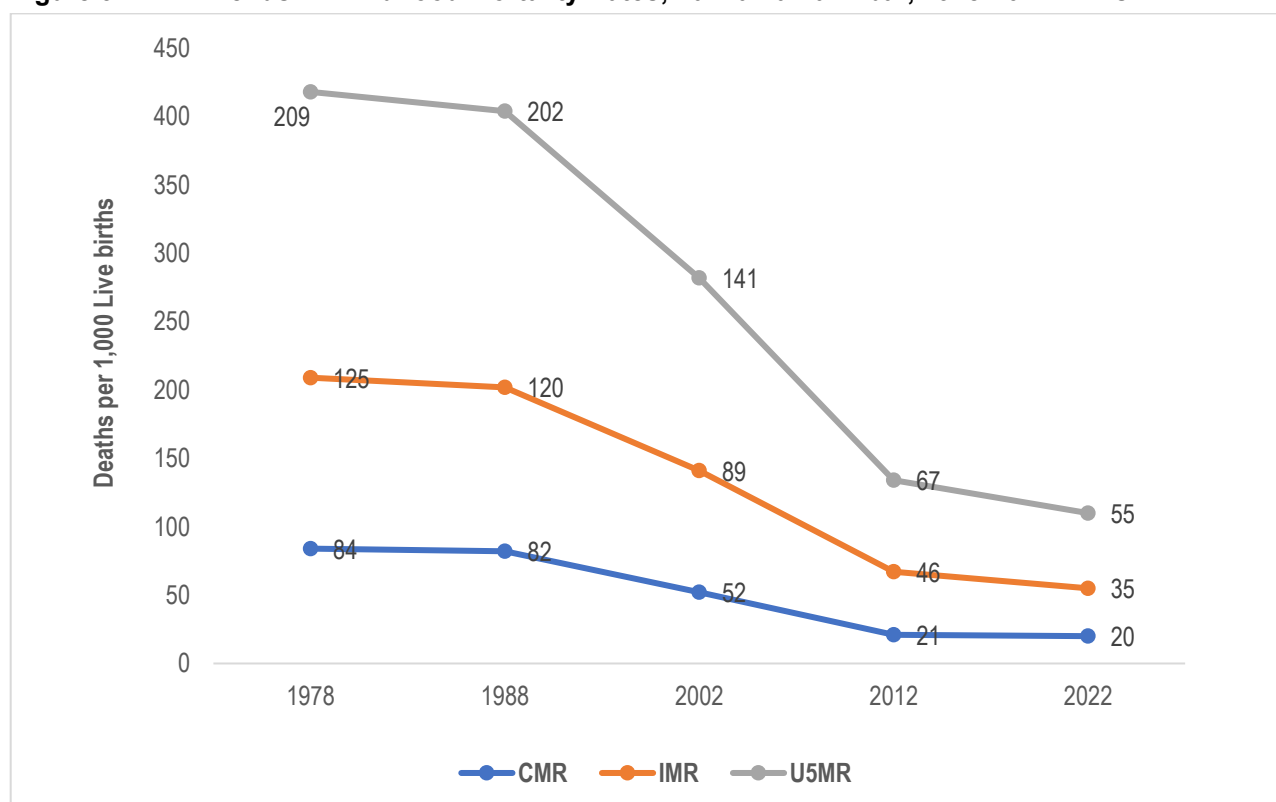


Figure 3.1.2: Trends in Childhood Mortality Rates; Tanzania Zanzibar, 1978-2022 PHCs



3.3 Trends in the Proportion of Children Dead per 100 Women

The proportion of children ever born who have died serves as an important indicator of cumulative childhood mortality and reflects both historical and recent trends in child survival. This indicator is particularly useful when derived from census data, where complete birth histories are not collected, but information on children ever born and children surviving is available.

An analysis of the proportion of children dead by age of mother provides critical insights into child survival patterns and maternal experiences of child loss across different age cohorts. In Tanzania, data from the 2002 and 2022 Population and Housing Censuses reveal a consistent decline in the proportion of children ever born who had died across all maternal age groups, reflecting improvements in child health and survival over the two decades. Generally, older mothers reported higher proportions of children dead, largely due to longer exposure to risk and historical periods of higher child mortality. However, the percentage change between 2002 and 2022 shows the most significant reductions occurring among younger mothers (aged 15–19), suggesting progress in maternal and child health services, increased access to immunization, improved nutrition, and better household living conditions during the early 2000s and 2010s. Despite these gains, disparities remain, with older women still reporting relatively higher child loss, underscoring the need for targeted interventions aimed at addressing long-term reproductive health and family planning needs. The observed trends highlight the importance of sustained investments in maternal and child health to further reduce child mortality in Tanzania.

Table 3.2: Proportion of Children Dead by Age of Mother and Percentage Change; Tanzania 2002-2022 PHCs

Age Group of Mother	Census Year			Percentage Change	
	2002	2012	2022	2002-2012	2012-2022
15-19	3.3	1.7	0.7	-48	-57
20-24	19.0	10.0	4.9	-47	-51
25-29	40.2	23.4	10.6	-42	-55
30-34	64.9	41.0	18.2	-37	-56
35-39	88.7	60.6	28.9	-32	-52
40-44	116.0	80.9	40.0	-30	-51
45-49	137.8	101.3	49.6	-26	-51

Analysis of the proportion of male and female children dead by age groups of mothers provides critical insights into gender-related patterns in childhood mortality and intergenerational shifts in child survival. Using data from the 2002, 2012, and 2022 Population and Housing Censuses, this section examines how child mortality outcomes vary by the child's sex across maternal age groups.

In all census years, the proportion of children dead, defined as the number of deceased children as a percentage of children ever born, was generally higher among older mothers (aged 40–49), consistent with their longer exposure to childbearing and higher mortality risks in earlier decades. Younger mothers (aged 15–29) showed markedly lower proportions, reflecting improved child survival in recent years.

Across all three censuses, male children consistently experienced a slightly higher proportion of deaths than female children in most maternal age groups. This aligns with established demographic patterns in sub-Saharan Africa, where biological and behavioural factors tend to result in higher mortality among boys in the early stages of life, despite cultural preferences for sons in some contexts (Hill & Upchurch, 1995; UN IGME, 2023).

Table 3.3 shows that, in 2002, the proportion of male children dead per 100 women among mothers aged 45–49 was around 72.0, compared to 65.8 for female children. In 2012, the proportions declined to 53.2 for males and 48.1 for females in the same age group. By 2022, the proportion further declined to 27.7 for males and 22.0 for females, showing overall progress in child survival across both sexes.

The gap between male and female child mortality has narrowed over time, indicating more equitable health outcomes. However, the persistently higher male mortality warrants continued focus on neonatal and postnatal care services, especially in rural and underserved areas where service quality and accessibility may be limited.

Table 3.3: Proportion of Male and Female Children Dead by Age Groups of Mother; Tanzania, 2002-2022 PHCs

Age Group of Mother	Male			Female		
	2002	2012	2022	2002	2012	2022
15-19	1.7	0.9	0.4	1.6	0.8	0.3
20-24	10.2	5.5	2.9	8.8	4.5	2.0
25-29	21.3	12.6	6.1	18.9	10.8	4.5
30-34	34.4	22.0	10.4	30.5	19.1	7.8
35-39	47.1	32.5	16.3	41.6	28.1	12.6
40-44	61.0	42.8	22.5	54.9	38.1	17.5
45-49	72.0	53.2	27.7	65.8	48.1	22.0

3.4 Differentials in Proportions of Children Dead

Understanding the differentials in the proportions of children dead provides critical insights into the underlying disparities in child survival outcomes across various population subgroups. These differentials often reflect the influence of socio-demographic, economic, and environmental factors. Analysing these variations helps identify the most vulnerable

groups and geographical areas with higher mortality risks, thereby informing targeted interventions and resource allocation. This section presents the patterns and extent of mortality differentials among children based on selected background characteristics using data from the 2022 Population and Housing Census.

3.4.1 Rural-Urban Differentials in Proportions of Children Dead by Place of Residence

Place of residence is a key determinant of childhood survival, influencing access to healthcare, drinking water, sanitation, education, and overall living conditions. In Tanzania, the rural–urban divide has historically contributed to disparities in child mortality outcomes. Analysing the proportion of children dead by residence offers valuable insight into geographic inequalities and helps identify areas that require targeted policy interventions. Analysis of census data from 2002 and 2022 reveals significant improvements in child survival across both rural and urban areas in Tanzania, though disparities remain.

In 2002, the proportion of children dead among 100 mothers aged 45–49 was 152 in rural areas compared to 92 in urban areas. By 2022, these figures had declined to 57 in rural areas and 37 in urban areas, representing percentage reductions of 63% and 60%, respectively. This indicates more rapid improvement in urban settings.

Across maternal age groups, the proportion of children dead per 100 women increased with the age of the mother, reflecting cumulative fertility and exposure to higher mortality risks in earlier decades. For example, among mothers aged 35–39 years, the proportion of children dead in 2002 was 99.7 in rural areas and 56.4 in urban areas, while in 2022, it had declined to 34.0 and 21.4 respectively.

The trend underscores a nationwide improvement in child survival, particularly among younger mothers, and a more substantial decline in urban settings, likely driven by better access to healthcare, maternal education, and sanitation services. However, rural areas still report consistently higher child loss across all age groups, highlighting persistent inequalities. These findings point to the need for strengthened rural health systems, targeted maternal and child health interventions and equitable investment in social services further to narrow the rural-urban survival gap (Table 3.4).

Table 3.4: Proportions of Children Dead per 100 Women by Place of Residence and Age Groups of Mother; Tanzania, 2002-2022 PHCs

Age Group of Mother	2002		2012		2022	
	Rural	Urban	Rural	Urban	Rural	Urban
15-19	3.9	1.8	2.1	1.1	0.9	0.4
20-24	22.6	10.8	12.1	6.8	6.2	3.2
25-29	47.2	23.1	28.0	15.8	13.0	7.5
30-34	74.4	39.0	48.6	27.6	21.7	13.5
35-39	99.7	56.4	70.6	40.6	34.0	21.4
40-44	128.1	76.5	92.4	55.0	46.6	29.5
45-49	150.2	94.1	112.7	75.0	56.6	37.1

3.5 Regional Differentials in Childhood Mortality Proportions

Examining regional differentials in the proportion of children dead is essential for understanding spatial inequalities in child survival across Tanzania. These disparities reflect variations in access to healthcare services, socioeconomic development, educational levels, infrastructure, cultural practices, and the effectiveness of health interventions across different regions.

The 2022 Census indicates that the regional gap remains notable among women aged 45-49, with some regions such as Kilimanjaro, Arusha, and Dar es Salaam consistently maintaining lower levels (below 35%), while Rukwa, Lindi, Mara, Kaskazini Pemba, and Dodoma still report comparatively higher proportions of children dead (above 60%). These patterns may be linked to regional differences in poverty levels, health system performance, maternal education, and environmental health conditions (Table 3.5).

Such disparities underscore the need for region-specific strategies and targeted interventions. Areas with persistently high child mortality may require intensified efforts to strengthen health systems, increase community-based health initiatives, improve maternal and child nutrition, and address socio-cultural barriers to health service utilization.

**Table 3.5: Regional Differentials in Proportions of Children Dead by Age of Mother; Tanzania, 2022
PHC**

Region	Age Group of Mother						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Tanzania	0.7	4.9	10.6	18.2	28.9	40.0	49.6
Tanzania Mainland	0.7	5.0	10.7	18.3	29.1	40.1	49.8
Dodoma	0.9	5.0	10.5	18.3	31.1	46.3	61.2
Arusha	0.4	2.4	5.3	9.2	14.0	18.6	22.4
Kilimanjaro	0.3	2.5	5.5	9.6	15.0	19.6	24.3
Tanga	0.7	5.3	11.6	19.2	30.4	43.6	54.9
Morogoro	0.6	4.6	10.1	17.8	28.1	39.5	50.4
Pwani	0.6	4.6	10.1	17.8	28.1	39.5	50.4
Dar es Salaam	0.3	2.4	6.0	11.4	17.9	24.8	30.5
Lindi	0.9	5.9	11.7	19.1	31.1	47.7	65.6
Mtwara	0.9	5.7	11.4	19.0	29.0	43.4	58.8
Ruvuma	1.3	6.5	12.6	21.0	32.8	44.3	57.3
Iringa	0.5	4.1	9.6	17.3	28.3	40.5	51.4
Mbeya	0.8	4.5	9.5	16.5	27.2	38.2	49.0
Singida	0.6	4.6	9.7	16.2	25.8	36.2	45.2
Tabora	1.2	6.9	13.8	22.7	34.2	44.8	51.4
Rukwa	1.3	8.0	16.8	26.6	43.1	56.6	66.9
Kigoma	0.7	5.3	12.2	20.7	34.1	45.4	54.0
Shinyanga	0.9	5.8	11.9	20.1	30.6	39.8	47.3
Kagera	0.7	6.8	15.1	26.0	41.5	57.3	69.1
Mwanza	0.6	4.6	10.5	18.5	29.8	40.2	48.4
Mara	0.9	6.6	14.9	26.2	41.0	55.3	64.5
Manyara	0.7	4.1	8.9	15.2	22.7	31.7	38.5
Njombe	0.5	4.3	9.2	16.7	25.5	36.7	46.3
Katavi	1.1	7.0	14.7	24.8	39.7	49.6	56.5
Simiyu	0.8	6.2	13.5	21.7	34.5	48.2	56.1
Geita	0.9	6.3	14.0	23.9	36.6	48.2	56.3
Songwe	1.3	6.7	12.6	21.1	34.2	47.6	59.3
Tanzania Zanzibar	0.2	2.7	7.9	14.4	24.3	34.8	43.5
Kaskazini Unguja	0.2	2.9	8.6	14.9	27.9	39.9	47.9
Kusini Unguja	0.4	3.5	8.1	15.5	24.2	34.2	45.5
Mjini Magharibi	0.2	2.1	6.8	12.6	21.2	29.2	35.7
Kaskazini Pemba	0.3	3.9	10.9	19.3	31.0	51.2	63.4
Kusini Pemba	0.3	2.9	9.4	16.4	25.9	37.3	45.4

3.6 Children Dead (absolute numbers) by Specified Age Groups and Place of Residence

To ensure a comprehensive analysis of child mortality, this report incorporates the absolute number of deaths among children aged 6–10 and 11–17 years. While traditional childhood mortality indicators often focus on the under-five age group, extending the analysis to include older children and adolescents provides a fuller picture of mortality patterns across the entire childhood period. Children in these age groups face a distinct set of health risks and external causes of death, such as injuries, road accidents, violence, drowning, and emerging non-communicable diseases that are often overlooked in standard mortality assessments. Presenting absolute numbers enables a more accurate identification of the mortality burden in these age ranges, supports the design of age-specific health and protection interventions, and informs a more equitable allocation of resources. Moreover, this approach enhances intersectoral planning and monitoring, as many of the factors contributing to mortality in older children extend beyond the health sector. By including these age groups, the report aims to strengthen the evidence base for policies and programmes that promote the survival and well-being of all children, not only in early childhood but throughout their development into adolescence.

The 2022 Population and Housing Census recorded a total of 125,170 child deaths in Tanzania among children aged 0–5 years, with the majority occurring in rural areas (90,173 deaths) compared to urban areas (34,997 deaths). This trend is consistent across all specified age groups, highlighting significant disparities in child survival between rural and urban areas. Notably, 10,779 deaths were reported among children aged 6–10 years and 11,700 among those aged 11–17 years, underscoring the importance of extending mortality analysis beyond early childhood. Tanzania Mainland accounted for the largest share of deaths across all age groups, while Zanzibar reported relatively fewer deaths, with 4,623 for ages 0–5 years, 221 for ages 6–10 years, and 290 for ages 11–17 years. These figures reveal a continued vulnerability among children and adolescents, especially in rural areas, and reinforce the need for targeted interventions that span the full spectrum of childhood and adolescence (Table 3.6).

Table 3.6: Children Dead (absolute numbers) by Specified Age Groups and Place of Residence; Tanzania, 2022 PHC

Age of the Deceased	Tanzania			Tanzania Mainland			Tanzania Zanzibar		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
0	84,425	58,875	25,550	80,586	56,826	23,760	3,839	2,049	1,790
1-4	36,811	28,245	8,566	36,087	27,813	8,274	724	432	292
0-5	125,170	90,173	34,997	120,547	87,660	32,887	4,623	2,513	2,110
6-10	10,779	8,274	2,505	10,558	8,146	2,412	221	128	93
11-17	11,700	8,601	3,099	11,410	8,426	2,984	290	175	115

3.7 Contribution of Children Dead

In addition to examining regional differentials in the proportion of children dead, it is equally important to analyze the contribution of each region to the national total number of deceased children. This measure highlights the regions with the highest absolute burden of child deaths, regardless of population size or proportion, and is crucial for prioritizing resource allocation and targeted interventions.

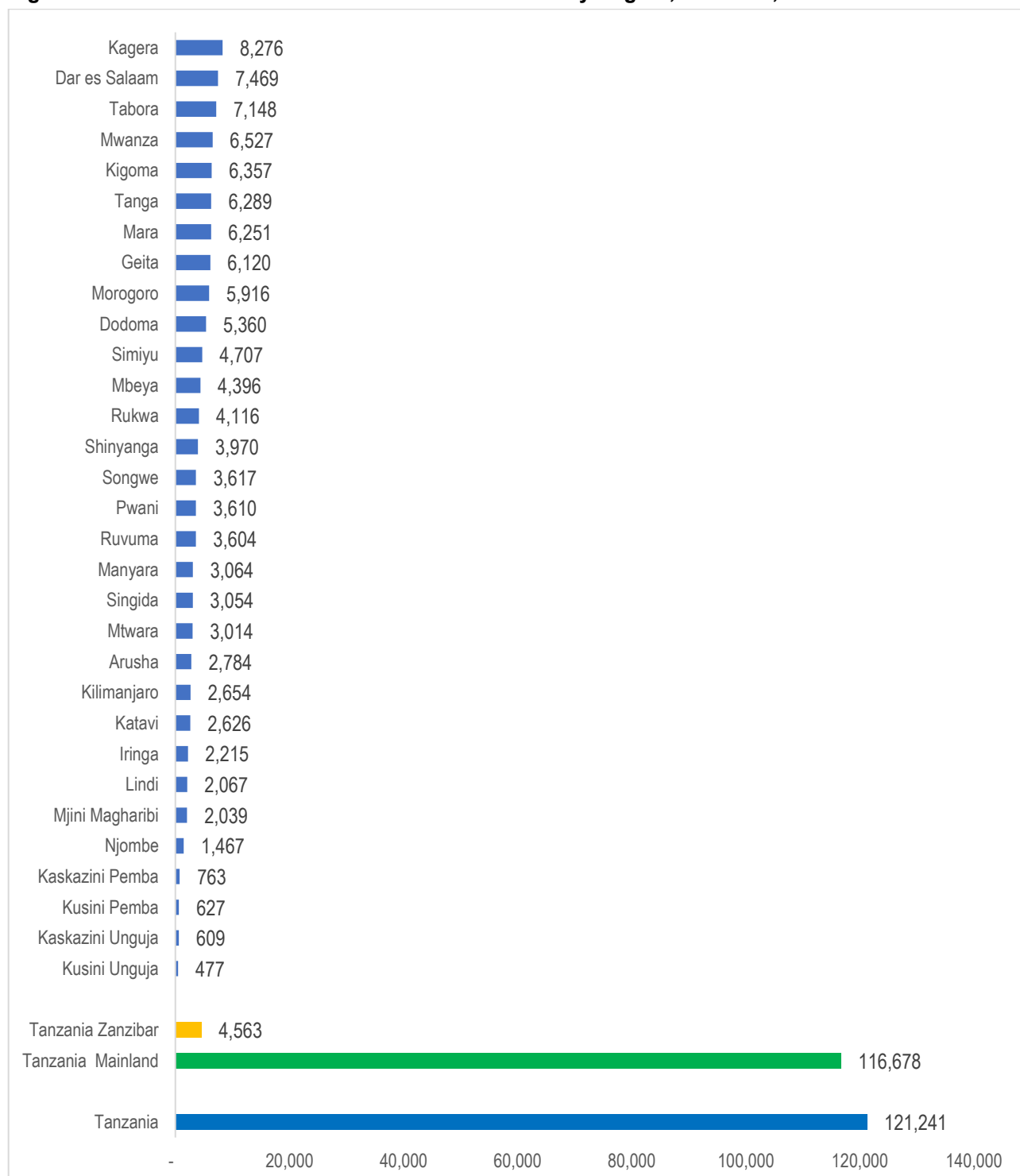
Using data from the 2022 Population and Housing Census, the share of each region in the total number of children dead in Tanzania was calculated based on the reported numbers of children ever born and children surviving. The analysis reveals that regions with large populations of women of reproductive age and historically high fertility rates contribute significantly to the overall burden of child mortality, even if their proportion of children dead is relatively moderate.

Regions such as Kagera, Dar es Salaam, and Tabora contributed the most significant shares to the national total of children dead, jointly accounting for over 22,893 (18.5%) of all child deaths in the country. This may be contributed by the populations of the regions, although the Kagera region has a small population with the highest number of child deaths, this may be due to its being less urbanized. On the other hand, regions such as Kusini Unguja, Kusini Pemba, Kaskazini Unguja, Kaskazini Pemba and Mjini Magharibi contributed relatively small shares to the total number of children dead. This variation may be attributed to differences in population size, socioeconomic conditions, access to health services, and health-seeking behaviors across regions. For instance, high-population regions such as Dar es Salaam and Mwanza naturally record larger absolute numbers of child deaths, while smaller island regions tend to report fewer cases. Moreover, disparities in maternal healthcare utilization,

nutritional status, and disease prevalence may partly explain the regional differences observed (Figure 3.2).

This pattern illustrates that region with both high fertility and high mortality rates bear a disproportionate burden of child deaths in absolute terms. Such insights are vital for evidence-based planning, as they identify regions where interventions can have the most significant national impact.

Figure 3.2: Contribution of Under-five Children Deaths by Region; Tanzania, 2022 PHC



3.8 Estimates of Childhood Mortality using Indirect Methods

3.8.1 Introduction

In the absence of complete and reliable vital registration systems, indirect methods provide a valuable approach to estimating childhood mortality. The 2022 Population and Housing Census in Tanzania applied Brass-type indirect estimation techniques to assess key indicators of childhood mortality, including Infant Mortality Rate (IMR), Child Mortality Rate (CMR), and Under-Five Mortality Rate (U5MR).

These estimates were derived using information collected from women aged 15–49 years on the number of children ever born and the number of children surviving. By applying model life tables and mortality assumptions based on age-specific fertility patterns, the method estimates the probability of dying before age one (IMR), between age one and five (CMR), and before age five (U5MR).

3.8.2 Limitations

While indirect methods are useful where direct data is unavailable or incomplete, they are sensitive to assumptions about fertility and mortality and may be influenced by recall bias and reporting errors (United Nations, 1983; Hill et al., 2012). Nevertheless, they remain a crucial tool for planning and monitoring child survival goals, particularly in relation to SDG Target 3.2 (UN IGME, 2023; NBS & OCGS, 2024).

3.8.4 Percentage Change of Infant Mortality Rate in the Intercensal Periods (1978–2022)

Understanding trends in infant mortality over time provides critical insights into the progress made in improving child survival and the effectiveness of health interventions. Using estimates derived from indirect methods applied to census data, the Infant Mortality Rate (IMR) in Tanzania has shown a consistent decline over the past four decades.

The IMR declined from 137 in 1978 to 34 in 2022, representing an overall reduction of approximately 75.2 percent over the 44-year period. The most significant decline occurred between 2002 and 2012, with a reduction of 51.6 percent, likely reflecting the impact of expanded immunization programmes, improved access to maternal and newborn care, and national efforts to combat malaria and other childhood diseases. (Table 3.5).

The decline between 2012 and 2022 was more moderate, suggesting a need to address the remaining challenges, such as neonatal mortality, regional disparities, and the quality of care in rural areas. These figures indicate substantial progress in reducing infant mortality

in Tanzania, although sustaining and accelerating gains will require continued investment in maternal and child health services, particularly in underserved regions.

3.8.5 Percentage Change of Under-five Mortality Rate in the Intercensal Periods (1978–2022)

Tracking under-five mortality over long periods provides critical insights into a country's health system performance and the effectiveness of child survival interventions. In Tanzania, the Population and Housing Censuses conducted in 1978, 1988, 2002, 2012, and 2022 have consistently collected data enabling estimation of the Under-Five Mortality Rate (U5MR).

Analyzing the percentage change in U5MR across intercensal periods allows for the identification of trends, progress, and challenges in improving child survival. It also reflects broader socio-economic and health sector developments, such as the expansion of immunization, maternal health services, nutrition programmes, and community health interventions.

Between 1978 and 2022, Tanzania achieved a 71.4 percent overall reduction in the under-five mortality rate, from 231 to 54 deaths per 1,000 live births. The most substantial progress occurred during the 2002–2012 intercensal period, with a 56.2 percent decline, coinciding with intensified child health interventions, expansion of primary healthcare services, and improved immunization coverage through national programmes such as IMCI (Integrated Management of Childhood Illnesses) (Table 3.7).

The 2022 Census confirms continued improvement, although the rate of decline (19.4%) between 2012 and 2022 was slower than the previous decade, possibly due to slower improvements in areas that were already doing well and persistent inequalities in hard-to-reach rural areas. The steady decline in U5MR over the past four decades underscores Tanzania's progress in child survival. However, the slowing pace of reduction between 2012 and 2022 highlights the need for renewed investment in health system strengthening, equity-based interventions, and community-level outreach, especially in regions with higher mortality burdens.

Table 3.7: Percentage Change Infant and Under-Five Mortality Rates in the Intercensal Periods between 1978 and 2022

	1978	1988	2002	2012	2022	Percentage Change			
						1978-1988	1988-2002	2002-2012	2012-2022
IMR	137	115	95	46	34	-16.1	-17.4	-51.6	-26.1
U5MR	231	191	153	67	54	-17.3	-19.9	-56.2	-19.4

3.9 Differentials in Infant and Child Mortality

3.9.1 Rural-Urban Differentials of Infant and Child Mortality

Rural-urban disparities in infant and child mortality reflect underlying differences in access to health services, living conditions, maternal education, and socioeconomic development. Analysis of data from the 2022 Population and Housing Census reveals significant differences in childhood mortality outcomes between rural and urban areas in Tanzania.

The Infant Mortality Rate (IMR) and Under-Five Mortality Rate (U5MR) were consistently higher in rural areas compared to urban areas across all child mortality categories.

In 2022, the IMR in rural areas was estimated at 35 per 1,000 live births, compared with 33 deaths per 1,000 live births in urban areas. Similarly, the U5MR in rural areas stood at 55 deaths per 1,000 live births, while urban areas recorded a significantly lower rate of 53 deaths per 1,000 live births. Overall, male children, irrespective of places of residence, have higher mortality than females in the infant, childhood, and up to the fifth birthday (Table 3.8).

Addressing rural-urban differentials in child mortality is essential to achieving equity in child health outcomes and meeting national and global targets such as Sustainable Development Goal 3.2. Efforts to reduce these disparities will ensure that all children, regardless of where they are born, have an equal chance to survive and be healthy.

Table 3.8: Rural-Urban Infant, Child, and Under-Five Mortality Rates by Sex; Tanzania, 2022 PHC

Place of Residence	Infant Mortality Rates			Child Mortality Rates			Under-5 Mortality Rates		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Tanzania	34.3	39.6	29.0	20.0	20.6	18.8	54.3	60.3	47.8
Rural	34.9	40.2	29.6	20.3	20.9	19.1	55.2	61.1	48.7
Urban	33.4	38.8	27.9	19.5	20.2	18.1	52.9	59.0	46.0
Tanzania Mainland	34.3	39.6	29.0	20.0	20.6	18.7	54.3	60.2	47.7
Rural	34.9	40.2	29.6	20.3	20.9	19.1	55.2	61.1	48.7
Urban	33.3	38.7	27.9	19.6	20.2	18.1	52.9	58.9	45.9
Tanzania Zanzibar	34.7	40.0	29.3	20.2	20.3	18.9	54.9	60.3	48.2
Rural	34.5	39.6	29.4	20.1	20.6	19.0	54.6	60.2	48.4
Urban	34.9	40.5	29.1	20.3	21.1	18.8	55.2	61.6	48.0

3.9.2 Regional Differentials of Infant and Child Mortality

Understanding regional variations in infant and child mortality is essential for informing targeted public health interventions and policies. Infant and under-five mortality are critical indicators of child well-being and health system performance (UN IGME, 2023). In Tanzania and other low- and middle-income countries, these regional disparities reflect unequal access to health services, socio-economic conditions, and geographic or cultural factors (Victora et al., 2003; Cleland et al., 1992).

Table 3.9 and Maps 3.1 and 3.2 present data on child survivorship, showing significant regional variations in early childhood mortality in Tanzania. The 2022 Census estimates infant, child, and under-five mortality rates, disaggregated by sex and place of residence, indicating a clear gender disparity. Male infants have a higher mortality rate (40 per 1,000 live births) than females (29 per 1,000 live births), a difference of 11 infant deaths, which could be primarily caused by biological factors, such as genetic vulnerabilities and weak immune responses in males (Drevenstedt et al., 2008). Socio-cultural factors such as health care gender bias and inequalities in access to medical services, particularly in rural areas of Tanzania Mainland, exacerbate disparities thus making male infants more vulnerable to diseases and poor health outcomes (Graham, 2003; Sullivan et al., 2012).

There are 12 of the 31 regions reporting rates below the national average, while remaining regions show higher mortality rates. Arusha and Kilimanjaro regions recorded the lowest infant mortality rates of 20 and 24 deaths per 1,000 live births, respectively, followed by Manyara (25), Singida (26), and Kusini Pemba (30). On the contrary, regions with high infant mortality rates ranging from 35 in Geita to 43 deaths per 1,000 live births in Lindi are above the national average, indicating significant disparities among regions in child health outcomes.

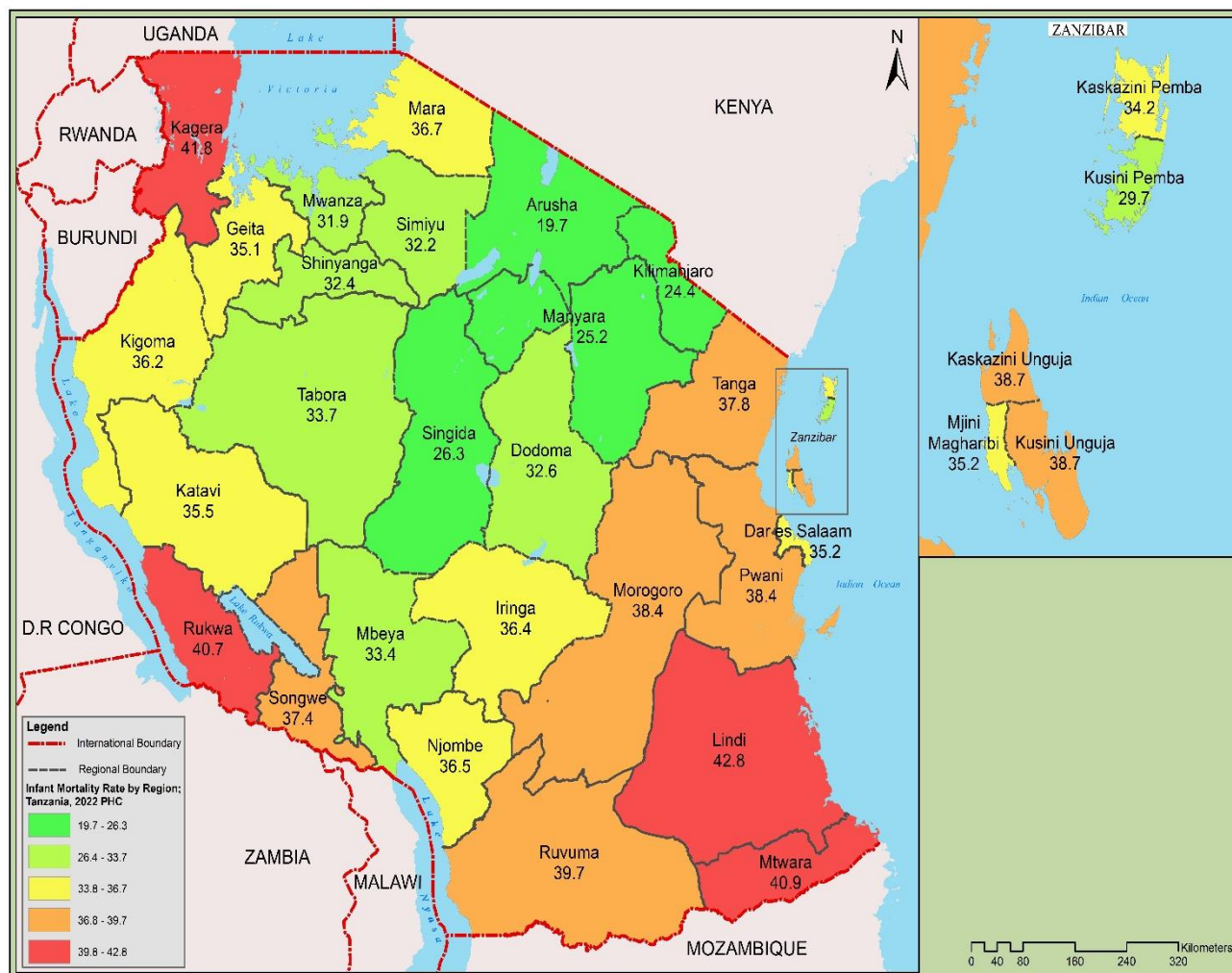
Similarly, Arusha and Kilimanjaro regions reported the lowest under-five mortality rates at 32 and 39 deaths per 1,000 live births, respectively. Twelve out 30 regions had under-five mortality rates below the national average of 54 deaths per 1,000 live births, while 19 regions recorded higher rates, ranging from 52 to 67 deaths per 1,000 live births.

The regional data therefore underscores substantial variation in mortality rates particularly in the southern and western regions such as Lindi, Kagera, Mtwara, and Rukwa, with less mortality than others in the north regions such as Arusha and Kilimanjaro. These disparities indicating an urgent need for interventions focusing on healthcare access, maternal and child health services, and infrastructure improvements in high-mortality regions, to reduce gaps and improve child survival in the country.

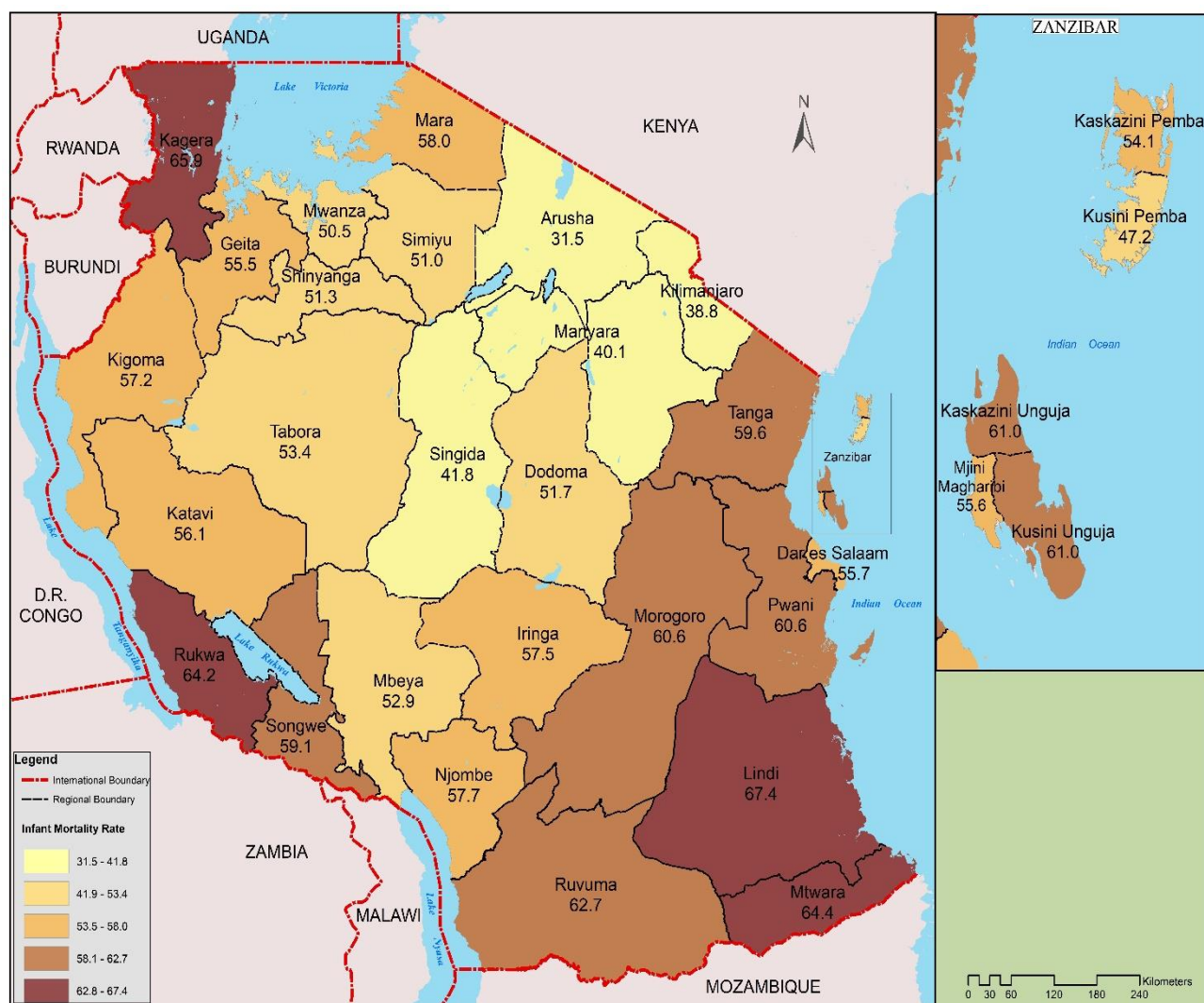
Table 3.9: Infant, Child and Under-Five Mortality Rates by Sex and Regions; Tanzania, 2022 PHC

Region	Infant Mortality Rate			Child Mortality Rate			Under-5 Mortality Rate		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Tanzania	34.3	39.6	29.0	20.0	20.6	18.8	54.3	60.3	47.8
Tanzania Mainland	34.3	39.6	29.0	20.0	20.6	18.7	54.3	60.2	47.7
Dodoma	32.6	37.7	27.5	19.1	19.7	17.8	51.7	57.4	45.3
Arusha	19.7	23.1	16.3	11.8	12.4	10.8	31.5	35.5	27.1
Kilimanjaro	24.4	28.1	20.6	14.4	14.9	13.5	38.8	42.9	34.1
Tanga	37.8	43.9	31.6	21.9	22.7	20.3	59.6	66.6	51.9
Morogoro	38.4	43.6	33.1	22.2	22.6	21.2	60.6	66.2	54.3
Pwani	38.4	43.6	33.1	22.2	22.6	21.2	60.6	66.2	54.3
Dar es Salaam	35.2	40.8	29.5	20.5	21.2	19.1	55.7	62.0	48.6
Lindi	42.8	49.8	35.7	24.6	25.5	22.9	67.4	75.3	58.6
Mtwara	40.9	46.8	34.8	23.6	24.1	22.3	64.4	71.0	57.2
Ruvuma	39.7	45.8	33.7	22.9	23.6	21.6	62.7	69.4	55.3
Iringa	36.4	41.7	31.0	21.1	21.7	20.0	57.5	63.4	50.9
Mbeya	33.4	38.5	28.2	19.5	20.1	18.3	52.9	58.6	46.5
Singida	26.3	30.3	22.3	15.5	16.0	14.6	41.8	46.3	36.9
Tabora	33.7	38.6	28.9	19.7	20.1	18.7	53.4	58.7	47.6
Rukwa	40.7	46.7	34.8	23.5	24.1	22.3	64.2	70.7	57.1
Kigoma	36.2	42.4	29.9	21.0	22.0	19.3	57.2	64.4	49.2
Shinyanga	32.4	37.4	27.3	18.9	19.6	17.7	51.3	57.0	45.0
Kagera	41.8	48.2	35.4	24.1	24.8	22.6	65.9	73.0	58.0
Mwanza	31.9	37.3	26.4	18.6	19.5	17.2	50.5	56.8	43.6
Mara	36.7	42.0	31.3	21.3	21.8	20.2	58.0	63.9	51.5
Manyara	25.2	29.4	21.0	14.9	15.6	13.8	40.1	45.0	34.7
Njombe	36.5	42.0	31.0	21.2	21.8	20.0	57.7	63.9	50.9
Katavi	35.5	41.1	29.9	20.6	21.4	19.3	56.1	62.4	49.2
Simiyu	32.2	37.2	35.4	18.8	19.4	9.6	51.0	56.6	44.9
Geita	35.1	40.2	30.0	20.4	20.9	19.4	55.5	61.1	49.4
Songwe	37.4	43.7	31.1	21.7	22.6	20.1	59.1	66.3	51.2
Tanzania Zanzibar	34.7	40.0	29.3	20.2	20.3	18.9	54.9	60.3	48.2
Kaskazini Unguja	38.7	41.1	29.3	22.3	21.4	22.1	61.0	62.5	51.4
Kusini Unguja	38.7	45.3	31.8	22.3	23.4	20.4	61.0	68.7	52.2
Mjini Magharibi	35.2	40.5	29.7	20.5	21.1	19.2	55.6	61.5	48.9
Kaskazini Pemba	34.2	40.2	27.9	19.9	20.9	18.1	54.1	61.1	46.0
Kusini Pemba	29.7	33.5	35.4	17.5	17.6	7.5	47.2	51.2	42.8

Map 3.1: Infant Mortality Rate by Region; Tanzania, 2022 PHC



Map 3.2: Under-Five Mortality Rates by Region; Tanzania, 2022 Census



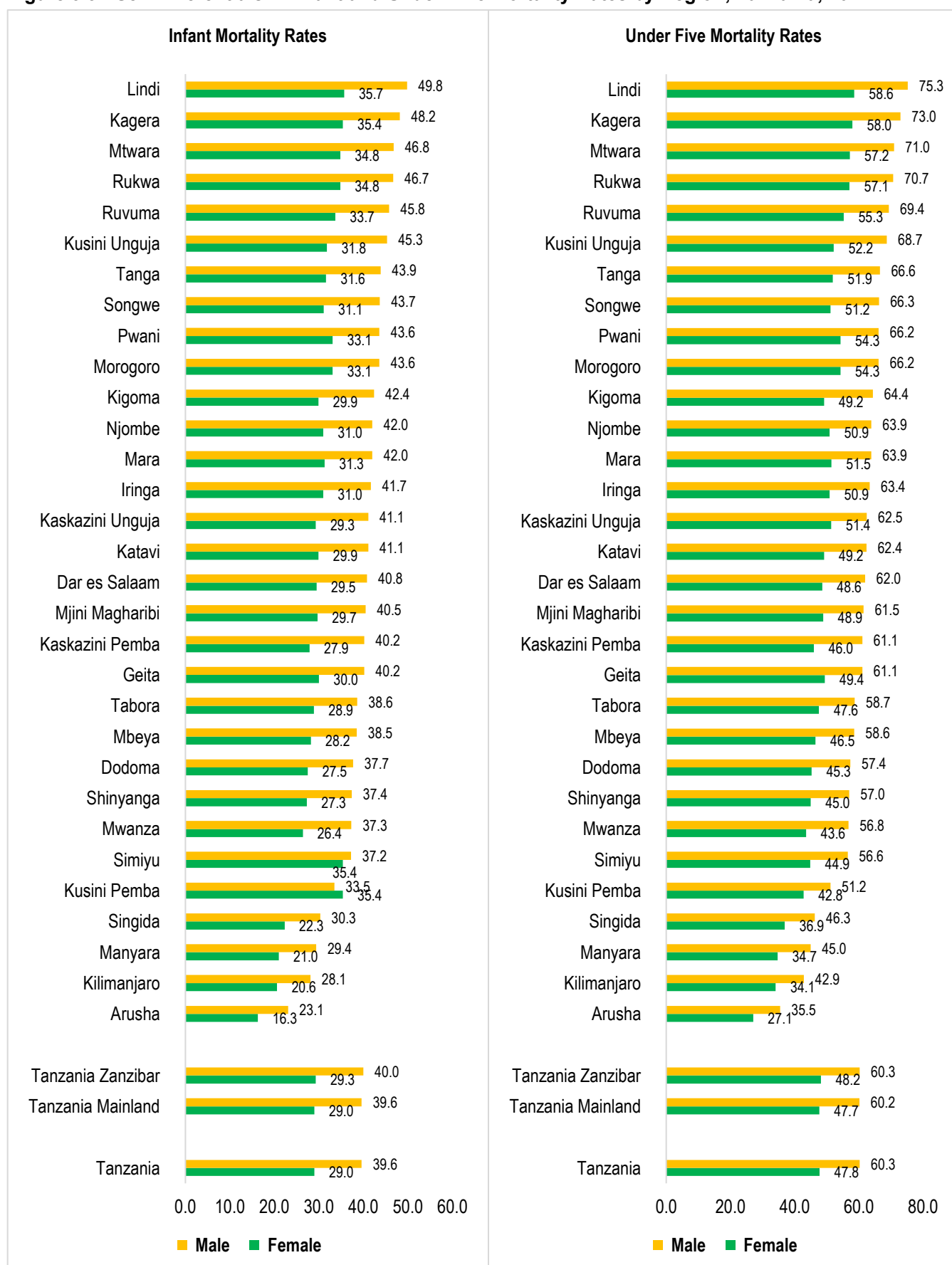
3.9.3 Sex Differentials in Childhood Mortality by Region

Figure 3.3 shows that, males had higher infant and under-five mortality rates than females except for Kusini Pemba Region. IMRs for males ranged between 23 deaths in Arusha Region and 50 deaths per 1,000 live births in Lindi. The estimated infant mortality rates for females were between 16 in Arusha Region and 36 deaths per 1,000 live births in Lindi Region. The under-five mortality rates for males ranged from 36 deaths per 1,000 live births in Arusha Region to 75 deaths in Lindi Region. In comparison, the under-five mortality rates for females ranged from 27 to 36 deaths per 1,000 live births in Arusha Region to 59 deaths per 1,000 live births in Lindi Region.

Infant mortality and under-five mortality rates for Tanzania are higher for males than females, and in some regions, the discrepancy, particularly for the infant mortality rate, is about 12–14 deaths. This is notably seen in Lindi (14 deaths), Kagera (14 deaths), Kusini Pemba (14 deaths), Kigoma (13 deaths), and Mtwara, Ruvuma, Tanga, Songwe, and Kaskazini Unguja (12 deaths each). The possible reasons may be due to biological factors, such as higher vulnerability of male infants to infections and diseases, as cited by Ngwira et al. (2017), who noted that male infants are more susceptible to respiratory infections and complications.

Additionally, differences in care-seeking behavior and maternal health practices could also contribute to these discrepancies, as cited by Mishra et al. (2020), who observed that gender-based health-seeking behaviours in Tanzania, where male children may not receive timely medical attention compared to females, can contribute to higher mortality rates among males. Moreover, these regions mentioned have limited access to healthcare facilities, low maternal education levels, and inadequate maternal healthcare services, which may be a source of such a significant discrepancy as referenced by Kamuzora & Ndyetabula (2019), who identified that regions with poor healthcare infrastructure and lower maternal health awareness have higher mortality rates. Therefore, there is a need for further studies to explore these gender-based differences in childhood mortality, particularly focusing on regional healthcare disparities and maternal care practices.

Figure 3.3: Sex Differentials in Infant and Under-Five Mortality Rates by Region; Tanzania, 2022 PHC



3.10 Mortality Differentials by Socio-Economic Determinants

Socioeconomic and demographic characteristics, such as the mother's age at the time of birth, education, marital status, occupation, and the survival of preceding sibling(s), can impact the newborn's survival. The discussion in this subsection focuses on mothers' level of education, marital status, occupation, and households' wealth quintile, and how these factors relate to childhood mortality levels.

3.10.1 Introduction

Child mortality is not only a health issue but also a reflection of broader socio-economic inequalities within the population. Data from the 2022 Population and Housing Census show that infant and under-five mortality rates in Tanzania are significantly influenced by various socio-economic determinants, including marital status, education attainment, occupation, and mother's age when giving first birth. Figures 3.7 to 3.7.2 present infant and under-5 mortality differentials for the selected socio-economic and demographic characteristics.

3.10.2 Differentials by Marital Status

Children born in households with both father and mother in marital union are generally more likely to survive than those born in households with a single parent. This is partly explained by the care provision and family environment, where children have better opportunities for cognitive development and physical growth. It is important to note that union status is a function of an individual's biological age. Women typically experience widowhood in their later years. On the other hand, young women are vulnerable to marital dissolution through divorce or separation, which can affect the mental and physical development of young children. (Choi & Marks, 2010).

Marital status in this report is categorized into four groups: married or living together, divorced or separated, widowed, and never married. The analysis shown in Figure 3.4 reveals that child mortality is highest among women who have never been married, followed by widowed women. For example, under-five mortality among never-married women is 60 deaths per 1000 births. Among widowed women, it is 54 deaths per 1000 births, compared with 46 deaths per 1000 births for married/living together women. The pattern is similar for infant and child mortality rates.

Among never married women, childhood mortality rates are notably higher in Zanzibar than in Tanzania Mainland. The Infant Mortality Rate (IMR) in Zanzibar stands at 47.0 deaths per 1,000 live births compared to 37.7 in Tanzania Mainland, while the Under-Five Mortality Rate (U5MR) reaches 73.7 in Zanzibar against 59.5 in the Mainland. These disparities

suggest that children born to never married women in Zanzibar face a greater risk of dying before their fifth birthday. The differences may reflect variations in social support systems, access to maternal and child health services, and household economic conditions. Strengthening targeted interventions to support unmarried mothers, particularly in Zanzibar, could help reduce the observed mortality gap.

Figure 3.4: Infant and Under five Mortality Rates by Marital Status of Mother; Tanzania, 2022 PHC

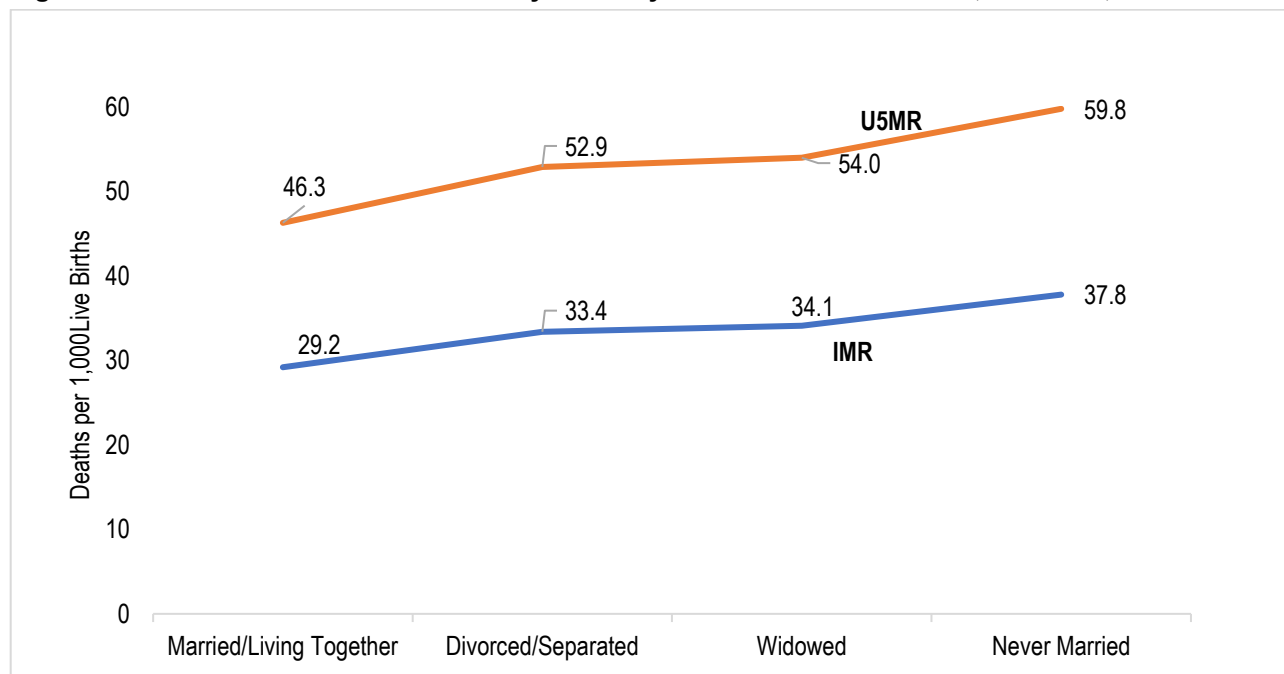


Figure 3.4.1: Infant and Under-five Mortality Rates by Marital Status of Mother; Tanzania Mainland, 2022 PHC

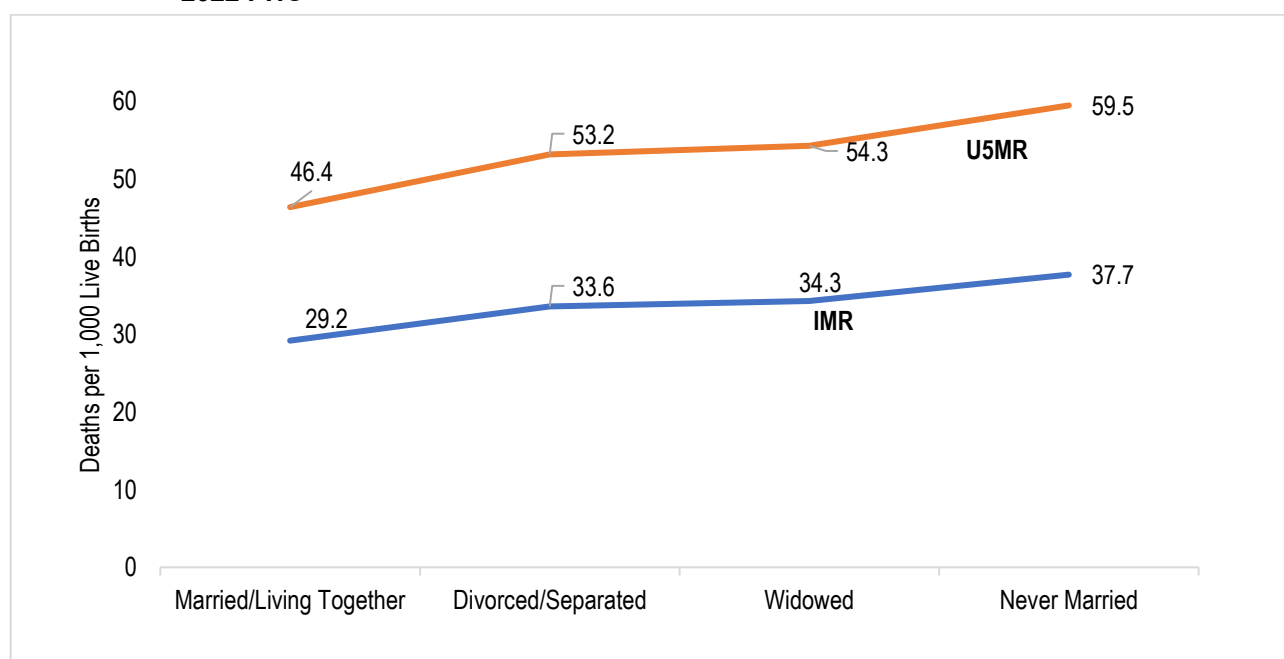
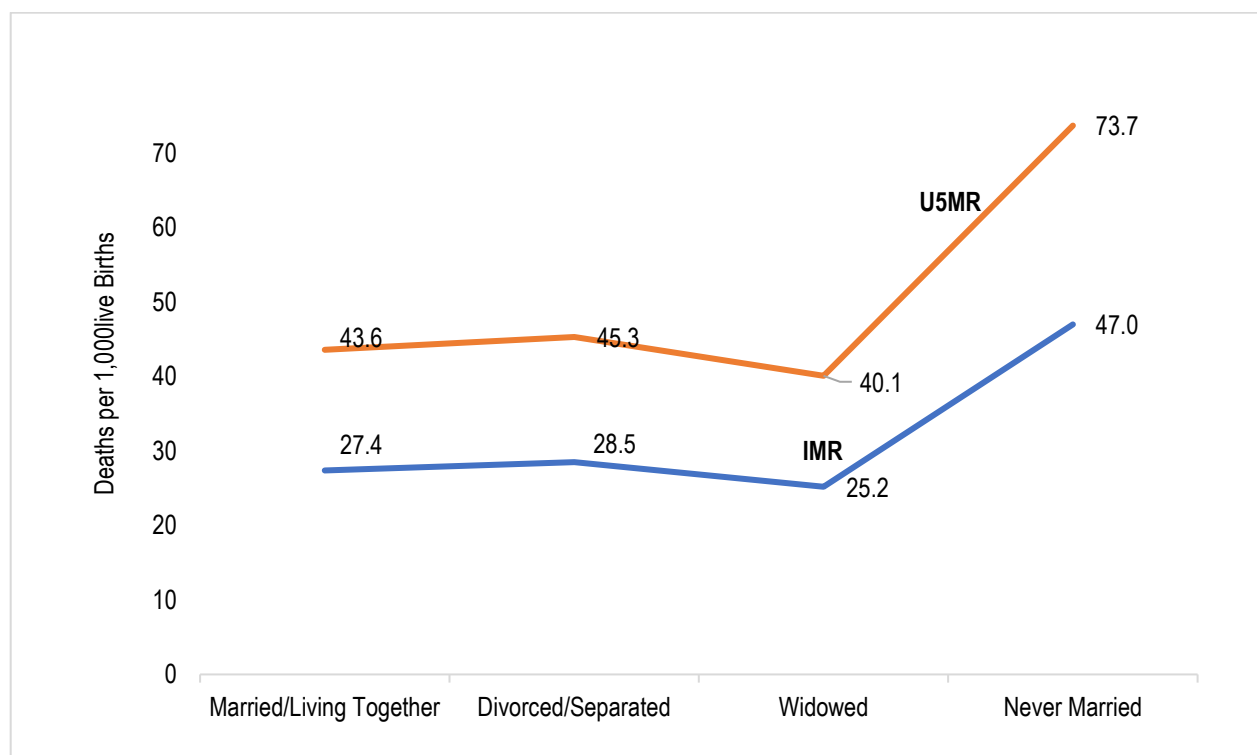


Figure 3.4.2: Infant and Under-five Mortality Rates by Marital Status of Mother; Tanzania Zanzibar, 2022 PHC



3.10.3 Differentials by Educational Attainment

There is considerable evidence on the influential role of education in lowering the risks of infant and child mortality. Generally, an inverse relationship is found between women's education and child mortality. Women with more years of schooling experience are also likely to seek health care, delay marriage, use contraception for spacing and limiting births, practice exclusive breastfeeding, and seek immunization services. (Caldwell, 1979; Gakidou et al., 2010).

The educational attainment of mothers is categorized as follows: never attended (not attended pre-primary and nursery education), primary, secondary, tertiary (post-secondary education), and above. Childhood mortality rate was higher among those who attained lower level of education (United Nations Inter-Agency Group for Child Mortality Estimation, 2023). The national IMR for mothers who never attended school was 34 deaths per 1,000 live births, but higher in Zanzibar (39 deaths per 1,000 live births). This is the same for the deaths of under-five children from these mothers. Almost 54 Tanzanian children per 1,000 live births of this age die before celebrating the fifth birthday. On the other hand, the IMR and U5MR for Tanzanian mothers who attained tertiary level are 27 and 43 deaths per 1,000 live births, respectively (Figure 3.5).

Figure 3.5: Infant and Under Five Mortality Rates by Educational Attainment of Mother; Tanzania, 2022 PHC

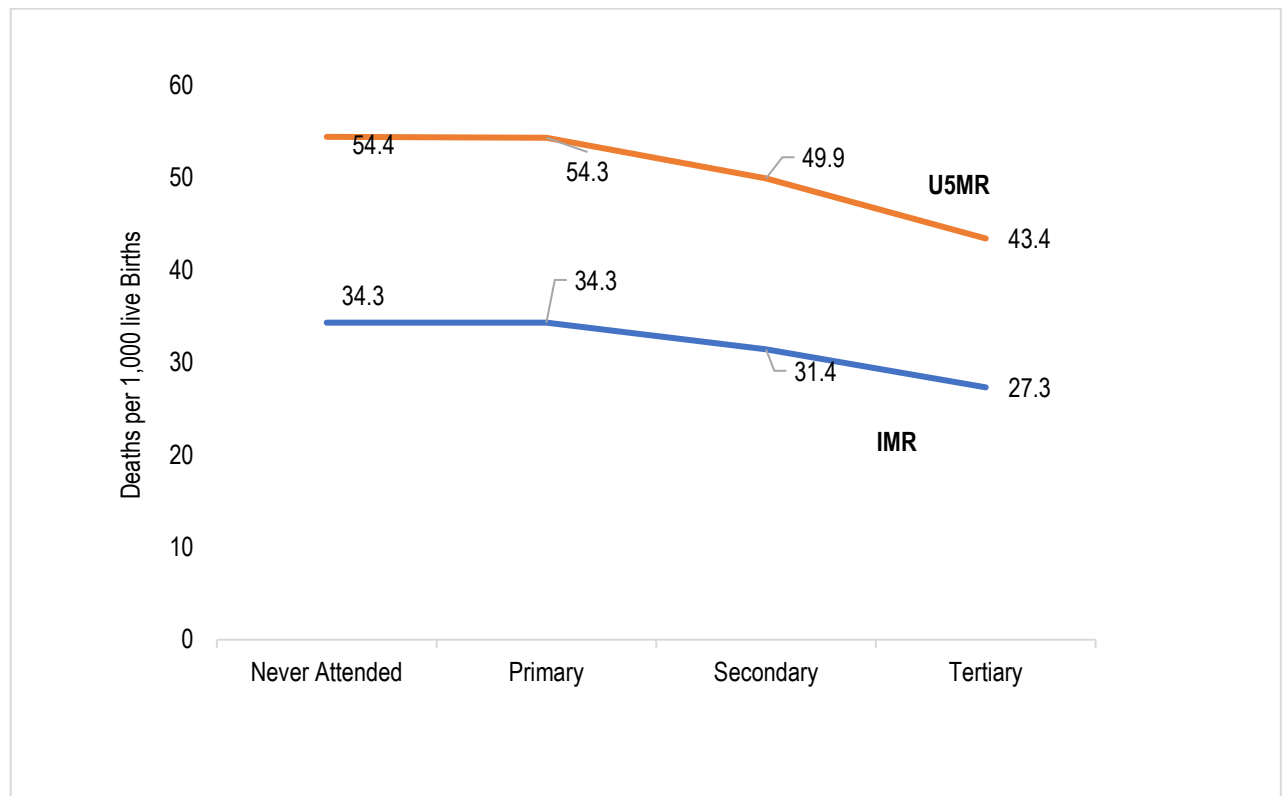


Figure 3.5.1: Infant and Under five Mortality Rates by Educational Attainment of Mother; Tanzania Mainland, 2022 PHC

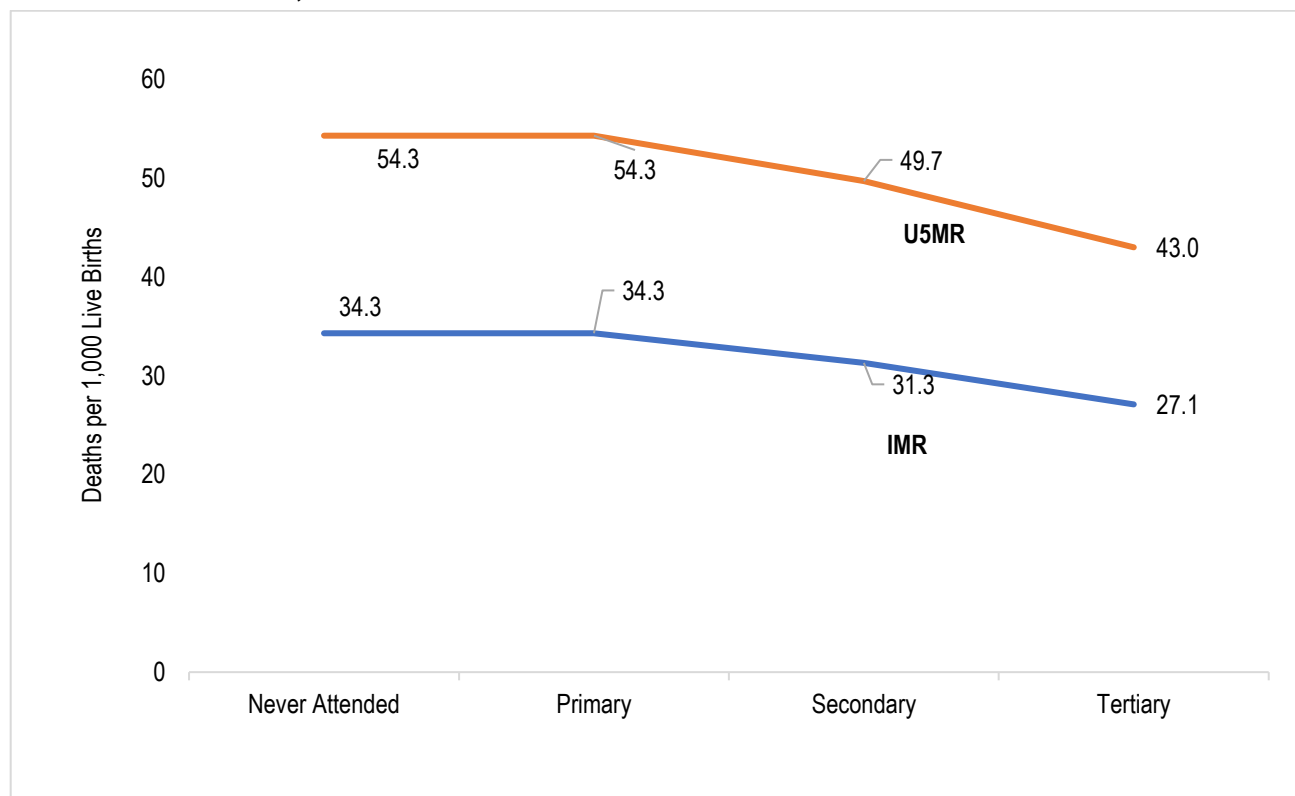
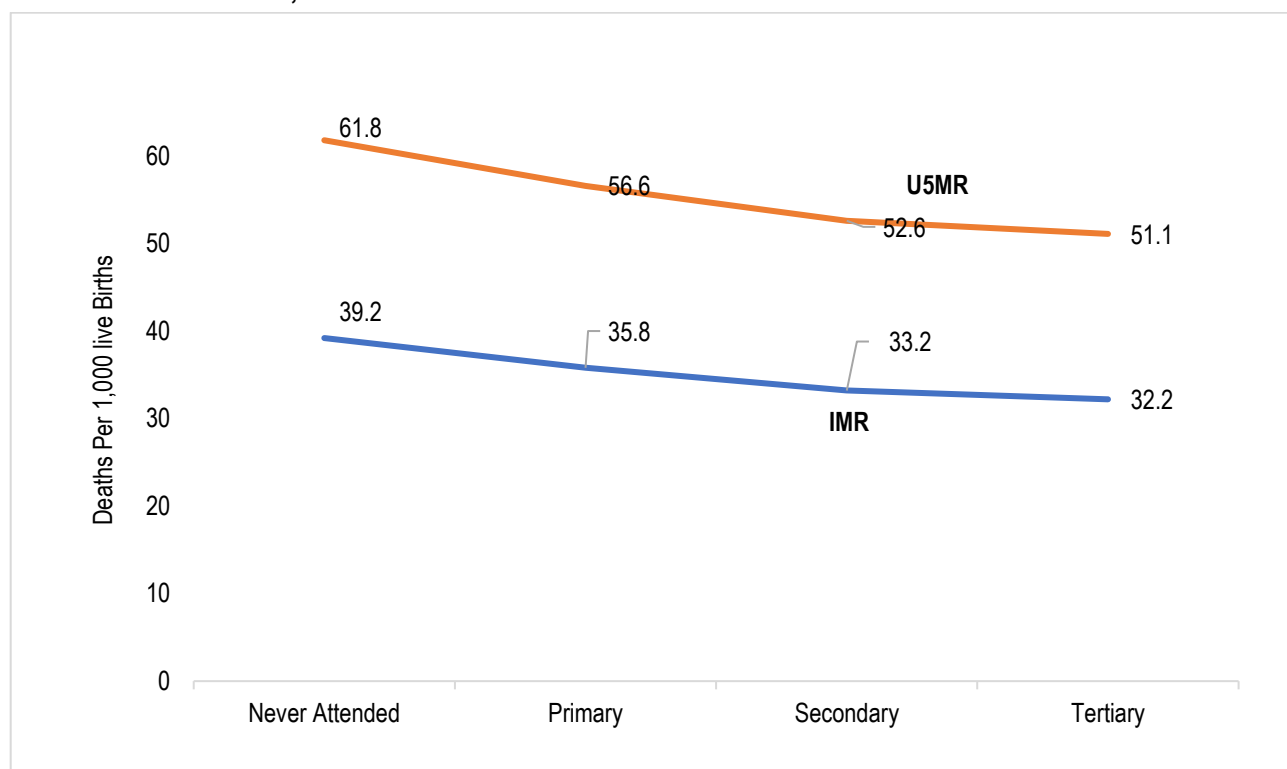


Figure 3.5.2: Infant and Under five Mortality Rates by Educational Attainment of Mother; Tanzania Zanzibar, 2022 PHC



3.10.4 Differentials by Main Occupation

Women's employment status is an effective socioeconomic indicator of autonomy, empowerment, and access to financial resources. Infant and under-five mortality rates in Tanzania, including Tanzania Mainland and Tanzania Zanzibar, vary significantly based on the occupation of women aged 15-49. Figure 3.6 shows the differences in five main occupation categories:

- i. Professionals, Managers, and Technicians
- ii. Small Business, Service, Sales, and Crafts
- iii. Elementary Occupations¹
- iv. Clerks
- v. Agriculture

Figure 3.6 shows that women in agriculture experience much higher infant and under-five mortality rates than those in professional and managerial positions. The overall infant mortality rate for women engaged in agriculture is 35 deaths per 1,000 live births in Tanzania, but in Tanzania Mainland, the rate is 35 deaths per 1,000 live births, and in Tanzania Zanzibar, the rate is 36 deaths per 1,000 live births. Under-five mortality rate

¹ Elementary occupations involve the performance of a simple and routine tasks which may require the use of hand-held tools and considerable physical effort. Supervision of other workers may be included.

follows a similar pattern, being 56 in Tanzania total, 56 in the Tanzania Mainland, and 56 in Tanzania Zanzibar.

The results in Figures 3.6-3.6.2 show key differences in child mortality rates between Tanzania as a whole, Tanzania Zanzibar, and Tanzania Mainland, particularly how occupation affects infant and under-five mortality rates (IMR and U5MR). Women in elementary occupations in Tanzania Zanzibar experience higher mortality rates (38 infant deaths and 60 under-five deaths per 1,000 live births) than women in the same occupation (35 and 55, respectively) in Tanzania Mainland.

This occupational disparity is not clear in the Tanzania Mainland. While women in small business, service, and sales occupations have similar mortality rates in Tanzania Zanzibar, and Tanzania Mainland (31 infant and 50 under-five deaths per 1,000 live births in Tanzania Zanzibar, compared with 32 and 51 in the Tanzania Mainland), mortality rates for women in elementary occupations are high in Tanzania Zanzibar. This suggests that local factors such as healthcare access and socio-economic conditions play a larger role in Tanzania, Zanzibar. Reports from organizations like the World Health Organization (WHO, 2021) and the United Nations Development Programme (UNDP, 2020) highlight the extent to which socio-economic inequality and health system challenges contribute to disparities in health outcomes.

Studies by TDHS-MIS (2016) and local research institutions, such as the Zanzibar Health Research Foundation (ZHRF, 2020), emphasize the added vulnerability of women in low-income, manual labour occupations, where poor working conditions, lack of access to appropriate healthcare, and gendered social roles exacerbate health risks. The studies also highlight how local factors intersect to impact mortality, particularly among women facing both economic disadvantage and limited access to healthcare opportunities (Mwanza et al., 2019).

Furthermore, the professional, managerial and technical workers in Tanzania Zanzibar report higher IMR (32 deaths per 1,000 live births) and U5MR (51 deaths per 1,000 live births) than Tanzania Mainland workers in similar roles (27 and 42 deaths per 1,000 live births respectively), illustrating those differences health outcomes are due to regional healthcare challenges and socio-economic factors disproportionately affecting the lower-income jobs in Tanzania Zanzibar.

The differentials between the mortality rates of women in agriculture and those in professional positions are remarkable. Women in professional, managerial, and technical

roles report much lower rates, with 27 infant and 43 under-five deaths per 1,000 live births. The pattern is consistent in Tanzania Mainland, where women in agriculture have rates of 35 deaths per 1,000 live births for infant mortality and 56 deaths per 1,000 live births for under-five mortality.

The findings emphasize dependency in the relationship between a woman's occupation and childhood mortality rates, showing how employment choice may significantly influence health outcomes in Tanzania.

Figure 3.6: Infant and Under five Mortality Rates by Economic Activity of Mother ; Tanzania, 2022 PHC

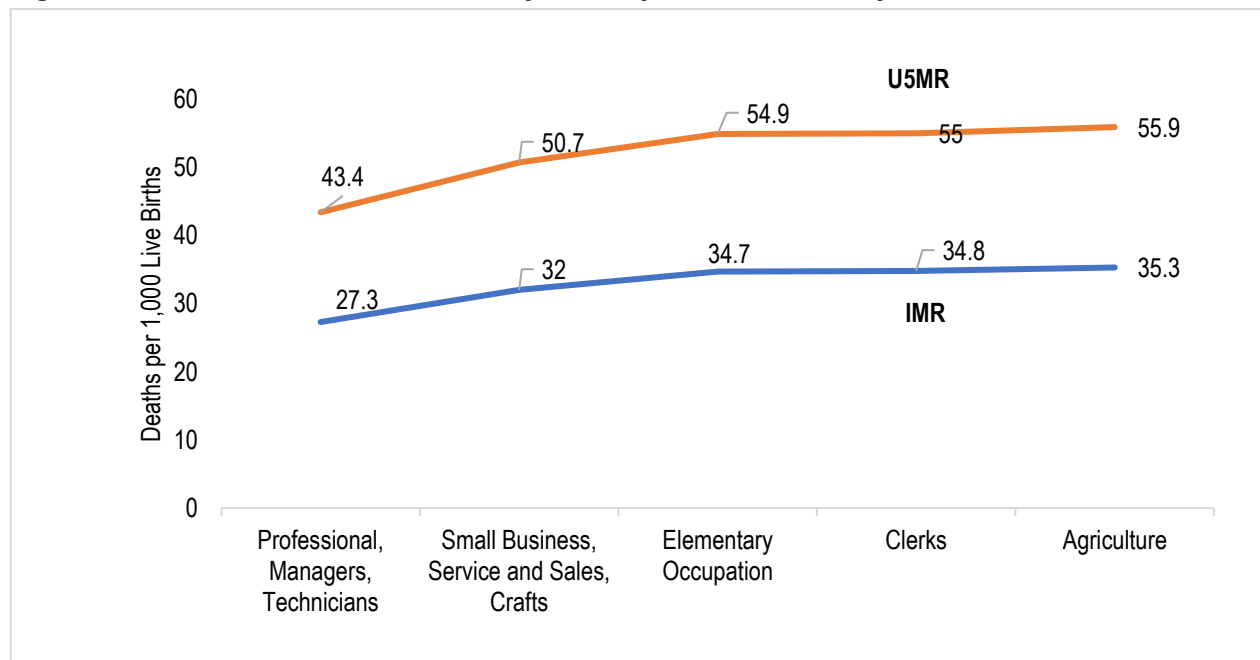


Figure 3.6.1: Infant and Under five Mortality Rates by Economic Activity of Mother; Tanzania Mainland, 2022 PHC

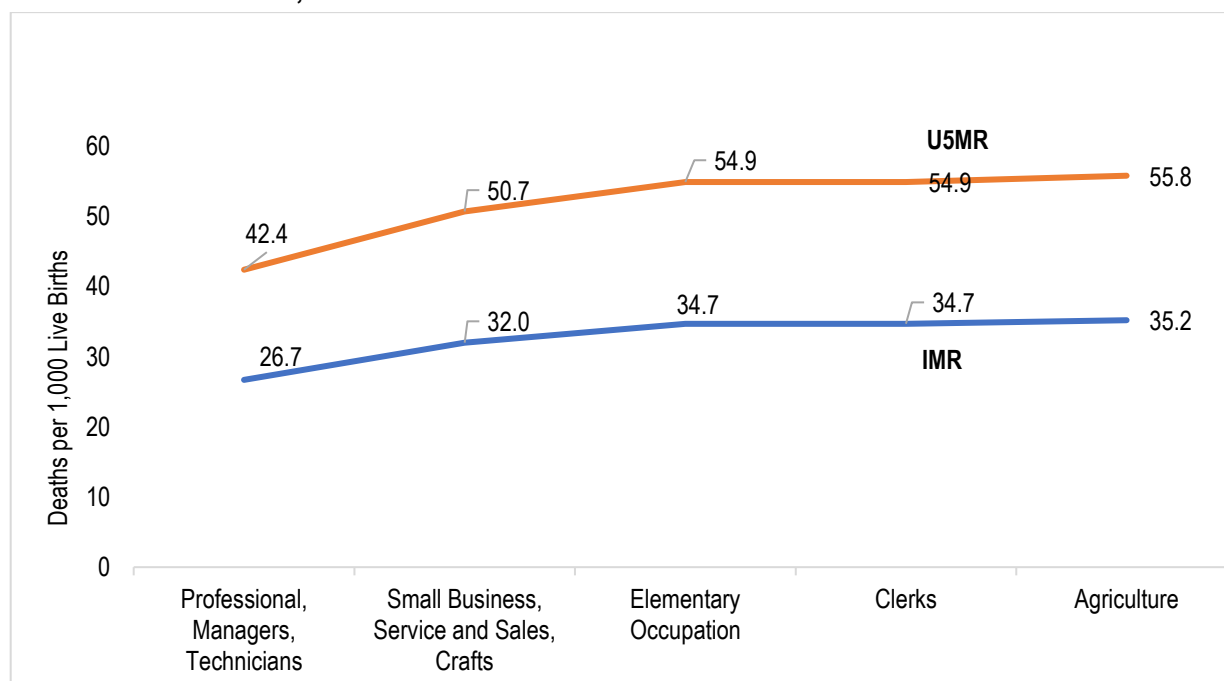
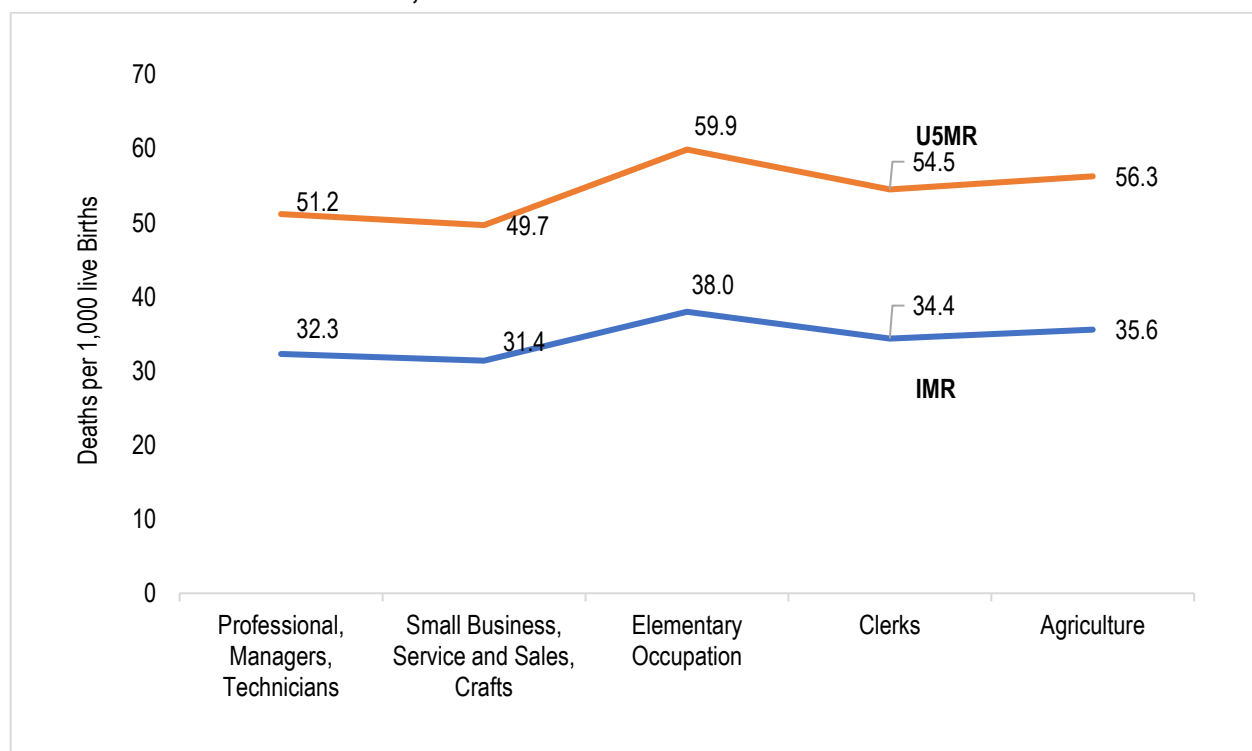


Figure 3.6.2: Infant and Under five Mortality Rates by Economic Activity of Mother IMR and U5MR; Tanzania Zanzibar, 2022 PHC



3.10.5 Infant and Under-five Mortality by Wealth Quintile

The 2022 Population and Housing Census results reveal variations in infant mortality and under-five mortality across regions and wealth quintiles in Tanzania. Household wealth quintiles were derived from a composite asset index using principal component analysis, incorporating dwelling characteristics, access to utilities, and ownership of durable goods.

At the national level, infant mortality rates (IMR) ranged narrowly between 35.1 deaths per 1,000 live births in the richest quintile and 36.8 deaths per 1,000 live births in the second quintile. Similarly, under-five mortality (U5MR) ranged from 55.5 deaths per 1,000 live births in the richest quintile to 58.1 deaths per 1,000 live births in the second quintile. These patterns suggest that while wealth status has some influence, disparities in childhood mortality remain relatively small at the national level.

However, regional disaggregation shows pronounced differences. Regions such as Kagera, Lindi, Ruvuma, and Rukwa reported some of the highest infant and under-five mortality rates across all quintiles, with U5MR exceeding 65 deaths per 1,000 live births in the poorest groups. Conversely, regions such as Arusha, Manyara, Kilimanjaro, and Kusini Pemba recorded comparatively low mortality levels, with under-five mortality often below 45 deaths per 1,000 live births in most quintiles.

Wealth-related inequalities are also evident within certain regions. For example, in Tanga and Morogoro, mortality rates remain high across all quintiles, reflecting broader systemic

health and socioeconomic challenges. In contrast, in Arusha and Manyara, the gradient is more pronounced, with wealthier quintiles experiencing significantly lower child mortality rates.

In Zanzibar, disparities are also notable. Kusini Unguja recorded the highest under-five mortality rates (above 70 deaths per 1,000 live births in the poorest quintiles), while Kusini Pemba had the lowest (as low as 38 deaths per 1,000 live births in the poorest quintile). Urbanized regions, such as Mjini Magharibi, showed moderate mortality levels, but with less consistent patterns across quintiles.

Overall, these findings highlight three important messages. First, despite a general national decline in childhood mortality, regional disparities remain serious, with children in certain regions, particularly in the southern and western zones, facing significantly higher risks. Second, wealth inequalities are more pronounced at the regional level than at the national level, suggesting that access to health services and living conditions differ significantly across geographical locations. Third, the persistently high mortality levels in specific regions call for targeted interventions in maternal and child health services, improved nutrition and broader social support systems, particularly for the poorest households.

The findings underscore the necessity for targeted regional interventions to address high childhood mortality rates in regions such as Kagera, Lindi, Ruvuma, and Rukwa, where mortality rates exceed the national average across all wealth groups. Expanding maternal, newborn, and child health services, strengthening referral systems, and improving access to essential medicines in these areas are critical. At the same time, improving nutrition, promoting exclusive breastfeeding, and scaling up community-based health education will help tackle the underlying causes of child mortality.

While national differences in mortality by wealth quintile are relatively narrow, inequities are more pronounced at the regional level, where poorer households face greater vulnerability. Pro-poor strategies such as conditional cash transfers, community health insurance and outreach services are necessary to ensure equitable access to health care. In Zanzibar, the wide gap between Kusini Unguja and Kusini Pemba underscores the importance of region-specific approaches. Strengthened monitoring and use of census data for evidence-based planning will also enhance accountability and enable resources to be directed to areas with the greatest need.

Table 3.10: Infant and Under-five Mortality by Wealth Quintile and Region; Tanzania, 2022 PHC

Region	Lowest Quintile		Second Quintile		Middle Quintile		Fourth Quintile		Highest Quintile	
	IMR	U5MR	IMR	U5MR	IMR	U5MR	IMR	U5MR	IMR	U5MR
Tanzania	36.1	57.0	36.8	58.1	36.0	56.9	35.7	56.4	35.1	55.5
Tanzania Mainland	36.0	56.9	36.8	58.1	35.9	56.8	35.7	56.4	35.0	55.4
Dodoma	36.0	56.9	34.3	54.3	32.8	51.9	33.9	53.7	32.8	51.9
Arusha	16.4	26.3	22.7	36.2	25.4	40.4	23.3	37.2	21.6	34.4
Kilimanjaro	25.1	39.9	28.5	45.2	26.9	42.8	24.2	38.6	27.8	44.2
Tanga	38.5	60.9	43.8	68.9	42.7	67.2	37.7	59.5	35.4	56.0
Morogoro	37.5	59.2	40.6	64.0	42.7	67.2	39.1	61.7	40.5	63.8
Pwani	41.8	65.8	42.5	66.9	39.2	61.9	40.8	64.3	36.7	58.0
Dar es Salaam	38.6	60.9	38.6	60.9	38.7	61.0	35.9	56.8	36.0	56.9
Lindi	43.6	68.7	46.2	72.6	47.0	73.9	43.4	68.3	42.6	67.0
Mtwara	42.6	67.0	45.2	71.0	40.9	64.4	42.4	66.8	38.8	61.2
Ruvuma	45.7	71.8	41.3	65.1	40.2	63.4	37.3	59.0	38.1	60.1
Iringa	41.8	65.8	36.5	57.7	38.1	60.2	38.3	60.4	34.2	54.1
Mbeya	34.9	55.2	35.4	56.0	34.3	54.3	37.0	58.5	32.6	51.6
Singida	26.2	41.6	28.7	45.6	27.2	43.2	28.7	45.5	28.2	44.7
Tabora	34.1	54.0	36.4	57.5	34.5	54.6	35.1	55.6	37.5	59.3
Rukwa	44.9	70.6	41.7	65.7	40.5	63.8	40.7	64.2	40.2	63.3
Kigoma	37.6	59.5	36.8	58.2	36.7	58.0	36.4	57.5	37.9	59.8
Shinyanga	34.2	54.2	33.7	53.3	32.7	51.8	37.1	58.7	34.2	54.1
Kagera	46.9	73.6	49.1	77.1	42.5	66.9	39.2	61.9	37.9	59.9
Mwanza	34.5	54.6	33.7	53.4	32.3	51.2	31.9	50.6	30.8	48.9
Mara	40.0	63.1	39.0	61.5	38.8	61.2	35.2	55.7	31.9	50.5
Manyara	21.6	34.4	28.1	44.7	29.0	46.1	28.6	45.4	26.4	42.1
Njombe	37.9	59.8	39.9	63.0	37.1	58.6	38.3	60.5	41.3	65.0
Katavi	31.0	49.1	38.0	60.1	37.1	58.6	37.5	59.3	41.1	64.9
Simiyu	33.6	53.3	35.3	55.8	34.5	54.7	33.5	53.0	31.3	49.6
Geita	36.8	58.2	36.7	57.9	34.4	54.5	37.2	58.8	36.2	57.2
Songwe	41.2	65.0	38.3	60.5	39.5	62.4	38.1	60.2	38.5	60.8
Tanzania Zanzibar	38.6	61.0	38.4	60.6	38.2	60.2	34.8	55.0	36.9	58.3
Kaskazini Unguja	39.2	61.8	38.7	61.1	35.6	56.3	34.3	54.2	40.0	63.1
Kusini Unguja	49.6	77.7	47.2	74.2	39.6	62.4	38.9	61.4	42.4	66.8
Mjini Magharibi	40.2	63.4	31.6	50.2	35.0	55.4	36.8	58.1	40.6	64.0
Kaskazini Pemba	36.2	57.3	31.4	49.8	43.1	67.8	33.0	52.3	35.7	56.4
Kusini Pemba	24.0	38.2	34.1	54.0	32.9	52.1	29.7	47.1	26.3	41.9

3.10.6 Children's Mortality by Age of the Mother

Analysis of data from the 2022 Population and Housing Census (PHC) reveals significant differentials in childhood mortality associated with the mother's age. Maternal age is a critical factor influencing child survival through biological, behavioral, and socio-economic pathways. The 2022 PHC findings reaffirm the well-established U-shaped relationship between maternal age and childhood mortality, with higher mortality observed among children born to very young and older mothers (URT, 2024a).

Children born to mothers aged below 20 years recorded the highest levels of mortality, particularly for infant and under-five deaths. Teenage pregnancies are often linked to physiological immaturity, limited maternal health knowledge, lower antenatal care uptake, and poor socio-economic conditions, all of which contribute to increased child mortality (UNICEF, 2023; WHO, 2022).

On the other hand, mothers aged 20–39 years experienced the lowest proportion of dead children, highlighting this age range as the biologically and socially optimal period for childbearing. Women in this age group are more likely to be physically mature, economically stable, and better informed about maternal and child health practices, leading to improved child survival outcomes (URT, 2024a; TDHS-MIS, 2022).

A notable rise in child mortality was observed among children born to mothers aged 35 years and above, particularly for those aged 40 and above. Advanced maternal age is associated with higher risks of obstetric complications, chromosomal abnormalities, and increased likelihood of preterm births and low birth weight, which are major contributors to neonatal and infant mortality (WHO, 2022; URT, 2024b).

These patterns emphasize the need for targeted reproductive health interventions that address adolescent fertility and promote healthy timing and spacing of pregnancies. Policies aimed at reducing teenage pregnancies and discouraging high-risk pregnancies among older women can significantly reduce childhood mortality and improve Tanzania's progress towards achieving SDG targets on maternal and child health.

Table 3.11: Infant and Under-five Mortality Rates by Place of Residence and Age of Mothers; Tanzania, 2022 PHC

Socio Economic and Demographic Characteristics	Tanzania total		Tanzania Mainland		Tanzania Zanzibar	
	IMR	U5MR	IMR	U5MR	IMR	U5MR
Age Group of Mother						
15-19	48.2	75.6	48.1	75.6	55.0	86.0
20-24	36.0	56.9	36.0	56.9	36.4	57.5
25-29	32.7	51.8	32.7	51.7	33.0	52.3
30-34	33.7	53.4	33.8	53.5	31.7	50.2
35-39	37.4	59.1	37.5	59.3	34.1	54.0
40-44	42.7	67.3	42.9	67.5	38.4	60.7
45-49	45.8	72.0	46.0	72.3	40.4	63.7

3.11 Changes in Infant and Under-Five Mortality in Tanzania 2012 and 2022

The 2022 Population and Housing Census (PHC) provides an updated picture of childhood mortality in Tanzania, allowing for a comparative assessment with the results from the 2012 Census. The observed trends indicate a continued decline in both infant and under-five mortality rates, reflecting progress in maternal and child health interventions over the intercensal period.

According to the 2012 Census, the Infant Mortality Rate (IMR), defined as the number of deaths of children under one year of age per 1,000 live births, was estimated at 46 deaths per 1,000 live births, while the Under-Five Mortality Rate (U5MR) stood at approximately 67 deaths per 1,000 live births.

By 2022, these figures had declined to 34 deaths per 1,000 live births for IMR and 54 deaths per 1,000 live births for U5MR. These reductions represent a 26 percent decline in infant mortality and a roughly 18 percent decline in under-five mortality over the ten-year period.

Tanzania Mainland registered a substantial decline in both indicators. Infant mortality decreased from 46 to 34 deaths per 1,000 live births (26.1% reduction), while under-five mortality fell from 67 to 54 deaths per 1,000 live births (19.4 % reduction).

Tanzania Zanzibar, though also showing progress, experienced a more modest decline. Infant mortality decreased from 46 to 35 per 1,000 live births, representing a 23.9 percent reduction, and under-five mortality dropped from 67 to 55, corresponding to a 17.9 percent decline.

Tanzania Mainland recorded a slightly more pronounced decline in mortality rates compared to Zanzibar. This can be attributed to the broader scale and reach of health sector investments, including improvements in health infrastructure, skilled birth attendance, and outreach services in rural and peri-urban areas. Additionally, ongoing government efforts to reduce regional disparities and improve access to quality health care contributed to this decline.

Rural–urban differentials continue to reveal notable disparities. Urban areas exhibited a greater percentage reduction in both infant and under-five mortality compared with rural areas. Urban areas experienced a more significant reduction in child mortality. Infant mortality declined from 49 to 33 deaths per 1,000 live births (32.7 percent decrease), and under-five mortality reduced from 66 to 55 deaths per 1,000 live births (16.7% decrease).

Rural areas, where a majority of the population resides, saw a smaller reduction. Infant mortality decreased from 46 to 35 deaths per 1,000 live births (23.9 % reduction), while under-five mortality fell from 71 to 53 deaths per 1,000 live births (25.4% reduction) (Table 3.12).

This pattern highlights the continuing challenge of health inequities between densely populated areas where access to health facilities, skilled health personnel, and education is generally higher, and remote rural regions, where barriers to healthcare persist. Rural areas often face challenges such as limited transport infrastructure, lower levels of female education, and scarcity of skilled healthcare providers, which can delay further reductions in child mortality.

Table 3.12: Percentage Change of Infant and Under-Five Mortality; Tanzania, 2012 and 2022 Censuses

Place of Residence	Infant Mortality Rate				Under-five Mortality Rate			
	2012	2022	Percentage Change	Average Annual Change in IMR	2012	2022	Percentage Change	Average Annual Change in U5MR
Tanzania	46.2	34.3	-25.8	-3.0	66.5	54.3	-18.35	-2.0
Rural	46.0	34.9	-24.1	-2.8	65.9	55.2	-16.24	-1.8
Urban	48.5	33.4	-31.1	-3.7	71.2	52.9	-25.70	-3.0
Tanzania Mainland	46.2	34.3	-25.8	-3.0	66.5	54.3	-18.35	-2.0
Rural	45.3	34.9	-23.0	-2.6	64.9	55.2	-14.95	-1.6
Urban	47.8	33.3	-30.3	-3.6	70.2	52.9	-24.64	-2.8
Tanzania Zanzibar	46.4	34.7	-25.2	-2.9	67.4	54.9	-18.55	-2.1
Rural	46.4	34.5	-25.6	-3.0	67.1	54.6	-18.63	-2.1
Urban	48.4	34.9	-27.9	-3.3	71.1	55.2	-22.36	-2.5

The comparison of infant and under-five mortality rates between the 2012 and 2022 Population and Housing Censuses reveals significant regional variations in progress towards reducing childhood mortality in Tanzania. Overall, the country experienced a decline in both infant and under-five mortality, reflecting improvements in maternal and child health services, immunization coverage, access to clean water and sanitation, and community health interventions.

Iringa (39.1%), Katavi (39.0%), and Kusini Pemba (35.2%) regions recorded the most notable reductions in infant mortality during the reference period, indicating the ongoing government efforts to reduce regional disparities and improve access to quality health care have resulted in strong health system performance and better socio-economic conditions. In contrast, a few regions, including Kaskazini Unguja, Lindi, and Mtwara, showed minimal improvement, with a decrease of less than 10 percent in infant mortality.

The data underscore the importance of targeted regional interventions to address disparities and accelerate progress towards national and global targets for child survival, including SDG 3.2, which aims to end preventable deaths of newborns and children under 5 years of age by 2030.

Table 3.13: Percentage Change of Infant and Under-Five Mortality by Region; Tanzania, 2012 and 2022 PHCs

Place of Residence	Infant Mortality Rate				Under-five Mortality Rate			
	2012	2022	Percentage Change	Average Annual Change in IMR	2012	2022	Percentage Change	Average Annual Change in U5MR
Tanzania	46.2	34.3	-25.8	-3.0	66.5	54.3	-18.3	-2.0
Tanzania Mainland	46.2	34.3	-25.8	-3.0	66.5	54.3	-18.3	-2.0
Dodoma	42.1	32.6	-22.6	- 2.6	57.5	51.7	-10.1	-1.1
Arusha	29.0	19.7	-32.1	- 3.9	37.3	31.5	-15.5	-1.7
Kilimanjaro	29.6	24.4	-17.6	- 1.9	38.5	38.8	0.8	0.1
Tanga	44.7	37.8	-15.4	- 1.7	64	59.6	-6.9	-0.7
Morogoro	47.6	38.4	-19.3	- 2.1	68.7	60.6	-11.8	-1.3
Pwani	51.3	38.4	-25.1	- 2.9	75.4	60.6	-19.6	-2.2
Dar es Salaam	49.0	35.2	-28.2	- 3.3	72.3	55.7	-23.0	-2.6
Lindi	47.0	42.8	-8.9	- 0.9	65	67.4	3.7	0.4
Mtwara	45.2	40.9	-9.5	- 1.0	62.3	64.4	3.4	0.3
Ruvuma	47.6	39.7	-16.6	- 1.8	68.7	62.7	-8.7	-0.9
Iringa	59.8	36.4	-39.1	- 5.0	90.7	57.5	-36.6	-4.6
Mbeya	49	33.4	-31.8	- 3.8	71.5	52.9	-26.0	-3.0
Singida	32.4	26.3	-18.8	- 2.1	42.7	41.8	-2.1	-0.2
Tabora	47.5	33.7	-29.1	- 3.4	69.4	53.4	-23.1	-2.6
Rukwa	54.8	40.7	-25.7	- 3.0	81.2	64.2	-20.9	-2.3
Kigoma	48.9	36.2	-26.0	- 3.0	71.7	57.2	-20.2	-2.3
Shinyanga	46.2	32.4	-29.9	- 3.5	66.7	51.3	-23.1	-2.6
Kagera	61.8	41.8	-32.4	- 3.9	93.9	65.9	-29.8	-3.5
Mwanza	44.3	31.9	-28.0	- 3.3	63.8	50.5	-20.8	-2.3
Mara	50.7	36.7	-27.6	- 3.2	73.6	58	-21.2	-2.4
Manyara	33.3	25.2	-24.3	- 2.8	44.5	40.1	-9.9	-1.0
Njombe	54.5	36.5	-33.0	- 4.0	81.4	57.7	-29.1	-3.4
Katavi	58.2	35.5	-39.0	- 4.9	88	56.1	-36.3	-4.5
Simiyu	39.4	32.2	-18.3	- 2.0	54.3	51	-6.1	-0.6
Geita	41.0	35.1	-14.4	- 1.6	57.8	55.5	-4.0	-0.4
Songwe		37.4				59.1	N/A	N/A
Tanzania Zanzibar	46.4	34.7	-25.2	- 2.9	67.4	54.9	-18.5	-2.1
Kaskazini Unguja	42.1	38.7	-8.1	- 0.8	59.5	61	2.5	0.2
Kusini Unguja	56.8	38.7	-31.9	- 3.8	85.9	61	-29.0	-3.4
Mjini Magharibi	47.1	35.2	-25.3	- 2.9	69	55.6	-19.4	-2.2
Kaskazini Pemba	43.4	34.2	-21.2	- 2.4	61.8	54.1	-12.5	-1.3
Kusini Pemba	45.8	29.7	-35.2	- 4.3	66.7	47.2	-29.2	-3.5

Note: Songwe Region was formed in 2015

3.12 Levels and Trends in IMR and U5MR by Councils

Appendix 1.3 presents the levels and trends in the Infant Mortality Rate (IMR) across councils between 2012 and 2022. The results indicate that IMR declined in all councils during the period. However, three councils of Mafia, Kyerwa and Namtumbo continued to experience relatively high infant mortality rates exceeding 50 deaths per 1,000 live births. In contrast, the councils of Ngorongoro, Monduli and Simanjiro recorded the lowest IMR, each with fewer than 20 deaths per 1,000 live births.

Only 12 out of 195 councils namely Mufindi District, Mafinga Town, Bahi District, Tanganyika District, Songea Municipal, Musoma Municipal, Mpimbwe District, Songea District, Muleba District, Mbeya City, Mlele District, and Madaba District have achieved an Average Annual Rate of Reduction (AARR) exceeding 4.0 percent. For most other councils, the average annual rate of reduction ranged between 0.1 and 4.0 percent.

Musoma Municipal Council recorded a notable improvement, with IMR declining from 73 deaths per 1,000 live births in 2012 to 29 deaths per 1,000 live births in 2022, representing a 66 percent reduction. Detailed IMR and AARR estimates for each council are provided in Appendix 1.3.

By 2022; 38 of the 195 councils had already achieved the national target of reducing IMR to 30 deaths per 1,000 live births, as stipulated in the Third National Five-Year Development Plan (FYDP III) 2021/22–2025/26.

Appendix 1.4 presents the trends in the Under-Five Mortality Rate (U5MR) across councils from 2012 to 2022. The results show a significant reduction in U5MR in all councils, with only Hai District Council recording a reduction of less than 10 percent. Musoma Municipal Council again showed the largest improvement, reducing U5MR from 112 to 45 deaths per 1,000 live births over the same period.

Councils that achieved high average annual rates of reduction in U5MR (at 7.0 percent or above) included Mufindi District, Bahi District, Mafinga Town, Tanganyika District, and Songea Municipal Council.

By 2022; 11 councils had already reached the national target of reducing U5MR to 40 deaths per 1,000 live births by 2025/26, as outlined in FYDP III. These councils were Ngorongoro, Monduli, Simanjiro, Longido, Mwanga, Mbulu, Meru, Arusha District, Arusha

City, Moshi District and Singida Municipal Council. while Mafia District Council recorded the highest (85 deaths per 1,000 live births). Detailed U5MR and AARR estimates for each council are provided in Appendix 1.4.

Overall, the analysis reveals a substantial decline in both Infant Mortality Rate (IMR) and Under-Five Mortality Rate (U5MR) across all councils between 2012 and 2022. The majority of councils demonstrated positive progress, with several already achieving or surpassing the national targets for 2025/26 ahead of time. The consistent reductions across councils reflect improved child survival and signify progress in health interventions, including enhanced access to maternal and child health services during the review period.

3.13 Conclusion

The 2022 PHC results indicate that Tanzania has made significant progress in reducing infant and under-five mortality rates, suggesting improvements in healthcare access and child health outcomes. However, the persistent disparities such as higher mortality rates in rural areas, among male children in specific regions, show there is a need for properly specified interventions. Thus, addressing the challenges requires a focused approach that prioritizes underserved populations and areas, strengthens healthcare systems, and promotes equitable access to essential services.

Following the Health Sector Strategic Plan 2021–2026 and the 2030 SDGs, Tanzania must implement tailored strategies that tackle the root causes of disparities to sustain and accelerate progress. Therefore, investments in rural healthcare infrastructure, expanded immunization programmes, improved nutrition, and strengthened disease prevention measures are critical. By addressing the gaps and promoting inclusive healthcare policies, Tanzania can ensure that all children, regardless of gender or location, have the opportunity to thrive.

CHAPTER FOUR

IMPACT OF SOCIO-ECONOMIC DIFFERENTIALS ON CHILDHOOD MORTALITY

4.1 Introduction

This chapter gives an understanding of how different socio-economic factors related to mothers' (15-49) age and children under age five have an impact on childhood mortality by using visual presentations of tables and figures. The chapter is explained in seven sub-sections, including child health care, education background of women, regional differentials in female literacy rate and U5MR, types of sources of drinking water, types of toilet facilities, and childbearing age at the National and Regional levels.

4.2 Child Health Care

Child health care services play a critical role in improving survival rates and reducing under-five mortality. The Tanzania Demographic and Health Survey (TDHS) 2022 provides essential insights into the coverage and disparities of key child health interventions, including immunization, nutrition, and treatment of common childhood illnesses, which have an impact on childhood mortality rates as per the 2022 Census.

4.2.1 Childhood Immunization in the Region

Immunization is a cornerstone intervention that prevents many vaccine-preventable diseases associated with high child mortality. According to DHS 2022: routine childhood vaccines include; BCG (tuberculosis); oral polio vaccine (OPV) or inactivated polio vaccine (IPV); pentavalent or DPT-HepB-Hib (diphtheria, pertussis, tetanus, hepatitis B, and Haemophilus influenzae type b); pneumococcal conjugate vaccine (PCV); rotavirus vaccine (RV); and measles-rubella (MR) vaccine, in Tanzania.

Table 4.1 presents immunization coverage among children 12-23 and 24-35 months by place of residence and region in Tanzania. Regions with a high percentage of children who were fully vaccinated were associated with a lower childhood mortality rate. Urban areas generally demonstrate high percentage of children who were fully vaccinated (26.4%) with under-five mortality rate of 52.9 deaths per 1,000 live births due to factors such as better access to healthcare facilities and easier for communication and spreading of information

about child vaccination compared with rural areas only 21.7 percent of children received fully vaccination accompanied with U5MR of 55.2 deaths per 1,000 live births.

Regions such as Kagera and Rukwa had low percentage of children who were fully vaccinated according to national schedule which were accompanied with high under-five mortality rates of 65.9 and 64.2 deaths per 1,000 live births respectively. Lindi and Mtwara regions, both from the southern zone of Tanzania, had a low percentage of children who were fully vaccinated, with less than 50 observations, and high under-five mortality rates of 67.4 and 64.4 deaths per 1,000 live births, respectively.

Table 4.1: Immunization Coverage among Children 12–23 and Children 24–35 Months and U5MR by Place of Residence and Region; Tanzania, TDHS-MIS and PHC 2022

Place of residence	Fully vaccinated (according to national schedule) 3	U5MR
Tanzania		
Rural	21.7	55.2
Urban	26.4	52.9
Tanzania Mainland	22.5	54.3
Dodoma	36.8	51.7
Arusha	21.0	31.5
Kilimanjaro	(65.5)	38.8
Tanga	14.8	59.6
Morogoro	15.6	60.6
Pwani	12.6	60.6
Dar es Salaam	24.2	55.7
Lindi	(27.7)	67.4
Mtwara	(15.0)	64.4
Ruvuma	44.0	62.7
Iringa	45.9	57.5
Mbeya	15.0	52.9
Singida	19.9	41.8
Tabora	14.4	53.4
Rukwa	10.5	64.2
Kigoma	29.3	57.2
Shinyanga	2.5	51.3
Kagera	16.5	65.9
Mwanza	32.8	50.5
Mara	35.4	58.0
Manyara	8.8	40.1
Njombe	(38.1)	57.7
Katavi	17.4	56.1
Simiyu	17.1	51.0
Geita	14.0	55.5
Songwe	16.4	59.1
Tanzania Zanzibar	39.5	54.9
Kaskazini Unguja	40.4	61.0
Kusini Unguja	29.4	61.0
Mjini Magharibi	52.1	55.6
Kaskazini Pemba	28.0	54.1
Kusini Pemba	23.3	47.2

Note: Percentages in parentheses are obtained from less than 50 observations

4.2.2 Nutritional Practice for Young Children

Table 4.2 Outlines key Infant and Young Child Feeding (IYCF) practices. High nutritional practices lead to a lower mortality rate among infants and young children, thereby improving their health status. Early initiation of breastfeeding is beneficial for both mother and child. 70 percent of children received early initiation of breastfeeding as the first milk from their mothers, which helps the child with nutrients that will boost the child's immunity and hence reduce child mortality. A high percentage of children under 6 months of age were exclusively breastfed (64%). This shows that a high percentage of children were provided with nutrients from their mother's milk that protected them against infectious diseases such as diarrhea and respiratory illness that could lead to an increased mortality rate (TDHS-MIS, 2022).

The percentage of children aged 6–23 months who met the minimum dietary diversity requirement was 64 percent. A high percentage of children did not receive foods from at least 5 out of 8 defined food groups at a specific age, which led to high childhood mortality, especially among children aged 6-23 months. Last two indicators, 30% of children age 6–23 months were fed a sweet beverage and 9% of children age 6–23 months consumed unhealthy foods are against WHO guidance recommendations since they lead to cardiovascular diseases and diabetes to under five children which may lead to the childhood mortality that was reported in the 2022 Census, where by Tanzania reported 54 deaths per 1,000 live births, Tanzania mainland reported 54 deaths per 1,000 live births and Tanzania Zanzibar reported 54.9 deaths per 1,000 live births of under-five mortality rates.

Table 4.2: Percentage of children fed according to various IYCF practices; Tanzania, TDHS-MIS 2022

Indicator	Indicator numerator and denominator	Percentage
Early initiation of breastfeeding	Percentage of children born in the last 2 years who were put to the breast within 1 hour of birth,	70.2
Exclusive breastfeeding under 6 months	Percentage of children age 0–5 months who were fed exclusively with breastmilk during the previous day	64.3
Minimum dietary diversity 6–23 months	Percentage of children age 6–23 months who were fed foods and beverages from at least 5 out of 8 defined food groups during the previous day	18.8
Sweet beverage consumption 6–23 months	Percentage of children age 6–23 months who were given a sweet beverage during the previous day	30.0
Unhealthy food consumption 6–23 months	Percentage of children age 6–23 months fed unhealthy foods during the previous day	8.7

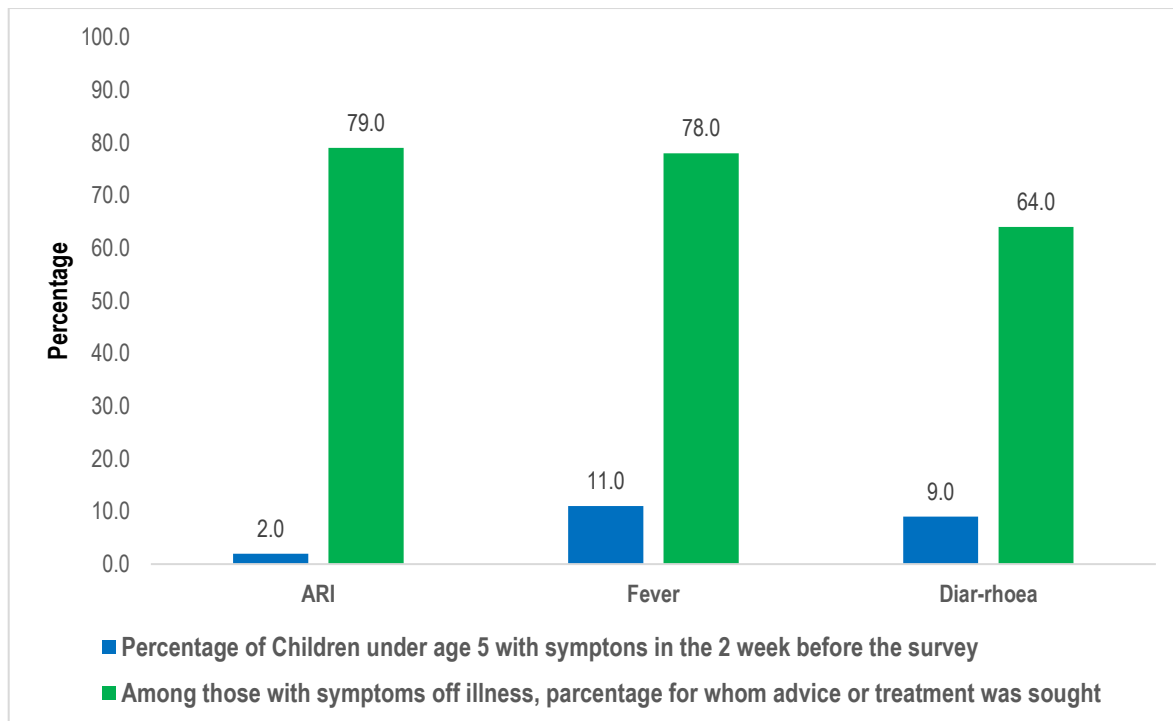
4.2.3 Childhood Prevention and Treatment for Some Illnesses

Figure 4.1 illustrates the prevalence of symptoms of the common childhood illnesses that lead to a high childhood mortality rate if the mothers and caregivers did not seek advice and

treatment. Common childhood illnesses, including Acute Respiratory Infection (ARI), Fever, and Diarrhoea among children under age 5 in the 2 weeks preceding the survey. Fever (11%) was the most common illness reported among children under age five during the 2 weeks before the survey, followed by diarrhoea (9%) and symptoms of ARI (2%). However, a high percentage of children with ARI symptoms (79%) and fever (78%) were taken for treatment, or their mothers sought advice, as compared with the percentage of children with diarrhoea (64%). This led to more deaths of children with diarrhoea symptoms than children with ARI and fever symptoms.

In comparing the results above with the results from Censuses, Childhood mortality rates have declined from 2012 to 2022. The results from censuses reveal that both IMR and U-5MR decreased from 46.2 and 66.5 deaths per 1,000 live births, respectively, in 2012 PHC to 34.3 and 54.3 deaths per 1,000 live births, respectively, in 2022 PHC. A high percentage of mothers who sought advice and treatment, especially for ARI and fever diseases, led to decreased childhood mortality caused by specific common childhood diseases, but there may still be high IMR and U-5MR for children with diarrhoea symptoms due to a low percentage of their mothers seeking advice and treatment.

Figure 4.1: Percentage Symptoms of Childhood Illness and Care Seeking; Tanzania, TDHS-MIS 2022



4.2.4 Nutritional Status in Early Childhood

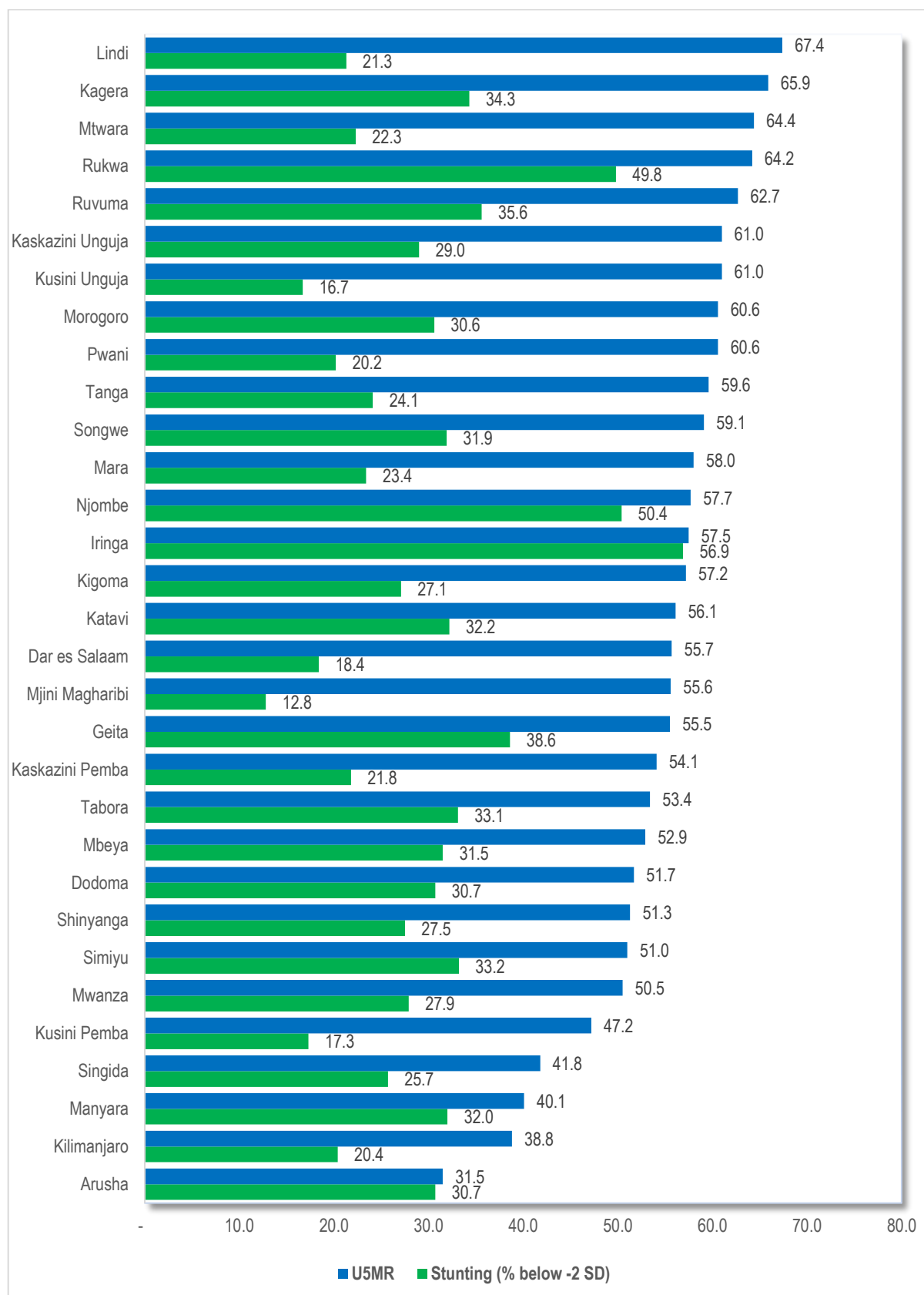
Child nutrition status is commonly measured by the anthropometrics, including age, height, and weight data. The distributions of age, height, and weight for children under 5 years of age are compared to the WHO growth standard reference population (WHO, 2006).

Nutritional status indices are height-for-age, weight-for-height, and weight-for-age, which are expressed in standard deviation units (z-scores) from the median of the reference population. Children who fall more than two standard deviations (-2 SD) below the median of the reference population are considered undernourished, and children who fall more than three standard deviations (-3 SD) below the median of the reference population are considered severely undernourished.

Height-for-age is one of the indices of the child nutrition status used to assess stunting which then lead to increased childhood mortality rate, children whose height-for-age z-score is below negative two standard deviation (-2 SD) from median of the reference population are short of their age (stunted) and children whose height-for-age z-score is below negative three standard deviation (-3 SD) from media of the reference population are classified as severely stunted with high risk of death due to weak immunity (TDHS-MIS).

Iringa and Njombe regions reported high percentages of stunting in children (56.9%) and (50.4%) respectively, with high U5MR of 57.5 and 57.7 deaths per 1,000 live births respectively compared with Kilimanjaro region that reported only (20.4%) of children who were stunted with low U5MR of 38.8 deaths per 1000 live births.

Figure 4.2: Under-five Mortality Rates and Percentage of Children under age 5 classified as Malnourished according to Height-for-Age (Stunting) by Region; Tanzania, 2022 PHC and TDHS-MIS 2022

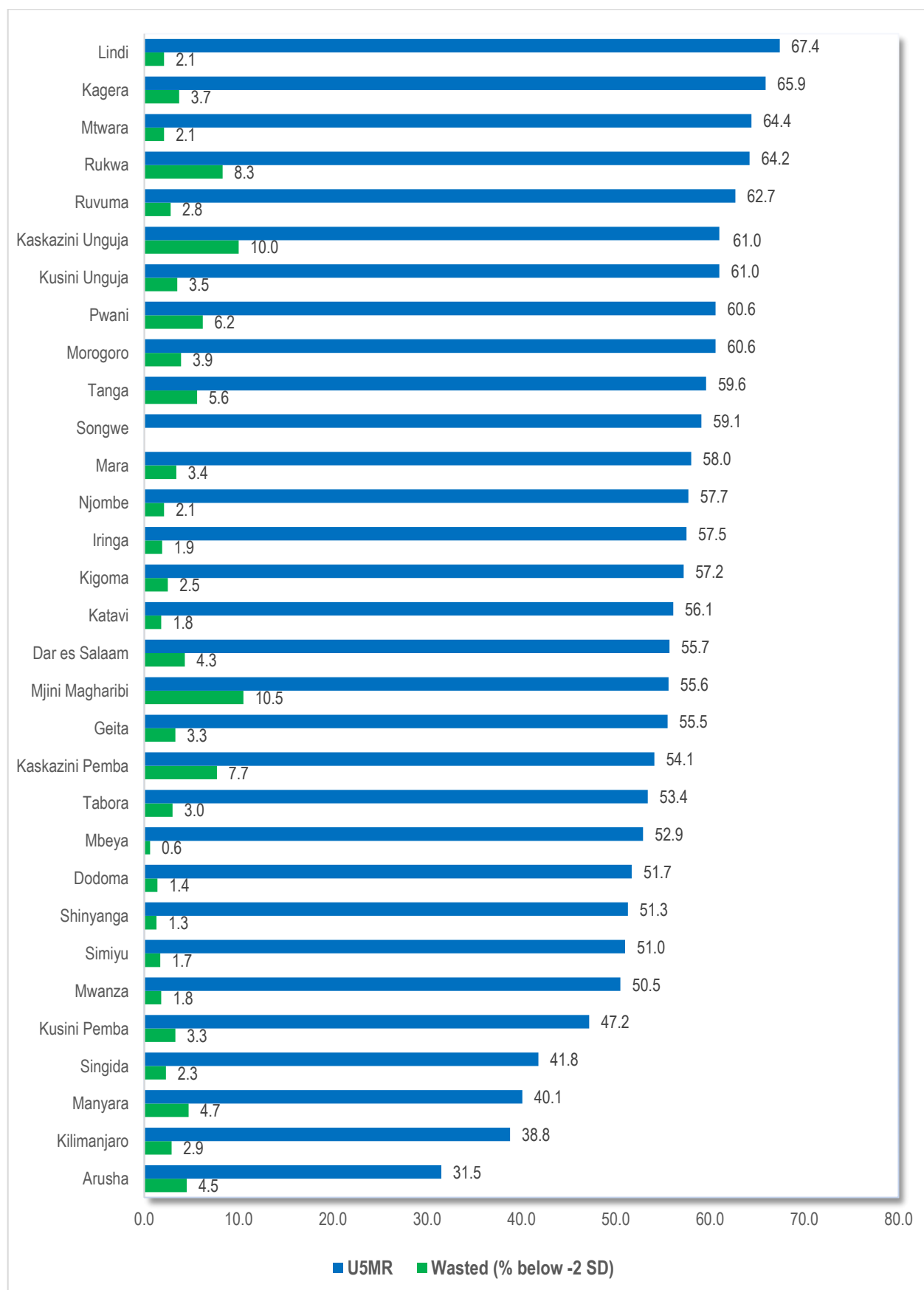


The weight-for-height index assesses wasting and overweight of children, both of which have a significant impact on the child mortality rate. Children with weight-for-height z-score below negative two standard deviation (-2 SD) from the median of the reference population

are considered thin for their height (wasted), children with a weight-for-height z-score below negative three standard deviation (-3 SD) from the median of the reference population are termed as too thin for their height or severely wasted, and children with a weight-for-height z-score above two standard deviation (+2 SD) above the median of the reference population are considered as overweight (TDHS-MIS, 2022).

Mjini Magharibi and Kaskazini Unguja reported a high percentage of wasted children (10.5%) and (10.0%), with high U5MR of 55.6 and 61 deaths per 1000 live births, respectively, compared with the Kilimanjaro region, which reported (2.9%) of wasted children with a low U5MR of 38.8 deaths per 1000 live births.

Figure 4.3: Under-five Mortality Rates and Percentage of Children under age 5 Classified as Malnourished According to Weight- for - Height (Wasting) by Region, Tanzania, 2022 PHC and TDHS-MIS 2022



4.3 Educational Background of Women

Education is one of the socio-economic factors that significantly impacts childhood mortality. Educated women tend to make better decisions regarding their children's nutrition, care, and economic stability, which helps prevent common childhood diseases and lower childhood mortality rates as well. Literacy rate has an inverse relationship with both IMR and U5MR, as the literacy rate of women increases, IMR and U5MR decrease.

4.3.1 Regional Differentials in Female Literacy Rate and U5MR

Regional differentials are observed in table 4.3 and show that Kilimanjaro region have high percentage of literate women (96.3%) with low IMR of 24.4 and U5MR of 38.8 because educated women can make better decision regarding child nutrition, hygiene and overall child care as compared with Tabora region with the lowest percentage of women literacy rate (67.4%) with higher IMR of 33.7 and U5MR of 53.4 which conclude to high mortality rate in the region.

Table 4.3: Literacy Rate of Women age 15–49, Infant and Under five Mortality Rates by Place of Residence and Region; Tanzania, 2022 PHC

Place of residence	literacy Rate	Infant Mortality Rate	Under five Mortality Rate
Tanzania	84.4	34.3	54.3
Rural	77.4	34.9	55.2
Urban	94.5	33.4	52.9
Tanzania Mainland	84.1	34.3	54.3
Dodoma	78.9	32.6	51.7
Arusha	85.0	19.7	31.5
Kilimanjaro	96.3	24.4	38.8
Tanga	84.3	37.8	59.6
Morogoro	82.8	38.4	60.6
Pwani	88.5	38.4	60.6
Dar es Salaam	97.9	35.2	55.7
Lindi	79.2	42.8	67.4
Mtwara	82.5	40.9	64.4
Ruvuma	87.7	39.7	62.7
Iringa	93.5	36.4	57.5
Mbeya	90.4	33.4	52.9
Singida	81.3	26.3	41.8
Tabora	67.4	33.7	53.4
Rukwa	72.0	40.7	64.2
Kigoma	77.3	36.2	57.2
Shinyanga	79.0	32.4	51.3
Kagera	80.7	41.8	65.9
Mwanza	88.1	31.9	50.5
Mara	87.8	36.7	58.0
Manyara	79.6	25.2	40.1
Njombe	94.2	36.5	57.7
Katavi	68.3	35.5	56.1
Simiyu	77.8	32.2	51.0
Geita	77.0	35.1	55.5
Songwe	81.9	37.4	59.1
Tanzania Zanzibar	92.8	34.7	54.9
Kaskazini Unguja	89.2	38.7	61.0
Kusini Unguja	95.7	38.7	61.0
Mjini Magharibi	97.2	35.2	55.6
Kaskazini Pemba	79.9	34.2	54.1
Kusini Pemba	89.0	29.7	47.2

4.4 Types of Sources of Drinking Water

Access to safe and clean water is essential for human health and well-being. Drinking water can be obtained from various sources, which are categorized into two types: improved and unimproved sources. In Tanzania, Improved sources of drinking water include piped water, public taps, standpipes, tube wells, boreholes, protected dug wells, springs, rainwater, water delivered via tanker trucks or carts with small tanks, and bottled water. Unimproved sources include unprotected dug wells, unprotected springs, surface water, and others (TDHS-MIS, 2022). Improved water sources are significantly associated with low child mortality rate; access to clean water reduces the risk of waterborne diseases such as diarrhea, cholera, and typhoid, which cause high mortality of children.

Table 4.4 shows that Kilimanjaro region reported higher percentage of improved sources of water (92.8%) which led to low IMR of 24.4 deaths per 1,000 live births and U5MR of 38.8 deaths per 1,000 live births compared with Tabora region with low percentage of improved sources of water (41.9%) which led to high IMR of 33.7 deaths per 1,000 live births and U5MR of 53.4 deaths per 1,000 live births due to risk of waterborne diseases in this this region.

Table 4.4: Infant, Under five Mortality Rates, and Improved Source of Drinking water by Region; Tanzania, 2022 PHC

Place of residence	Improved	Infant Mortality Rate	Under five Mortality Rate
Tanzania	70.1	34.3	54.3
Tanzania Mainland	69.5	34.3	54.3
Dodoma	67.8	32.6	51.7
Arusha	87.3	19.7	31.5
Kilimanjaro	92.8	24.4	38.8
Tanga	62.4	37.8	59.6
Morogoro	72.0	38.4	60.6
Pwani	72.2	38.4	60.6
Dar es Salaam	97.5	35.2	55.7
Lindi	59.2	42.8	67.4
Mtwara	66.3	40.9	64.4
Ruvuma	75.0	39.7	62.7
Iringa	78.5	36.4	57.5
Mbeya	76.9	33.4	52.9
Singida	47.2	26.3	41.8
Tabora	41.9	33.7	53.4
Rukwa	55.8	40.7	64.2
Kigoma	64.5	36.2	57.2
Shinyanga	67.2	32.4	51.3
Kagera	48.0	41.8	65.9
Mwanza	71.7	31.9	50.5
Mara	49.9	36.7	58.0
Manyara	62.1	25.2	40.1
Njombe	80.4	36.5	57.7
Katavi	56.4	35.5	56.1
Simiyu	68.3	32.2	51.0
Geita	59.4	35.1	55.5
Songwe	57.1	37.4	59.1
Tanzania Zanzibar	92.6	34.7	54.9
Kaskazini Unguja	93.1	38.7	61.0
Kusini Unguja	85.3	38.7	61.0
Mjini Magharibi	97.3	35.2	55.6
Kaskazini Pemba	81.5	34.2	54.1
Kusini Pemba	92.2	29.7	47.2

4.5 Type of Toilet Facility

Sanitation plays a critical role in promoting health and preventing the spread of diseases. One of the key aspects of sanitation is the type of toilet facility that people use in their homes or communities. The type of toilet facility is categorized into improved and unimproved, depending on how well they keep human waste from coming into contact with people. Improved toilet facilities include flush/pour flush toilets that flush water and waste to a piped sewer system, a septic tank, a pit latrine, or an unknown destination; ventilated improved pit (VIP) latrines; pit latrines with slabs; and composting toilets. Unimproved toilet facilities include flush/pour flush not connected to a sewer/septic tank/pit latrine, pit latrine without a slab/open pit, bucket, hanging toilet/hanging latrine, and others (TDHS-MIS, 2022).

Households that lack toilet facilities are more prone to communicable diseases, which in turn affect the well-being of both children and adults at the community level. Improper sanitation can lead to the mortality of infants and children, especially those under age five. Table 4.5 shows that the Dar es Salaam region was leading with a higher percentage of improved toilet facilities (97.7%), which led to low IMR and U5MR of 35.2 and 55.7 deaths per 1,000 live births, respectively. In contrast, Kagera region, with a low percentage of improved toilet facilities (32.2%), had high IMR and U5MR of 41.8 and 65.9 deaths per 1,000 live births, respectively. This indicates that regions with a high percentage of improved toilet facilities have a lower childhood mortality rate.

Table 4.5: Percentage of Household with Improved Toilet Facilities, Infant and Under five Mortality Rates by Region; 2022 PHC

Place of residence	Improved	Infant Mortality Rate	Under five Mortality Rate
Tanzania	60.2	34.3	54.3
Tanzania Mainland	59.4	34.3	54.3
Dodoma	54.5	32.6	51.7
Arusha	68.9	19.7	31.5
Kilimanjaro	82.4	24.4	38.8
Tanga	61.2	37.8	59.6
Morogoro	61.9	38.4	60.6
Pwani	67.5	38.4	60.6
Dar es Salaam	97.7	35.2	55.7
Lindi	46.6	42.8	67.4
Mtwara	47.5	40.9	64.4
Ruvuma	56.0	39.7	62.7
Iringa	82.8	36.4	57.5
Mbeya	70.4	33.4	52.9
Singida	38.6	26.3	41.8
Tabora	33.8	33.7	53.4
Rukwa	35.7	40.7	64.2
Kigoma	35.3	36.2	57.2
Shinyanga	48.6	32.4	51.3
Kagera	32.2	41.8	65.9
Mwanza	66.2	31.9	50.5
Mara	50.8	36.7	58.0
Manyara	38.3	25.2	40.1
Njombe	80.3	36.5	57.7
Katavi	47.0	35.5	56.1
Simiyu	32.5	32.2	51.0
Geita	54.9	35.1	55.5
Songwe	56.6	37.4	59.1
Tanzania Zanzibar	89.9	34.7	54.9
Kaskazini Unguja	88.3	38.7	61.0
Kusini Unguja	92.2	38.7	61.0
Mjini Magharibi	99.0	35.2	55.6
Kaskazini Pemba	66.8	34.2	54.1
Kusini Pemba	77.9	29.7	47.2

4.6 Childbearing Age at National and Regional Levels

Table 4.6 presents the correlations between the mean age at first marriage and IMR and U5MR by place of residence and region. A later mean age at first marriage is associated with a lower child mortality rate. This is because women who delay marriage tend to be more mature, educated, and economically stable, which contributes to improved care during pregnancy and early childhood, all of which contribute to better health of both mother and children. Nationally, the average age at which women have their first marriage is 22.1 years with an IMR of 34.3 deaths and U5MR of 54.3 deaths per 1,000 live births. In urban areas, women tend to have their first marriage at an average age of 24.2 years, and these areas report slightly lower IMR of 33.4 deaths and U5MR of 52.9 deaths per 1,000 live births. This is associated with the provision of education and stability in the economy of urban women.

In comparison, women in rural areas had their first marriage at a mean age of 20.6 years with an IMR of 34.9 and a U5MR of 55.2 deaths per 1,000 live births, which is higher than in urban areas due to low provision of education, instability in the economy, and immaturity, hence this led to a high mortality rate. Women in Dar es Salaam region were leading on getting their first marriage later at mean age of 25.7 years with IMR (35.2) lower than Katavi region women had their first marriage earlier at mean age of 19.7 years with IMR of 35.5 deaths per 1,000 live births, this reveals that childhood mortality is high in Katavi region because of getting first marriage at young age compared with Dar es Salaam region (Table 4.6).

Table 4.6: Correlate Between Mean Age at First Marriage and Childhood Mortality Rates by Place of Residence and Region; 2022 PHC

Place of Residence	MAFM	IMR	U5MR
Tanzania	22.1	34.3	54.3
Rural	20.6	34.9	55.2
Urban	24.2	33.4	52.9
Tanzania Mainland	22.1	34.3	54.3
Dodoma	22.1	32.6	51.7
Arusha	23.0	19.7	31.5
Kilimanjaro	24.5	24.4	38.8
Tanga	22.0	37.8	59.6
Morogoro	22.0	38.4	60.6
Pwani	22.9	38.4	60.6
Dar es Salaam	25.7	35.2	55.7
Lindi	21.5	42.8	67.4
Mtwara	21.0	40.9	64.4
Ruvuma	21.5	39.7	62.7
Iringa	24.4	36.4	57.5
Mbeya	22.8	33.4	52.9
Singida	21.1	26.3	41.8
Tabora	19.8	33.7	53.4
Rukwa	20.3	40.7	64.2
Kigoma	21.2	36.2	57.2
Shinyanga	20.7	32.4	51.3
Kagera	20.8	41.8	65.9
Mwanza	22.5	31.9	50.5
Mara	21.2	36.7	58.0
Manyara	21.6	25.2	40.1
Njombe	23.8	36.5	57.7
Katavi	19.7	35.5	56.1
Simiyu	20.3	32.2	51.0
Geita	20.7	35.1	55.5
Songwe	20.5	37.4	59.1
Tanzania Zanzibar	23.7	34.7	54.9
Kaskazini Unguja	23.3	38.7	61.0
Kusini Unguja	23.4	38.7	61.0
Mjini Magharibi	24.5	35.2	55.6
Kaskazini Pemba	22.2	34.2	54.1
Kusini Pemba	22.7	29.7	47.2

Note: Mean Age at First Marriage

4.7 Conclusion

The results from this chapter suggest that socio-economic differentials significantly influence childhood mortality rates. Socioeconomic disparities, including maternal education, place of residence, access to sanitation facilities, and household wealth, were strongly associated with child survival. Children who resided in rural areas, places with unimproved toilet facilities, uneducated mothers, unimproved sources of drinking water, and who were not fully vaccinated were at a high risk of child mortality. There is a need for improving health facilities, maternal education, and sanitation in areas with a high childhood mortality rate.

Urban areas showed a low percentage of childhood mortality due to a high percentage of women's literacy, knowledge on child feeding indicators, access to health care, immunization coverage, improved types of sources of water, and toilet facilities. In contrast, rural areas reported a high percentage of childhood mortality, which was associated with limited resources and poor living conditions. However, the chapter also showed socio-economic disparities in childhood mortality by region.

CHAPTER FIVE

COMPARISON OF CHILDHOOD MORTALITY INDICATORS WITH OTHER SOURCES OF DATA

5.1 Introduction

This chapter presents comparisons of infant and under-five mortality rates between the Census and Tanzania Demographic and Health Survey (TDHS) data. These rates are important in measuring the country's health status and the quality of life of its people. Childhood mortality estimates are used to identify vulnerable populations, particularly where data on the incidence and prevalence of diseases are not readily available.

The comparison is based on the data from the 2012 and 2022 censuses. These data were compared with the results from Tanzania Demographic and Health Surveys (TDHS). In addition, the chapter also highlighted the progress on Childhood mortality indicators towards national (Five-year Development Plan (FYDP), Zanzibar Development Plan (ZADEP), and Health Sector Strategy Plan (HSSP)) and international goals (Sustainable Development Goals (SDGs)).

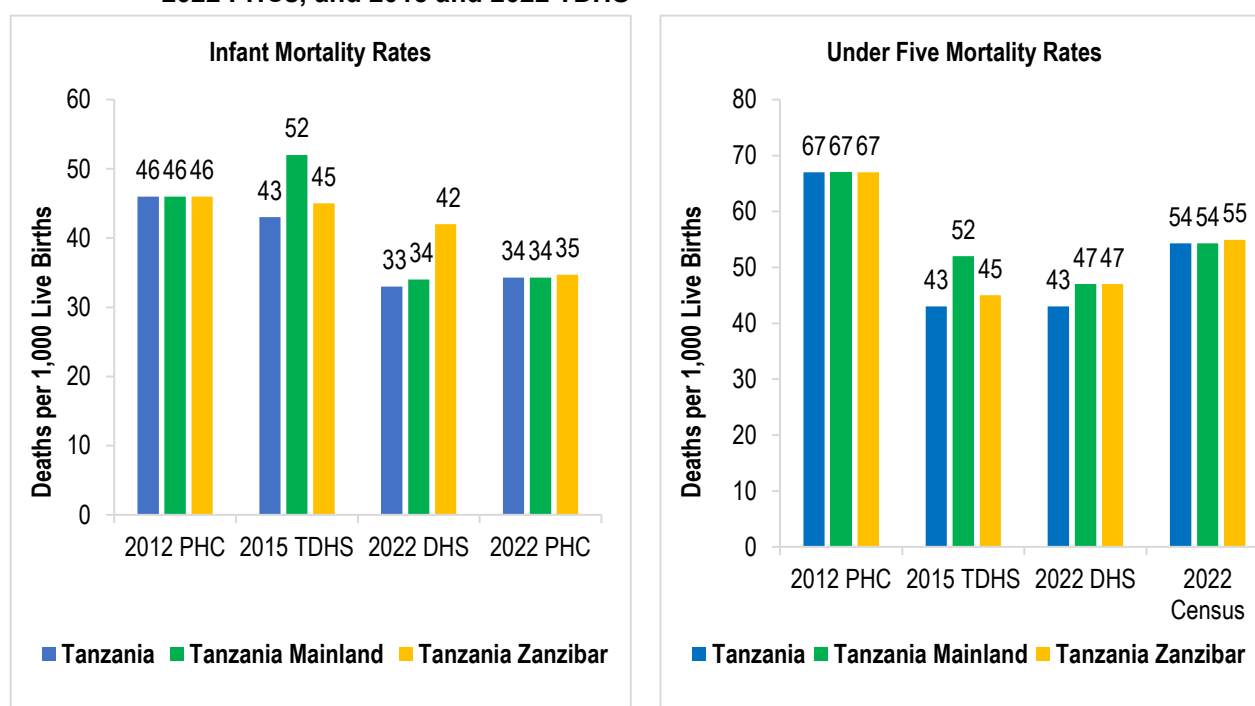
4.2 Comparison of Childhood Mortality Indicators between Census and Surveys

Figure 5.1 presents the infant and under-five mortality rates obtained from censuses and surveys undertaken in Tanzania from 2012 to 2022. Two national surveys (2015 TDHS-MIS and 2022 TDHS-MIS) were conducted prior to the 2022 Census; the 2022 TDHS was conducted six months prior to the 2022 PHC. The results show a decline in childhood mortality (infant and under-five) between censuses. The declines of childhood mortality (infant and under five) indicators were observed; at national level, infant mortality rate decreased from 46 deaths per 1,000 live births in 2012 PHC to 34 deaths per 1,000 deaths in 2022 PHC, a similar rate was observed in Tanzania Mainland while in Tanzania Zanzibar IMR decrease to 35 deaths per 1,000 live births in 2022 from 46 deaths in 2012 PHC.

The under-five mortality rate for Tanzania also declined to 54 deaths per 1,000 live births in 2022 from 67 deaths recorded in 2012. A similar rate was observed for Tanzania Mainland, while for Tanzania Zanzibar, the rate declined from 67 deaths per 1,000 live births.

The comparison between the 2022 PHC and TDHS shows a minor, notable discrepancy in the infant mortality rate, where the rates were 34 and 33 deaths per 1,000 live births, respectively, and it's particularly high in Tanzania, Zanzibar, where the rates were 42 and 35 deaths per 1,000 live births, respectively. In addition, the under-five mortality rates reported in the 2022 TDHS differed from those in the 2022 PHC, due to the different methodologies employed in each survey. The under-five mortality rate recorded in the 2022 PHC is 54 deaths per 1,000 live births for Tanzania overall, the same as Tanzania Mainland, and 55 deaths per 1,000 live births for Tanzania Zanzibar.

Figure 5.1: Infant and Under-Five Mortality Rates from Censuses and Surveys; Tanzania, 2012 and 2022 PHCs, and 2015 and 2022 TDHS



5.3 Comparison with other African Countries participated in the 2020 round of census

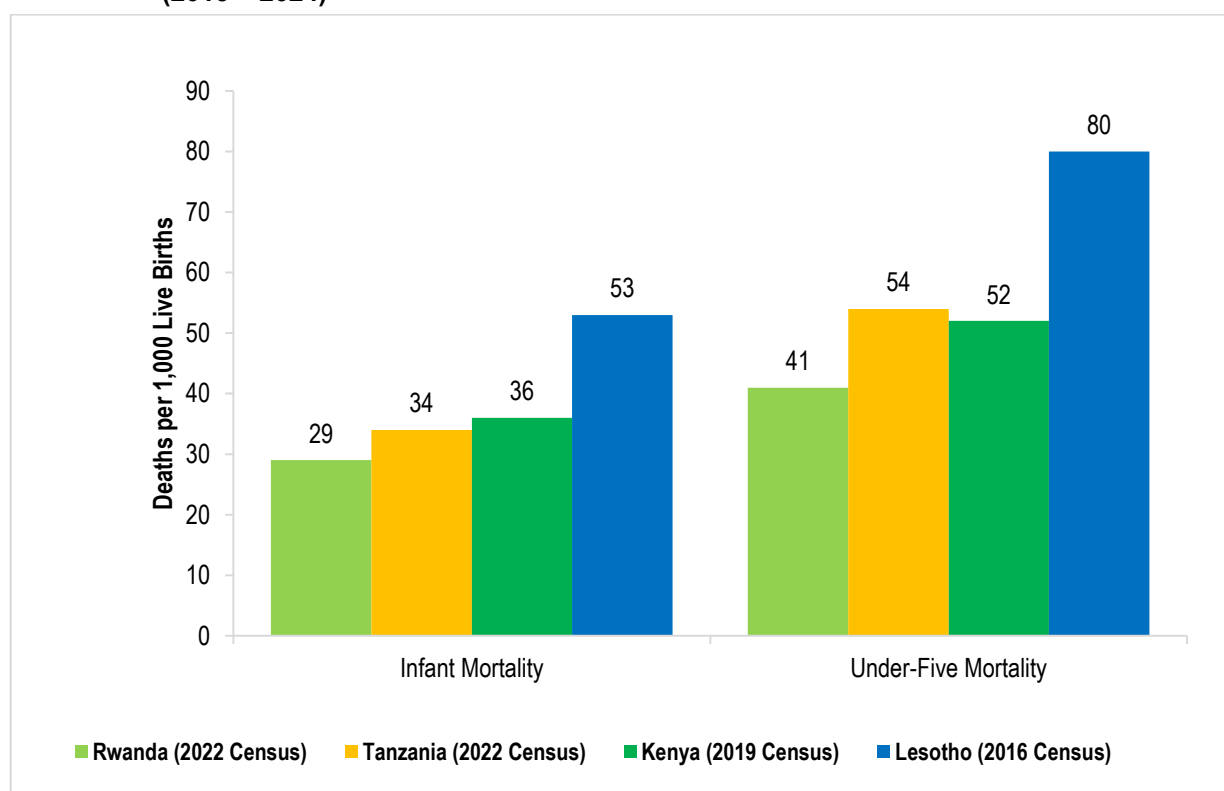
The infant and under-five mortality rates data in several African countries show significant variations. Each country employed its own survey methods, typically involving representative sampling techniques to collect data on live births, deaths, and demographic characteristics. These methodologies ensure comprehensive and reliable estimates of child mortality rates, enabling comparisons with those of different countries and periods.

Rwanda has the lowest infant mortality rate of 29 deaths per 1,000 live births, while Lesotho has the highest at 53 deaths per 1,000 live births. Other identified figures include Tanzania (34 deaths per 1,000 live births) and Kenya (36 deaths per 1,000 live births). The rates reflect the effectiveness of healthcare systems and interventions in improving child health in each country. For under-five mortality rates, again, Rwanda also has the lowest at 41

deaths per 1,000 live births, and Lesotho has the highest at 80 deaths per 1,000 live births. The statistics therefore emphasize the need for public health strategies which address the disparities and improve child survival rates among counties.

The data on infant and under-five mortality rates from various African countries generally indicate challenges and the status of achievement of Sustainable Development Goal 3.2, aiming to end the occurrence of preventable deaths of newborns and children under five years of age by 2030. The figures also reveal a diverse landscape in child health, underscoring the need for a focused and sustained commitment to improving health systems on the continent (Figure 5.2).

Figure 5.2: Infant and Under-Five Mortality Rates from Other African Countries; 2020 Census Round (2015 – 2024)



Source: 2022 Tanzania Population and Housing Census; 2016 Lesotho Population and Housing Census; 2019 Kenya Population and Housing Census; 2022 Rwanda Population and Housing Census

54 Progress Achieved Towards National and International Development Plans

Childhood mortality remains a critical indicator of population health and the effectiveness of health systems. As of the most recent data, Tanzania's Infant Mortality Rate (IMR) stands at 34 deaths per 1,000 live births, while the Under-Five Mortality Rate (U5MR) is 54 deaths per 1,000 live births. While these figures represent progress over previous decades, they remain above several national, regional, and international targets.

Nationally, the Third National Five-Year Development Plan (FYDP III) 2021/22–2025/26 outlines targets to reduce IMR to 30 and U5MR to 40 by the end of the plan period in

2025/26. When compared to the current rates (IMR: 34; U5MR: 54), further reduction is necessary to meet these goals, particularly for U5MR, which will require a decline of 14 deaths per 1,000 live births within a short timeframe (Figures 5.3 and 5.4).

Similarly, the Health Sector Strategic Plan (HSSP) 2021–2026 sets more ambitious targets: reducing IMR to 25 and U5MR to 37 by 2026. These targets reflect alignment with global standards and a strong national commitment to child survival. However, achieving them will demand substantial investments in healthcare infrastructure, maternal and child health services, and interventions addressing the social determinants of health.

Regionally, the East Africa Vision 2050 has set a target to reduce IMR to 36 deaths per 1,000 live births by 2050. Tanzania has already achieved this target, with its current IMR at 34, suggesting commendable progress relative to regional aspirations.

At the global level, the 2030 Sustainable Development Goals (SDGs) aim to reduce U5MR to at least 25 deaths per 1,000 live births by 2030. Tanzania's current U5MR of 54 is more than double this target, indicating a need for accelerated efforts in child health interventions to align with this global commitment (Table 5.1)

Table 5.1: Progress Achieved in Infant and Under five Mortality Rates towards National Plans and International Development

National Development Plan	Infant Mortality Rate (IMR) Deaths per 1,000 Live Births				Under five Mortality Rate(U5MR) Deaths per 1,000 live Births			
	Target	2022 Census Result	2022 TDHS Result	Progress	Target	2022 Census Result	2022 TDHS Result	Progress
Third National Five-Year Development Plan 2021/22 - 2025/26 (FYDP)	Reduce 30 deaths by 2025/26	34 deaths	33 deaths	On track	Reduce 40 deaths by 2025/26	54 deaths	43 deaths	For 2022 Census results - Not Achieved
Zanzibar Development Plan (ZADEP) 2025/26	Reduce to 15 deaths by 2025/26	35 deaths	42 deaths	Not Achieved	Reduce to 37 deaths by 2025/26	55 deaths	47 deaths	Not Achieved
Health Sector Strategic Plan (HSSP) 2021 - 2026	Achieve 25 deaths 2026	34 deaths	33 deaths	On track	Reduce to 37 deaths by 2026	54 deaths	43 deaths	Not Achieved
East Africa Vision	Reduce to 36 deaths by 2050	34 deaths	33 deaths	Achieved	NIL	NIL	NIL	NIL
International Development Plan								
2030 Sustainable Development Goals (SDGs)	NIL	NIL	NIL	NIL	Reduce to at least as low as 25 deaths by 2030	54 deaths	43 deaths	Not Achieved

Figure 5.3: Trends in Infant Mortality Rates Towards Five Year Development Plan (FYDP) and Zanzibar Development Plan (ZADEP) Targets; Tanzania, 1978-2022 Censuses

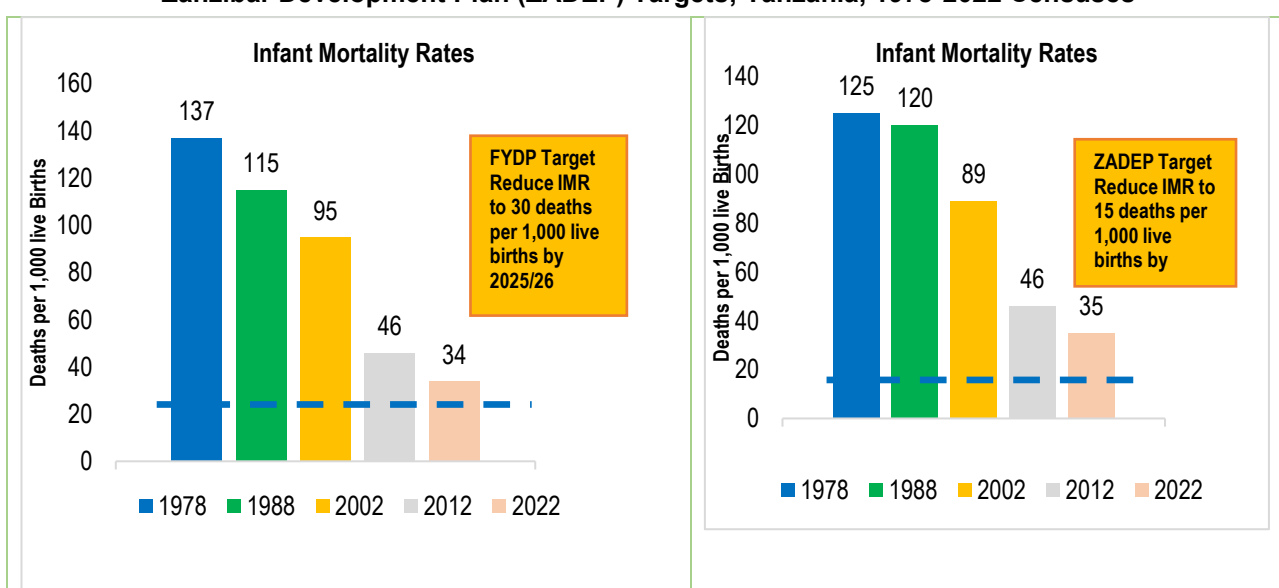


Figure 5.4: Trends in Under five Mortality Rates against Five-year Development Plan (FYDP)2021-2026 and Zanzibar Development Plan (ZADEP) Targets, Tanzania 1978-2022 Censuses

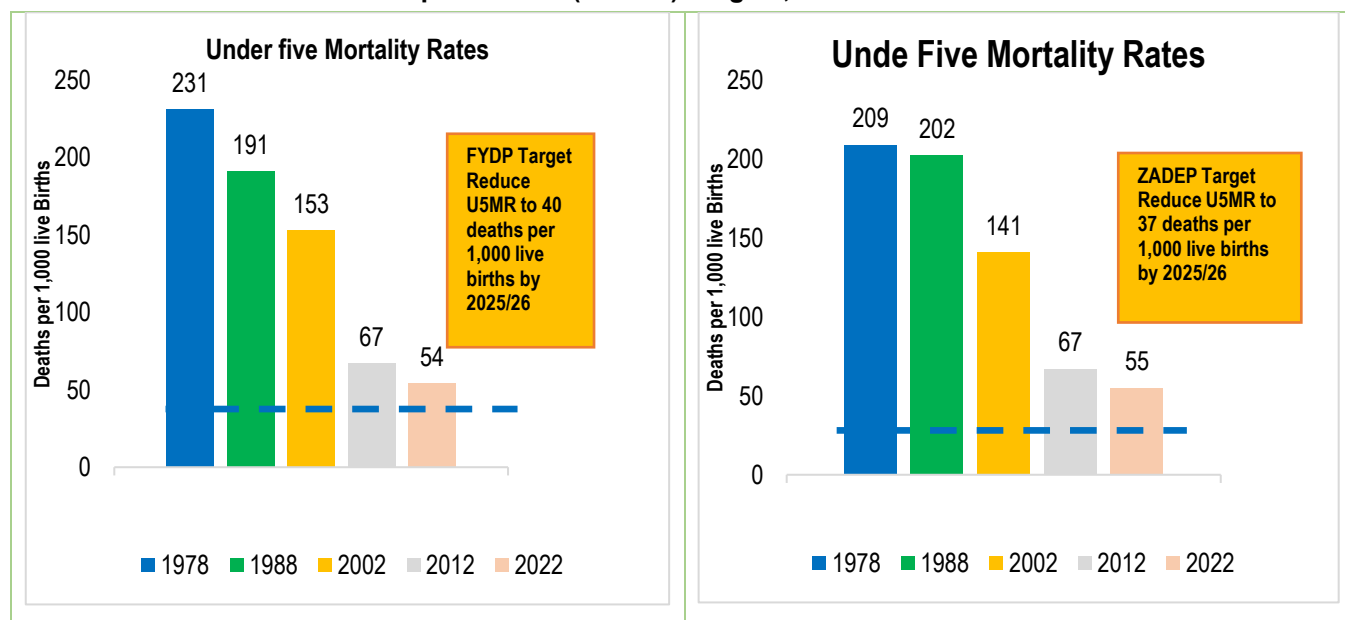
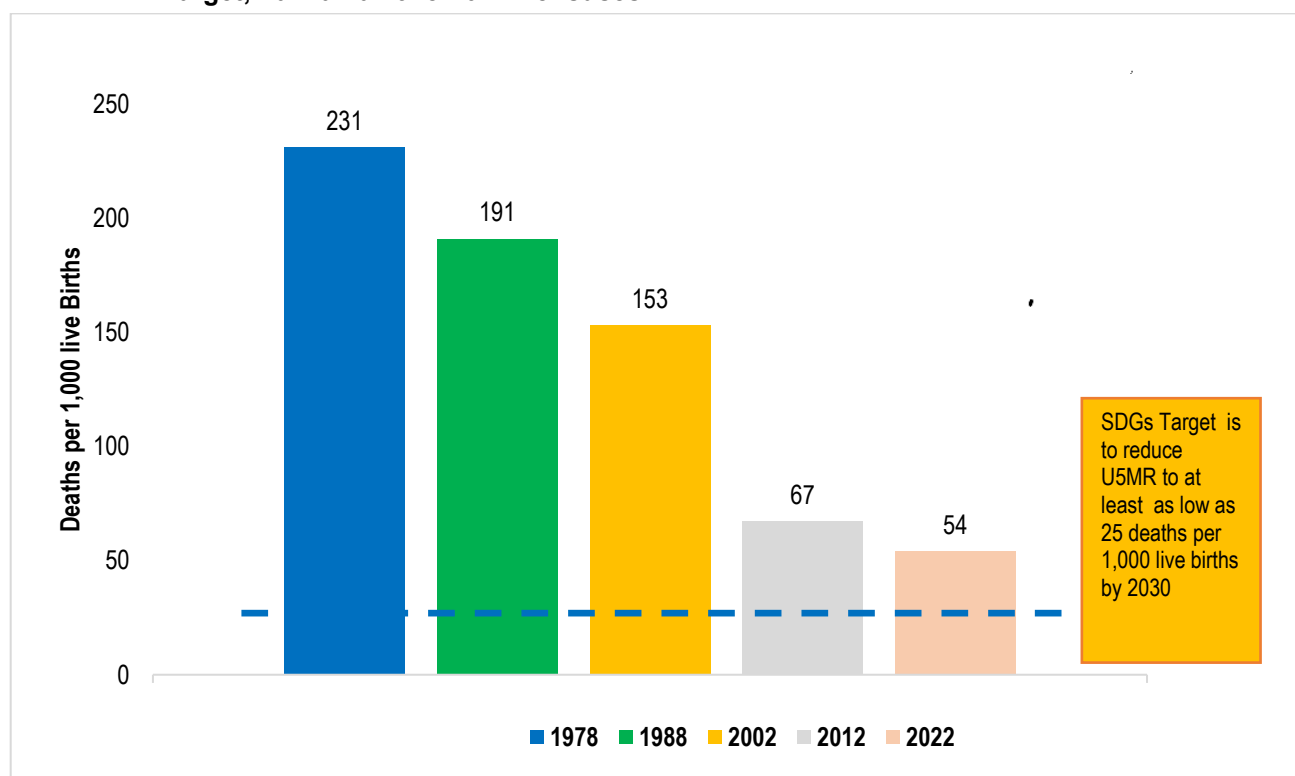


Figure 5.5: Trends in Under five Mortality Rates Towards Sustainable Development Goal (SDGs) Target; Tanzania 1978-2022 Censuses



5.5 Conclusion

Despite the significant decline in childhood mortality (infant and under-five mortality) in Tanzania, results from the 2022 PHC show that the targets set by both national and international plans/strategies for the SDGs have not yet been achieved. Therefore, the Ministry of Health, through its Health Sector Strategic Plan (2021–2026), should continue targeted efforts, including expanding health services, particularly in areas with high rates. This is essential to close these gaps and ensure that all children in Tanzania are surviving.

The comparison between the 2022 PHC and 2022 TDHS shows a minor, notable discrepancy in the infant mortality rate, which was 34 and 33 deaths per 1,000 live births, respectively.

CHAPTER SIX

CONCLUSION, POLICY IMPLICATIONS AND RECOMMENDATIONS

6.1 Introduction

The 2022 PHC provides baseline information on Tanzania's population for policy formulation and review, development planning, informed decision-making, monitoring and evaluation, and reporting of development programs at national and regional levels. This chapter, therefore, presents a summary of findings, policy implications, and recommendations to inform the public and other health stakeholders on current mortality trends and health challenges. It will guide policymakers and decision-makers on how to improve healthcare access, address socioeconomic factors that affect health, and align national efforts with global health targets.

6.2 Infant and Under Five Mortality

6.2.1 Findings

The key findings provided a status on infant mortality and under-five mortality.

- i. The Infant Mortality Rate for Tanzania as a whole had decreased from 46 deaths per 1,000 live births in 2012 to 34 deaths per 1,000 live births in 2022, with an average annual decline of 1.2 deaths per 1,000 live births. The Child Mortality Rate for Tanzania decreased from 21 in 2012 to 20 deaths per 1,000 live births in 2022, with an average annual decline of 1.1 deaths per 1,000 live births. While the Under-Five Mortality Rate for Tanzania decreased from 67 in 2012 to 54 deaths per 1,000 live births in 2022, with an average annual decline of 1.2 deaths per 1,000 live births;
- ii. Overall, infant and under-five mortality estimates for the rural areas in Tanzania Mainland were higher than those for related urban areas, while IMR and U5MR are more or less at the same level in Tanzania Zanzibar.
- iii. There are five regions with higher infant and child mortality than the other regions. These are Lindi (43), Kagera (42), Mtwara (41), Rukwa (41) and Ruvuma (40) deaths per 1,000 live births; and
- iv. Individuals without formal educational attainment have higher IMR (34) and U5MR (54) than those with high formal educational attainment. Individuals with tertiary education have the lowest rates, with an IMR of 27.3 and a U5MR of 43.4, indicating the importance of education in reducing child mortality.

6.3 Policy Implications

- i. The decrease in the Infant Mortality Rate (IMR) and Under-5 Mortality Rate (U5MR) in Tanzania indicates a significant improvement in childhood health. However, it indicates a need to ensure that ongoing policy efforts address remaining challenges to meet national and global health targets, such as the Health Sector Strategic Plan (HSSP) for 2021-2026² and the 2030 SDGs target.
- ii. The disparity between urban and rural areas in IMR and U5MR emphasizes the need for prioritizing tailored healthcare strategies that focus on urban-rural differences to reduce the long-standing advantage of urban areas over rural areas. Hence there is a need to balance resource and facilities allocation in rural and urban areas.
- iii. Regions with very high Infant Mortality Rates (IMR) and Under-Five Mortality Rates (U5MR) have limited access to quality healthcare; inadequate maternal and child nutrition; low immunization coverage and disease prevention; insufficient sanitation and unsafe water; and socioeconomic disparities and education gaps, among others. and
- iv. The results from the TDHS 2022 show a clear relationship between high infant and under-five mortality rates (IMR and U5MR) and poor nutritional status, particularly stunting, in Tanzania's regions. Most regions with an IMR above the national average of 34.3 also exhibit stunting rates higher than the national average of 30 percent. For example, Kagera (34%) and Ruvuma (36%) exhibit stunting levels above the national average, with Rukwa being significantly higher at 50%. Conversely, Lindi and Mtwara are exceptions, with stunting rates of 21% and 22%, respectively, both of which are below the national average. This suggests that regions with higher under-five mortality are often associated with poorer nutritional outcomes, underscoring the importance of addressing malnutrition to reduce child mortality.

6.4 Recommendations

- i. Improve rural health care access through investing more in healthcare infrastructures such as clinics and mobile health services, as well as expanding training and support for healthcare workers;
- ii. Strengthen community health programmes involving local leaders and educate families on preventive child health practices, safe delivery, nutrition, and immunization, particularly households without formal education;
- iii. Establish programmes that reduce IMR and U5MR, emphasising on the five regions with very high infant and child mortality;

² The HSSP infant mortality rate target is to achieve 25 deaths per 1,000 live births by 2026

- iv. Targeted Nutrition and Healthcare Interventions. Focus on high-risk regions, such as Kagera, Ruvuma, and Rukwa, by implementing comprehensive nutrition programmes, including improved maternal and child nutrition, micronutrient supplementation, and enhanced access to healthcare services. These initiatives should address malnutrition directly, promote breastfeeding, and enhance early child care to reduce stunting and under-five mortality; and
- v. Strengthen Food Security and Community Education. Enhance food security and nutrition education in regions with high rates of stunting, promoting dietary diversity and sustainable agricultural practices. Local communities should be empowered with knowledge about proper feeding practices, the importance of nutritious foods, and how to improve household food production to combat malnutrition and improve child health outcomes.

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Appendices

Appendix 1.1 Contributors to the Childhood Mortality Analysis in Tanzania Census Commissars

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Daniel Ulindula	Director of Corporate Services – NBS
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Appendix 1.2: 2022 Census Questionnaires

QUESTIONNAIRE FOR THE 2022 POPULATION AND HOUSING CENSUS This census is conducted in accordance with Section 6(2)(a) of the Statistics Act Cap. 351 All responses collected in this census are protected under this Act The Sixth Post Union Census Strictly Confidential																																						
SECTION A: IDENTIFICATION																																						
Region	District	Council	Constituency	Division/Wadi	Ward/Shehia	Village/Mtaa	Hamlet/Enumeration Area (EA)	Household Number	CONFIDENTIAL																													
A01 Please State the number all persons who Spent here at the Census Night																																						
SECTION B: DEMOGRAPHICS INFORMATION																																						
B01 No.	B02 HOUSEHOLD MEMBERS Please state the names of all persons who spent the census night, that is Monday night before Tuesday 23rd August, 2022 in your household, starting with the name of the head of household. DO NOT FORGET TO INCLUDE ALL INFANTS, HOUSEHOLD MEMBERS WHO SLEPT IN A NEARBY FUNERAL AND THOSE WORKING NIGHT SHIFTS SUCH AS NURSES, DOCTORS, POLICE, GUARDS, ETC. WRITE DOWN FULL NAME OF EACH HOUSEHOLD MEMBER	B03 RELATIONSHIP TO THE HEAD What is the relationship of [NAME] to the head of the household?	B04 SEX Is [NAME] a male or a female?	B05 AGE How old is [NAME]? WRITE AGE IN COMPLETE YEARS. IF UNDER ONE YEAR WRITE "00" FOR 97 YEARS AND ABOVE WRITE "97"	B06 MARITAL STATUS (APPLICABLE TO AGE 10+) What is current marital status of [NAME]? never married, married, living together, divorced, separated, widowed?	B07 MOBILE PHONE (AGE 15+) Please give the mobile number of [NAME]? WRITE THE MOBILE NUMBER OF ALL HOUSEHOLD MEMBERS AGED 15+.																																
		<table border="1" style="width: 100%; text-align: center; font-size: small;"> <tr> <td>Head</td><td>Spouse</td><td>Son/Daughter</td><td>Biological Parent</td><td>Grand Child</td><td>Other Relative</td><td>Not Related</td> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td> </tr> </table>	Head	Spouse	Son/Daughter	Biological Parent	Grand Child	Other Relative	Not Related	1	2	3	4	5	6	7	<table border="1" style="width: 100%; text-align: center; font-size: small;"> <tr> <td>Male</td><td>Female</td> </tr> <tr> <td>1</td><td>2</td> </tr> </table>	Male	Female	1	2		<table border="1" style="width: 100%; text-align: center; font-size: small;"> <tr> <td>Never Married</td><td>Married</td><td>Living Together</td><td>Divorced</td><td>Separated</td><td>Widowed</td><td>Not Stated</td> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>9</td> </tr> </table>	Never Married	Married	Living Together	Divorced	Separated	Widowed	Not Stated	1	2	3	4	5	6	9	
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SECTION C: INFORMATION ON DISABILITIES/DIFFICULTIES																																																												
B01 No.	C01 ALBINISM Is [NAME] an albino?	C02 SEEING Does (NAME) have difficulty seeing, even if wearing glasses?	C03 HEARING Does (NAME) have difficulty hearing, even if using a hearing aid?	C04 WALKING Does [NAME] have difficulty walking or climbing steps?	C05 REMEMBERING Does (NAME) have difficulty remembering or concentrating?	C06 SELF CARE Does (NAME) have difficulty with self-care, such as washing all over or dressing?																																																						
	<table border="1" style="width: 100%; text-align: center; font-size: small;"> <tr> <td>Yes</td><td>No</td> </tr> <tr> <td>1</td><td>2</td> </tr> </table>	Yes	No	1	2	<table border="1" style="width: 100%; text-align: center; font-size: small;"> <tr> <td>No Difficulty</td><td>Some Difficulty</td><td>A Lot of Difficulty</td><td>Unable to See</td><td>Not Applicable</td> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> </table>	No Difficulty	Some Difficulty	A Lot of Difficulty	Unable to See	Not Applicable	1	2	3	4	5	<table border="1" style="width: 100%; text-align: center; font-size: small;"> <tr> <td>No Difficulty</td><td>Some Difficulty</td><td>A Lot of Difficulty</td><td>Unable to Hear</td><td>Not Applicable</td> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> </table>	No Difficulty	Some Difficulty	A Lot of Difficulty	Unable to Hear	Not Applicable	1	2	3	4	5	<table border="1" style="width: 100%; text-align: center; font-size: small;"> <tr> <td>No Difficulty</td><td>Some Difficulty</td><td>A Lot of Difficulty</td><td>Unable to Walk</td><td>Not Applicable</td> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> </table>	No Difficulty	Some Difficulty	A Lot of Difficulty	Unable to Walk	Not Applicable	1	2	3	4	5	<table border="1" style="width: 100%; text-align: center; font-size: small;"> <tr> <td>No Difficulty</td><td>Some Difficulty</td><td>A Lot of Difficulty</td><td>Unable to Remember</td><td>Not Applicable</td> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> </table>	No Difficulty	Some Difficulty	A Lot of Difficulty	Unable to Remember	Not Applicable	1	2	3	4	5	<table border="1" style="width: 100%; text-align: center; font-size: small;"> <tr> <td>No Difficulty</td><td>Some Difficulty</td><td>A Lot of Difficulty</td><td>Unable to Care</td><td>Not Applicable</td> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> </table>	No Difficulty	Some Difficulty	A Lot of Difficulty	Unable to Care	Not Applicable	1	2	3	4	5
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SECTION C: INFORMATION ON DISABILITIES/DIFFICULTIES																			
B01 No.		C07 COMMUNICATION USING THE COMMON LANGUAGE: Does [NAME] have difficulty communicating; for example understanding or being understood?				C08 OTHER DISABILITIES Does, [NAME] have other type of disabilities/difficulties among the following? READ ALL TYPES OF DISABILITIES/ DIFFICULTIES TO RESPONDENT Yes = 1 No = 2 Don't know = 9				C09 CAUSE OF DISABILITY ASK FOR EVERY TYPE OF DISABILITY FROM C02 TO C07 IF CODE 3 OR 4 OR CODE 1 IN QUESTION C08 What is the cause of disability for [NAME]? MULTIPLE RESPONSE IS ALLOWED				C10 ASSISTIVE DEVICES AND MATERIALS ASK IF QC01 = 1 OR ANY QUESTION FROM QC02 TO Q07 = 3 OR 4 OR QC08 IS CODE 1 FOR B,C,D Does [NAME] has disability assistive devices or materials? Yes = 1 No = 2					
		No Difficulty Some Difficulty A Lot of Difficulty Unable to communicate Not Applicable 12345				Cleft PalateHydrocephalusSpinal bifidaSpinal cord injuriesEpilepsy or seizuresPoisoningStrabismusAutismMental HealthMental DisorderPerson with short statureLeprosyPerson with hunchbackOther disability ABCDEFGHIJKLMX				InfantDiseaseAccidentOld ageBeatenContaminated waterStressDrug abusePregnancy/birth complications ABCDEFGHI									
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0 8																			

SECTION A: IDENTIFICATION																					
Region		District		Council		Constituency		Division/Wadi		Ward/Shehia		Village/Mtaa		Hamlet/Enumeration Area (EA)		Household Number		CONFIDENTIAL			
SECTION D: MIGRATION INFORMATION																					
B01 No.		D01 CITIZENSHIP What is (NAME) country of citizenship? IF TANZANIAN, WRITE CODE 001 IF NON-TANZANIAN WRITE APPROPRIATE CODE, FOR DUAL CITIZENSHIP WRITE "888" ► IF THE ANSWER IS CODE OF RESPECTIVE COUNTRY GO TO D03				D02 DUAL CITIZENSHIP What is (NAME) countries of citizenship? WRITE CODES FOR THE COUNTRIES MULTIPLE RESPONSE IS ALLOWED FIRST COUNTRY SECOND COUNTRY				D03 PLACE OF RESIDENCE Which region/country does [NAME] usually live? WRITE CODE FOR THE COUNTRY, REGION AND DISTRICT IF LIVING IN TANZANIA, OR COUNTRY CODE IF LIVING OUTSIDE TANZANIA THEN GO TO THE NEXT QUESTION				D04 WHERE RESPONDENT SPENDS MOST OF THE DAY TIME Where do you spend most of your time during the day? WRITE COUNTRY, REGION AND DISTRICT CODES IF SPENDS MOST OF THE DAY TIME IN TANZANIA OR COUNTRY CODE IF OUTSIDE TANZANIA THEN GO TO THE NEXT QUESTION CODES FOR THE 8th BOX Rural =1 Regional /District Headquarters =2 Other Urban= 3				D05 PLACE OF BIRTH In which region/country was [NAME] born? WRITE CODE FOR COUNTRY, REGION AND DISTRICT IF BORN IN TANZANIA OR COUNTRY CODE IF BORN OUTSIDE TANZANIA. IF COUNTRY OF BIRTH IS UNKNOWN WRITE "9999999" ► IF THE RESPONDENT WAS BORN IN THE REGION WHERE THE INTERVIEW IS TAKING PLACE GO TO D10			
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0 2																					
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B01 No.	D06 TIME OF ARRIVE When did [NAME] arrive to live in this region/country? WRITE MONTH AND YEAR OF ARRIVAL OF A CURRENT PLACE MM YYYY	D07 LIVING PERIOD How long has [NAME] been living in this region/Country? WRITE COMPLETE YEARS. IF LESS THAN ONE YEAR WRITE "00"	D08 PREVIOUS RESIDENCE Where was [NAME] living before coming here? IF IN TANZANIA WRITE CODE 01 FOR RURAL, 02 FOR URBAN AREA AND COUNTRY CODE FOR OUTSIDE TANZANIA AND IF COUNTRY IS UNKNOWN WRITE CODE 999	D09 MAIN REASON FOR MIGRATION What was [NAME]'s main reason for moving to this region/to Tanzania? <table border="1" style="width:100%; font-size: 8px;"> <tr><td>01</td><td>To take up a paid job</td></tr> <tr><td>02</td><td>Job transfer</td></tr> <tr><td>03</td><td>To look for work/grow pastures/croplands</td></tr> <tr><td>04</td><td>Study/training</td></tr> <tr><td>05</td><td>Marriage</td></tr> <tr><td>06</td><td>Family moved/joining family</td></tr> <tr><td>07</td><td>Medical treatment/health care</td></tr> <tr><td>08</td><td>Conflict/peacekeeping/returnal disaster</td></tr> <tr><td>09</td><td>Looking for suitable land for agriculture</td></tr> <tr><td>10</td><td>Looking for suitable site for fishery activities</td></tr> <tr><td>11</td><td>Looking for suitable grazing land</td></tr> <tr><td>12</td><td>Care of living</td></tr> <tr><td>13</td><td>Moving into a new homestead</td></tr> <tr><td>14</td><td>Visit to family</td></tr> <tr><td>15</td><td>Conflict of Marriage/Family</td></tr> <tr><td>16</td><td>Death of parent (s)</td></tr> <tr><td>17</td><td>To be cared</td></tr> </table>	01	To take up a paid job	02	Job transfer	03	To look for work/grow pastures/croplands	04	Study/training	05	Marriage	06	Family moved/joining family	07	Medical treatment/health care	08	Conflict/peacekeeping/returnal disaster	09	Looking for suitable land for agriculture	10	Looking for suitable site for fishery activities	11	Looking for suitable grazing land	12	Care of living	13	Moving into a new homestead	14	Visit to family	15	Conflict of Marriage/Family	16	Death of parent (s)	17	To be cared	D10 PLACE OF RESIDENCE IN YEAR 2012 In which Region /Country was [NAME] living during 2012 census? WRITE CODE FOR THE COUNTRY, REGION AND DISTRICT IF LIVING IN TANZANIA, OR COUNTRY CODE IF LIVING OUTSIDE TANZANIA THEN GO TO THE NEXT QUESTION IF COUNTRY IS UNKNOWN WRITE CODE 999 ► TO BE ASKED FOR PERSONS AGED 11 YEARS OR ABOVE	D11 PLACE OF RESIDENCE IN YEAR 2021 In which Region /Country was [NAME] living in 2021? WRITE CODE FOR THE COUNTRY, REGION AND DISTRICT IF LIVING IN TANZANIA, OR COUNTRY CODE IF LIVING OUTSIDE TANZANIA THEN GO TO THE NEXT QUESTION ► FOR CHILDREN AGED '00' DON'T ASK THIS QUESTION SKIP TO E01
01	To take up a paid job																																							
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SECTION E: INFORMATION ON POSSESSION OF NATIONAL DOCUMENTS AND ORPHANHOOD																										
B01 No.	E01 BIRTH CERTIFICATE, PASSPORT, AND HEALTH INSURANCE Does [NAME] have the following Identification? Yes = 1 No = 2 Don't know = 9 QUESTION E01F SHOULD BE ASKED FOR A PERSON AGED 60 YEARS OR ABOVE	E02 OTHER DOCUMENTS - FOR PERSON AGED 18+ Does [NAME] have the following National Documents? Yes = 1 No = 2 Don't know = 9 ► IF D01 NOT TANZANIAN DON'T ASK CODE C, E AND F E02A1: IF A or B IS CODE 1, ASK, Please, mention National ID number of [NAME] E02C1: IF CODE C IS 1, ASK, Please, mention Zanzibar ID number of [NAME]	E02F ENTREPRENEUR ID - FOR PERSON AGED 18+ ► IF D01 NOT TANZANIAN DON'T ASK THIS QUESTION Does [NAME] have small entrepreneur ID? Yes = 1 No = 2 Don't know = 9 IF CODE 2 OR 9 SKIP TO E03 E02F1: IF CODE 1, ASK, Please, mention Entrepreneur ID number of [NAME] IF ID IS NOT FOUND OR DOES NOT REMEMBER THE ID NUMBER WRITE CODE "999999999"	E03 SURVIVAL OF PARENTS (APPLICABLE TO PERSONS BELOW AGE 18) Is [NAME]'s Father alive? Is [NAME]'s Mother alive? Yes = 1 No = 2 Don't Know = 9																						
	<table border="1" style="width:100%; font-size: 8px;"> <tr><td>Birth Certificate</td></tr> <tr><td>Birth Notification</td></tr> <tr><td>Travel Passport</td></tr> <tr><td>National Health Insurance/Community Health Insurance</td></tr> <tr><td>Other Health Insurance</td></tr> <tr><td>Card for elderly treatment</td></tr> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td></tr> </table>	Birth Certificate	Birth Notification	Travel Passport	National Health Insurance/Community Health Insurance	Other Health Insurance	Card for elderly treatment	A	B	C	D	E	F	<table border="1" style="width:100%; font-size: 8px;"> <tr><td>National ID (NIDA)</td></tr> <tr><td>National ID Number (NIDA)</td></tr> <tr><td>Zanzibar ID</td></tr> <tr><td>Driving Licence</td></tr> <tr><td>Voter's ID</td></tr> <tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td></tr> </table>	National ID (NIDA)	National ID Number (NIDA)	Zanzibar ID	Driving Licence	Voter's ID	A	B	C	D	E	FILL ID NUMBER	FILL ID NUMBER
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SECTION F: EDUCATION INFORMATION - ALL PERSONS AGED 4 YEARS OR ABOVE																																
B01 No.	F01 READING AND WRITING Can [NAME] read and write a short sentence in Kiswahili, English, Kiswahili and English or any other language? Kiswahili = 1 English = 2 Kiswahili and English = 3 Other Languages = 4 Illiterate = 5	F01A NUMERACY Can [NAME] do a simple arithmetics addition, subtraction, division or multiplication? Yes = 1 No = 2	F02 SCHOOL ATTENDANCE Is [NAME] currently attending, partially attended, completed or never attended school? Now attending =1 Partially attended =2 Completed =3 Never attended =4 ► IF CODE 1 OR 3 SKIP TO F04	F03 REASON FOR SCHOOL DROPOUT - 4 TO 24 YEARS What was the main reason for [NAME] school dropout/never attended? <table border="1" style="width:100%; text-align: center; font-size: 0.8em;"> <tr> <td>Financial Constraints</td> <td>School too far away</td> <td>Ill/Sick</td> <td>Disability</td> <td>Pregnancy</td> <td>Tuancy/Refusal</td> <td>Indispline behaviour</td> <td>Expulsion</td> <td>To work/looking for work</td> <td>Caring for the sick/children</td> <td>Marriage</td> <td>Difficulty/dangerous environment</td> <td>Unfriendly infrastructure</td> <td>Not started school</td> </tr> <tr> <td>01</td><td>02</td><td>03</td><td>04</td><td>05</td><td>06</td><td>07</td><td>08</td><td>09</td><td>10</td><td>11</td><td>12</td><td>13</td> </tr> </table>	Financial Constraints	School too far away	Ill/Sick	Disability	Pregnancy	Tuancy/Refusal	Indispline behaviour	Expulsion	To work/looking for work	Caring for the sick/children	Marriage	Difficulty/dangerous environment	Unfriendly infrastructure	Not started school	01	02	03	04	05	06	07	08	09	10	11	12	13	F04 LEVEL OF EDUCATION ► ASK IF F02 CODED 1, 2 OR 3 What level of education has [NAME] completed or is currently attending? WRITE THE APPROPRIATE CODE
Financial Constraints	School too far away	Ill/Sick	Disability	Pregnancy	Tuancy/Refusal	Indispline behaviour	Expulsion	To work/looking for work	Caring for the sick/children	Marriage	Difficulty/dangerous environment	Unfriendly infrastructure	Not started school																			
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CODES FOR F03

Education level	Code
Pre Primary	00
Std 1	01
Std 2	02
Std 3	03
Std 4	04
Std 5	05
Std 6	06
Std 7	07
Std 8	08

Secondary Education

Education level	Code
Pre form one	18
Form 1	09
Form 2	10
Form 3	11
Form 4	12
Form 5	13
Form 6	14

Education after Primary/Secondary School

Education level	Code
University and other related	15
Training after Primary Education	16
Training after secondary education	17
Unit (People with mental disabilities/mental health disabilities)	19

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SECTION G: INFORMATION ON ECONOMIC ACTIVITY - ALL PERSONS AGED 5 YEARS OR ABOVE																						
B01 No.	G01 WORK DURING LAST WEEK During the period of Last week, which of the following work/activity did [NAME] do for many hours? ENUMERATOR: READ CATEGORIES <table border="1" style="width:100%; text-align: center; font-size: 0.8em;"> <tr> <td>To take up a paid job</td> <td>Do activity or business for generate income/help a family member in paid job or business?</td> <td>Work or help in family agricultural activities including crop farming, livestock or fishing?</td> <td>Own account work - Prepare or preserved food or drinks for storage/Construction work or help a family member with similar</td> <td>Did not do any work or activity</td> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> </table>	To take up a paid job	Do activity or business for generate income/help a family member in paid job or business?	Work or help in family agricultural activities including crop farming, livestock or fishing?	Own account work - Prepare or preserved food or drinks for storage/Construction work or help a family member with similar	Did not do any work or activity	1	2	3	4	5	G02 TEMPORARY ABSENCE Even though [NAME] did not work last week, did [NAME] have a paid job, or any kind of business, or farming or other activity to generate income that you were absent from and definitely you will return to? EXAMPLES OF TEMPORARY ABSENCE • WAGE JOBS: LEAVE, STOOD DOWN, ILLNESS, STUDY LEAVE BUT STILL ATTACHED TO A JOB • BUSINESS/AGRIC: TEMPORARY ABSENCES WHILE ACTIVITY CONTINUES DURING THAT ABSENCE; • UNPAID WORKERS AND CASUAL WORKERS SHOULD NOT BE INCLUDED UNDER TEMPORARY ABSENT. Yes 1 No 2	G03 SEEKING WORK Did [YOU/NAME] taken any steps during the past four weeks to look for a paid job or start a business or an activity to generate income? <table border="1" style="width:100%; text-align: center;"> <tr><td>Yes</td><td>No</td></tr> <tr><td>1</td><td>2</td></tr> </table>	Yes	No	1	2	G04 AVAILABLE TO WORK At present are [YOU/NAME] available to take up a paid job, or do any kind of business, farming or any activity to generate income if such opportunity arises? <table border="1" style="width:100%; text-align: center;"> <tr><td>Yes</td><td>No</td></tr> <tr><td>1</td><td>2</td></tr> </table>	Yes	No	1	2
To take up a paid job	Do activity or business for generate income/help a family member in paid job or business?	Work or help in family agricultural activities including crop farming, livestock or fishing?	Own account work - Prepare or preserved food or drinks for storage/Construction work or help a family member with similar	Did not do any work or activity																		
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B01	G05	OCCUPATION	G06	OWNER OF THE ENTERPRISE	G07	MAIN ECONOMIC ACTIVITY	G08	MINING AND QUARRYING ACTIVITY	G09	EMPLOYMENT STATUS																																
No.		ENUMERATOR: THE FOLLOWING QUESTIONS ARE ABOUT (NAME'S) MAIN JOB OR BUSINESS. YOUR MAIN JOB IS THE ONE ON WHICH YOU USUALLY SPEND MOST OF YOUR WORKING TIME INCLUDING THOSE WHO WERE TEMPORARY ABSENT In main job, what kind of work does [NAME] usually do? WRITE OCCUPATION FULLY OR AT LEAST IN TWO WORDS		In your main work, who is the owner of the enterprise? <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Central Government</td> <td style="text-align: center;">Local Government</td> <td style="text-align: center;">Parastatal Organization</td> <td style="text-align: center;">NGO/religious organisation, political party, Non-profit institution</td> <td style="text-align: center;">International organization or foreign embassy</td> <td style="text-align: center;">Private business (non-farm)</td> <td style="text-align: center;">Registered partnership or cooperative</td> <td style="text-align: center;">Own or family farm</td> <td style="text-align: center;">Household(s) domestic worker</td> <td style="text-align: center;">Household - Other economic activities</td> <td style="text-align: center;">Other Private</td> </tr> <tr> <td style="text-align: center;">01</td> <td style="text-align: center;">02</td> <td style="text-align: center;">03</td> <td style="text-align: center;">04</td> <td style="text-align: center;">05</td> <td style="text-align: center;">06</td> <td style="text-align: center;">07</td> <td style="text-align: center;">08</td> <td style="text-align: center;">09</td> <td style="text-align: center;">10</td> <td style="text-align: center;">11</td> </tr> </table>	Central Government	Local Government	Parastatal Organization	NGO/religious organisation, political party, Non-profit institution	International organization or foreign embassy	Private business (non-farm)	Registered partnership or cooperative	Own or family farm	Household(s) domestic worker	Household - Other economic activities	Other Private	01	02	03	04	05	06	07	08	09	10	11		What is the main activity of the business or place where [NAME] work[s]? WRITE ACTIVITY FULLY OR AT LEAST IN TWO WORDS		During the period of 12 Months that is from August 2021 to the day before the census Night, Did [YOU/NAME] work on the following mining or quarrying activities? ► IF CODE "Z" SKIP TO QN. G10 READ RESPONSES		In [YOUR/NAME'S] job, [do/does] [YOU/NAME] work as....? <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Paid Employee</td> <td style="text-align: center;">Self Employed without employees</td> <td style="text-align: center;">Self employed with employees</td> <td style="text-align: center;">casual worker</td> <td style="text-align: center;">Workers not classifiable by status</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> </tr> </table>	Paid Employee	Self Employed without employees	Self employed with employees	casual worker	Workers not classifiable by status	1	2	3	4	5
Central Government	Local Government	Parastatal Organization	NGO/religious organisation, political party, Non-profit institution	International organization or foreign embassy	Private business (non-farm)	Registered partnership or cooperative	Own or family farm	Household(s) domestic worker	Household - Other economic activities	Other Private																																
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B01	G10	AGRICULTURAL ACTIVITIES	G11	TYPES OF CROPS	G11A	LEGAL RIGHT OVER THE OWNERSHIP	G12	TYPES OF LIVESTOCK	G13	TYPES OF FISHERY AND AQUACULTURE	G14	TYPES OF FOREST TREES																									
No.		Does [NAME] involved in agricultural activities during 2021/22 agricultural year? MULTIPLE RESPONSE IS ALLOWED ► IF CODE Z SKIP TO QN. G15		Fill Crop Type Codes (At most two)		What legal right do you have over the ownership of the land used for crop production in the agricultural year 2021/22?		Fill Livestock Type Codes (At most two)		Fill Capture Fishery, Aquaculture Activity and Sea Weeds production Codes (At most two)		Fill Forestry/Tree Activity Type Codes (At most two)																									
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Crop Farming</td> <td style="text-align: center;">Livestock Keeping</td> <td style="text-align: center;">Capture Fishery and Aquaculture (fish farming, etc.)</td> <td style="text-align: center;">Sea Weeds Production (etc.)</td> <td style="text-align: center;">Forestry/Tree Activity</td> <td style="text-align: center;">Not Applicable</td> </tr> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">B</td> <td style="text-align: center;">C</td> <td style="text-align: center;">D</td> <td style="text-align: center;">E</td> <td style="text-align: center;">Z</td> </tr> </table>	Crop Farming	Livestock Keeping	Capture Fishery and Aquaculture (fish farming, etc.)	Sea Weeds Production (etc.)	Forestry/Tree Activity	Not Applicable	A	B	C	D	E	Z		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Title deed</td> <td style="text-align: center;">Customary law</td> <td style="text-align: center;">Contract</td> <td style="text-align: center;">Rented</td> <td style="text-align: center;">Share cropped</td> <td style="text-align: center;">Land under other forms of tenure</td> <td style="text-align: center;">Does not own</td> <td style="text-align: center;">Don't know</td> </tr> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">B</td> <td style="text-align: center;">C</td> <td style="text-align: center;">D</td> <td style="text-align: center;">E</td> <td style="text-align: center;">F</td> <td style="text-align: center;">G</td> <td style="text-align: center;">Z</td> </tr> </table>	Title deed	Customary law	Contract	Rented	Share cropped	Land under other forms of tenure	Does not own	Don't know	A	B	C	D	E	F	G	Z					
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Codes for COL G11

Maize	11	Field peas	37	Banana	71
Paddy	12	Triwi	101	Avocado	72
Sorghum	13	Sunflower	41	Mango	73
Budrush Millet	14	Sesame	42	Papaw	74
Finger Millet	15	Groundnut	43	Pineapple	75
Wheat	16	Palm Oil	44	Orange	76
Barley	17	Coconut	45	Grapes	78
Cassava	21	Soybeans	47	Mandarin	79
Sweet Potatoes	22	Caster seed	48	Guava	80
Irish potatoes	23	Cotton	50	Plums	81
Yams	24	Malay apple	38	Apples	82
Cocoyams	25	Bread fruit	67	Pears	83
Onions	26	Jack fruit	69	Peaches	84
Ginger	27	Passion Fruit	70	Durian	97
Garlic	28	Solanum Nigrum	903	Rambutan	99
Beans	31	collard greens	904	Custard Apple	200
Cowpeas	32	Grapefruit	77	God Fruit	201
Green gram	33	Pomelo	68	Plum	203
Pigeon pea	34	Bilimbi	98	Date	210
Lentils	35	Star fruit	39	Vanilla	212
Bambara nuts	36	Nutmeg	65	Strawberry	213

Codes for COL G12

Soursoop	215	Seaweed	19
Rassberry	216	Cashew nut	46
flower	217	Tobacco	51
Line	851	Pyrothrum	52
Lemon	852	Sisal	53
Cabbage	86	Coffee	54
Spinach	88	Tea	55
Carrot	89	Cocoa	56
Chilies	90	Rubber	57
Amaranths	91	Sugar cane	60
Pumpkins	92	Cardamom	61
Cucumber	93	Jute	62
Egg Plant	94	Cinnamon	64
Water Melon	95	Clove	66
Cauliflower	96	Olive	110
Okra	100	Green Tomato	300
Coriander seed	102	Lemon grass	307
Tomatoes	871	Other	998
White eggplant	872	Pumpkin leaves	906
Green pepper	901	Black Pepper	18
Brocol	905	Not applicable	999

Codes for COL G13

Cattle	1
Goat	2
Sheep	3
Pig	4
Horse	5
Donkey	6
Chicken	7
Duck	8
Turkey	9
Rabbit	10
Other livestock	98
Not Applicable	99

Codes for COL G14

Capture Fishery	1
Aquaculture (fish farming, crab, etc. exclude sea weed)	2
Sea Weed Production	3
Not Applicable	9

Codes for COL G15

Bee Keeping	1
Production of Seeding	2
Tree Plantation	3
Forest Product	4
Gathering and Hunting	5
Other forestry activities	8
Not Applicable	9

SECTION A: IDENTIFICATION									
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SECTION G: INFORMATION ON ECONOMIC ACTIVITY - ALL PERSONS AGED 5 YEARS OR ABOVE

CODES FOR QUESTION G17					
WITHOUT PERMANENT PREMISES			WITH PERMANENT PREMISES		
Hawking/mobile		01	Permanent premises in a market (shop, kiosk, shed)		12
Improvised post on the roadside		02	Workshop, shop, restaurant, hotel		13
Permanent post on the roadside		03	Taxi station in permanent structure/ Public transport with fixed route		14
Vehicle, motor bike, Tricycle, Bicycle		04	Bicycle /Boda boda/ Tricycle stations		15
Customer's home		05	Mining site		16
In my own/partner's home without special installation		06	Farm/fishing or grazing area		17
Online business		07	Industrial area		18
Improvised post in a market		08	Other area with permanent premises		19
Garbage area		09	In my own/partner's home with special installation		20
Construction sites		10			
Other without permanent premises		11			

[illegible]

SECTION H: LAND OWNERSHIP AND INFORMATION REGARDING ICT

B01		LAND OWNERSHIP - ALL PERSONS					INFORMATION REGARDING ICT - 4 YEARS OR ABOVE																																																														
No.	H01	OWNERSHIP OF LAND				H02	TITLE DEED				H03	EQUIPMENTS OWNERSHIP				H04	EQUIPMENTS USED				H05	EQUIPMENT USE																																															
		Does [NAME] own any agricultural or non agricultural land either alone or jointly with someone else?				Does [NAME] have title deed with his/her name on it?				Did [NAME] own the following equipments in the past 3 months?				Did [NAME] use the following equipments in the past 3 months?				In which of the following activities did [YOU/NAME] you use the equipments?																																																			
		► IF THE ANSWER IS 4 OR 9 SKIP TO H03								YES = 1 NO = 2 Don't Know = 9				Yes = 1 No = 2 Don't Know = 9				Yes = 1 No = 2 Don't Know = 9																																																			
														► IF CODE 2 OR/AND 9 FOR ALL, SKIP TO QN. I01				READ ALL CATEGORIES																																																			
		<table border="1"> <tr> <td>Alone</td> <td>Jointly</td> <td>Both alone and jointly</td> <td>Does not own</td> <td>Don't Know</td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>9</td> </tr> </table>				Alone	Jointly	Both alone and jointly	Does not own	Don't Know	1	2	3	4	9	<table border="1"> <tr> <td>Alone</td> <td>Jointly</td> <td>Both alone and jointly</td> <td>No title deed</td> <td>Don't Know</td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>9</td> </tr> </table>				Alone	Jointly	Both alone and jointly	No title deed	Don't Know	1	2	3	4	9	<table border="1"> <tr> <td>Smart phone/Tablet</td> <td>Mobile phone</td> <td>Desktop</td> <td>Laptop</td> </tr> <tr> <td>A</td> <td>B</td> <td>C</td> <td>D</td> </tr> </table>				Smart phone/Tablet	Mobile phone	Desktop	Laptop	A	B	C	D	<table border="1"> <tr> <td>Smart phone/Tablet</td> <td>Mobile phone</td> <td>Desktop</td> <td>Laptop</td> </tr> <tr> <td>A</td> <td>B</td> <td>C</td> <td>D</td> </tr> </table>				Smart phone/Tablet	Mobile phone	Desktop	Laptop	A	B	C	D	<table border="1"> <tr> <td>Communication</td> <td>Search/receive information</td> <td>Online business</td> <td>Learning</td> <td>Playing games/Entertainment</td> <td>Sending and receiving money</td> </tr> <tr> <td>A</td> <td>B</td> <td>C</td> <td>D</td> <td>E</td> <td>F</td> </tr> </table>				Communication	Search/receive information	Online business	Learning	Playing games/Entertainment	Sending and receiving money	A	B	C	D	E	F
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SECTION I: INFORMATION ON FERTILITY - FEMALES AGED 10 YEARS OR ABOVE

B01 No.	CHILDREN EVER BORN - CHILDREN SURVIVING				FERTILITY IN LAST 12 MONTHS FOR WOMEN AGED 10 TO 49 YEARS	
	I01 BIRTH Have you ever given live birth? Yes = 1 No = 2 ► IF CODE "2" SKIP TO I04	I02 BORN ALIVE IN HOUSEHOLD How many male/female children were born alive to [NAME] and are now living with you/her in this household? IF SHE IS NOT LIVING WITH ANY OF HER CHILDREN WRITE "00"	I03 BORN ALIVE LIVING ELSEWHERE How many male/female children were born alive to [NAME] and are now living elsewhere? IF SHE HAS NO CHILDREN LIVING ELSEWHERE WRITE "00"	I04 CHILDREN DIED How many male/female children were born alive to [NAME] and are now unfortunately dead? IF NONE OF HER CHILDREN HAS DIED WRITE "00" ► IF QN I01 = 2 AND I04 = 0 SKIP TO J01	I05 CHILDREN BORN ALIVE How many of the male/female children who were born alive to [NAME] in the last 12 months? (22 AGOST, 2022 BACK TO 23 AGOST, 2021) IF THERE IS NO CHILD SURVIVING WRITE "0" ► IF THERE IS NO CHILD BORN ALIVE IN THE LAST 12 MONTHS WRITE "0" THEN GO SECTION J. DON'T ASK FEMALES AGED 50 YEARS OR ABOVE	
		MALE FEMALE	MALE FEMALE	MALE FEMALE	MALE FEMALE	
0 1						
0 2						
0 3						
0 4						
0 5						
0 6						
0 7						
0 8						

SECTION A: IDENTIFICATION									
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SECTION J: INFORMATION ON GENERAL AND MATERNAL DEATHS IN THE HOUSEHOLD

PLEASE RECORD INFORMATION ON DEATHS THAT OCCURRED IN THE HOUSEHOLD DURING THE LAST 12 MONTHS. DO NOT FORGET CHILDHOOD MORTALITY															
J01 Was there any death which occurred in this household during the last 12 months? (i.e. 22 AUGUST 2022 - 23 AUGUST 2021) Yes = 1 No = 2 ► IF THE ANSWER IS NO, SKIP TO SECTION K				J02 How many number of death occurred in this household during the last 12 months RECORD THE NUMBER OF DEATHS											
J03 Death Serial Number	SEX AND AGE OF DECEASED; AND CAUSE OF DEATH			IF DEATH IS OF A WOMAN AGED 10 TO 49 YEARS											
	J04 SEX OF DECEASED Was the deceased a male or a female? Male =1 Female =2	J05 AGE OF DECEASED How old was the deceased at the time of death? WRITE AGE IN COMPLETE YEARS. IF UNDER ONE YEAR WRITE "00" IF 97 YEARS OR ABOVE WRITE "97"	J06 CAUSE OF DEATH What was the main cause of death?	J07 DURING PREGNANCY Did the death occur during pregnancy? Yes = 1 No = 2 ► IF CODE 1 SKIP TO QUESTION J10	J08 DURING CHILDBIRTH Did the death occur during childbirth? Yes = 1 No = 2 ► IF CODE 1 SKIP TO QUESTION J10	J09 DURING SIX WEEKS Did the death occur during the 6 weeks period following the end of pregnancy, irrespective of the way the pregnancy ended? Yes = 1 No = 2	J10 PLACE OF DEATH ASK IF QJ07 OR J08 OR J09 = 1 Did this death occurred at home or in health facility? Home = 1 Health facility = 2 On the way = 3								
			<table border="1" style="width: 100%; text-align: center;"> <tr> <td>1 Road Accident</td> <td>2 Other Accidents</td> <td>3 Suicide</td> <td>4 Domestic Violence/Homicide</td> <td>5 Sickness/Disease</td> <td>6 Maternal Death</td> <td>7 Killed</td> <td>8 Unspecified reasons</td> </tr> </table>	1 Road Accident	2 Other Accidents	3 Suicide	4 Domestic Violence/Homicide	5 Sickness/Disease	6 Maternal Death	7 Killed	8 Unspecified reasons				
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SECTION K: HOUSING OWNERSHIP, CONDITIONS, CHARACTERISTICS AND ASSETS																																																				
K01 OWNERSHIP OF THE HOUSE/BUILDING		K02 LEGAL RIGHT OVER THE OWNERSHIP		K03 ROOFING MATERIALS		K04 FLOORING MATERIALS		K05 WALL MATERIALS																																												
What is the ownership status of the main dwelling used by this household? ▶ IF CODE 2 or ABOVE SKIP TO K03 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Owned by household</td></tr> <tr><td>Lived in without paying any rent</td></tr> <tr><td>Rented privately</td></tr> <tr><td>Rented by employer</td></tr> <tr><td>Rented by Government at subsidize rent</td></tr> <tr><td>Owned by employer - free of charge</td></tr> <tr><td>Owned by employer - with rent</td></tr> </table>		Owned by household	Lived in without paying any rent	Rented privately	Rented by employer	Rented by Government at subsidize rent	Owned by employer - free of charge	Owned by employer - with rent	What legal right do you have over the ownership of this land where your house is built? <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Title deed</td></tr> <tr><td>Residential licence</td></tr> <tr><td>Letter of offer/acknowledgement of easements</td></tr> <tr><td>Customary ownership</td></tr> <tr><td>Contract</td></tr> <tr><td>Land Registration Card (Zanzibar)</td></tr> <tr><td>Official document from Mtaa/Kijiji/Shehia</td></tr> <tr><td>No legal right</td></tr> </table>		Title deed	Residential licence	Letter of offer/acknowledgement of easements	Customary ownership	Contract	Land Registration Card (Zanzibar)	Official document from Mtaa/Kijiji/Shehia	No legal right	What is the main roofing material used for the main building of this household? <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Iron sheets</td></tr> <tr><td>Tiles</td></tr> <tr><td>Concrete</td></tr> <tr><td>Asbestos</td></tr> <tr><td>Grass/leaves</td></tr> <tr><td>Mud and Leaves</td></tr> <tr><td>Plastics/Box</td></tr> <tr><td>Tent</td></tr> </table>		Iron sheets	Tiles	Concrete	Asbestos	Grass/leaves	Mud and Leaves	Plastics/Box	Tent	What is the main flooring material used for the main building of this household? <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cement</td></tr> <tr><td>Ceramic tiles</td></tr> <tr><td>Parquet or Polished wood</td></tr> <tr><td>Terrazzo</td></tr> <tr><td>Vinyl or Asphalt strips</td></tr> <tr><td>Wood Planks</td></tr> <tr><td>Paint/Bamboo</td></tr> <tr><td>Earth/Sand</td></tr> <tr><td>Dung</td></tr> <tr><td>Tent/Containers</td></tr> </table>		Cement	Ceramic tiles	Parquet or Polished wood	Terrazzo	Vinyl or Asphalt strips	Wood Planks	Paint/Bamboo	Earth/Sand	Dung	Tent/Containers	What is the main wall material used for the main building of this household? <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Stones</td></tr> <tr><td>Cement bricks/rock bricks</td></tr> <tr><td>Sandred bricks</td></tr> <tr><td>Burnt bricks</td></tr> <tr><td>Timber</td></tr> <tr><td>Timber and Sheets</td></tr> <tr><td>Poles and mud</td></tr> <tr><td>Grass</td></tr> <tr><td>Glass/Aluminium</td></tr> <tr><td>Tent/Containers</td></tr> </table>		Stones	Cement bricks/rock bricks	Sandred bricks	Burnt bricks	Timber	Timber and Sheets	Poles and mud	Grass	Glass/Aluminium	Tent/Containers
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K06 ROOMS FOR SLEEPING		K07 MAIN SOURCE OF DRINKING WATER		K08 MAIN SOURCE OF ENERGY FOR COOKING																																																
How many rooms are available for sleeping in this household? RECORD NUMBER OF ROOMS FOR SLEEPING		What is the main source of drinking water for this household? <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Piped water into dwelling</td></tr> <tr><td>Piped water in the yard/plot</td></tr> <tr><td>Public tap/sandpipe</td></tr> <tr><td>Neighbours tap/sandpipe</td></tr> <tr><td>Tubewell/borehole</td></tr> <tr><td>Protected dug well</td></tr> <tr><td>Unprotected dug well</td></tr> <tr><td>Protected spring</td></tr> <tr><td>Unprotected spring</td></tr> <tr><td>Rain water</td></tr> <tr><td>Bottled water</td></tr> <tr><td>Bicycle/Motorcycle/Car with small tank/drum</td></tr> <tr><td>Tanker truck</td></tr> <tr><td>Surface water (river, dam, lake, pond, stream, charco, canal, irrigation channels)</td></tr> </table>		Piped water into dwelling	Piped water in the yard/plot	Public tap/sandpipe	Neighbours tap/sandpipe	Tubewell/borehole	Protected dug well	Unprotected dug well	Protected spring	Unprotected spring	Rain water	Bottled water	Bicycle/Motorcycle/Car with small tank/drum	Tanker truck	Surface water (river, dam, lake, pond, stream, charco, canal, irrigation channels)	What is the main source of energy used by this household for cooking? <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Electricity (TANESCO/ZECCO)</td></tr> <tr><td>Solar</td></tr> <tr><td>Generator/private sources</td></tr> <tr><td>Gas</td></tr> <tr><td>Biogas</td></tr> <tr><td>Wind generated Electricity</td></tr> <tr><td>Paraffin</td></tr> <tr><td>Coal</td></tr> <tr><td>Charcoal</td></tr> <tr><td>Firewood</td></tr> <tr><td>Wood/ residuals</td></tr> <tr><td>Animal residuals</td></tr> <tr><td>Charcoal briquette</td></tr> <tr><td>Not Applicable</td></tr> </table>						Electricity (TANESCO/ZECCO)	Solar	Generator/private sources	Gas	Biogas	Wind generated Electricity	Paraffin	Coal	Charcoal	Firewood	Wood/ residuals	Animal residuals	Charcoal briquette	Not Applicable															
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K09 What is the main source of energy used by this household for lighting?		K10 What is the main type of toilet facility used by this household?				K11 How does the household dispose solid waste?																																																																		
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K12 Which authorities usually collect waste from your household?		K13 Does your household usually sort kitchen waste, plastic waste, glass waste, metal waste and electronic waste?		K14 What is the main method that is used by your household to dispose E-Waste?		K15 OWNERSHIP OF EQUIPMENTS/ASSETS																																																																		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Contractor</td></tr> <tr><td>Waste collecting groups</td></tr> <tr><td>Council</td></tr> <tr><td>Private individuals</td></tr> </table>		Contractor	Waste collecting groups	Council	Private individuals	YES = 1 NO = 2 		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Mixed with other Refused</td></tr> <tr><td>Collected by Government</td></tr> <tr><td>Collected by Private Company</td></tr> <tr><td>Dumped in the compound/street</td></tr> <tr><td>Dumped in the Latrine</td></tr> <tr><td>Burnt in open pit</td></tr> <tr><td>Buried</td></tr> <tr><td>Sold/given as gift</td></tr> <tr><td>Collected by individual (s)</td></tr> </table>		Mixed with other Refused	Collected by Government	Collected by Private Company	Dumped in the compound/street	Dumped in the Latrine	Burnt in open pit	Buried	Sold/given as gift	Collected by individual (s)	Does your household have/own the following assets? YES = 1 NO = 2 FOR CODE 1, ASSETS SHOULD BE IN WORKING CONDITION. SELECT THE APPROPRIATE ANSWER FOR EACH ITEM <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>A</td><td>Radio</td></tr> <tr><td>B</td><td>Telephone (Land Line)</td></tr> <tr><td>C</td><td>Mobile Phone</td></tr> <tr><td>D</td><td>Bicycle</td></tr> <tr><td>E</td><td>Motor vehicle</td></tr> <tr><td>F</td><td>Motorcycle/Vespa</td></tr> <tr><td>G</td><td>Tricycle (G4a)</td></tr> <tr><td>H</td><td>Tri motorcycle (Bajaj)</td></tr> <tr><td>I</td><td>Television</td></tr> <tr><td>J</td><td>Electric Iron</td></tr> <tr><td>K</td><td>Charcoal Iron</td></tr> <tr><td>L</td><td>Cooker (Electric or Gas)</td></tr> <tr><td>M</td><td>Refrigerator/Freezer</td></tr> <tr><td>N</td><td>Computer Laptop</td></tr> <tr><td>O</td><td>Internet Facility</td></tr> <tr><td>P</td><td>Plough</td></tr> <tr><td>Q</td><td>Power tiller</td></tr> <tr><td>R</td><td>Hand hoe</td></tr> <tr><td>S</td><td>Wheelbarrow</td></tr> <tr><td>T</td><td>Oxen</td></tr> <tr><td>U</td><td>Draft animals (Donkey/Camel)</td></tr> <tr><td>V</td><td>Horse</td></tr> <tr><td>W</td><td>Land/Farm</td></tr> <tr><td>X</td><td>Tractor</td></tr> <tr><td>Y</td><td>Don't have/own</td></tr> </table>				A	Radio	B	Telephone (Land Line)	C	Mobile Phone	D	Bicycle	E	Motor vehicle	F	Motorcycle/Vespa	G	Tricycle (G4a)	H	Tri motorcycle (Bajaj)	I	Television	J	Electric Iron	K	Charcoal Iron	L	Cooker (Electric or Gas)	M	Refrigerator/Freezer	N	Computer Laptop	O	Internet Facility	P	Plough	Q	Power tiller	R	Hand hoe	S	Wheelbarrow	T	Oxen	U	Draft animals (Donkey/Camel)	V	Horse	W	Land/Farm	X	Tractor	Y	Don't have/own
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SECTION A: IDENTIFICATION													
Region	District	Council	Constituency	Division/Wadi	Ward/Shehia	Village/Mtaa	Hamlet/Enumeration Area (EA)	Household Number	CONFIDENTIAL				

INFORMATION ON PHYSICAL ADDRESS

A01A Does this household have a physical address? Yes = 1 | No = 2 ► IF CODE 2 SKIP TO SECTION Z

A01B Please, state the Physical Address Number _____

A01C Name of the Road/Hamlet _____

Appendix 1.3: Levels and Trends on Infant Mortality Rates by Councils, Tanzania; 2012 and 2022 PHCs

Area		IMR		Average Annual Rate of Reduction in IMR 2012-2022	Percentage Change
Region	Council	2012	2022		
Dodoma	Kondoa District	39.7	33.7	0.6	-15.1
	Kondoa Town	39.7	32.5	0.7	-18.1
	Mpwapwa District	63.9	36.4	2.7	-43.0
	Kongwa District	64.4	37.1	2.7	-42.4
	Chamwino District	68.0	33.6	3.4	-50.6
	Dodoma City	57.4	30.4	2.7	-47.0
	Bahi District	80.4	32.4	4.8	-59.7
	Chemba District	68.8	35.9	3.3	-47.8
Arusha	Monduli District	28.6	18.4	1.0	-35.7
	Meru District	41.2	23.2	1.8	-43.6
	Arusha District	41.2	23.3	1.8	-43.4
	Longido District	33.9	20.2	1.4	-40.4
	Karatu District	36.1	25.2	1.1	-30.3
	Ngorongoro District	16.0	13.3	0.3	-16.7
	Arusha City	35.6	23.4	1.2	-34.3
Kilimanjaro	Rombo District	34.2	29.4	0.5	-14.1
	Mwanga District	28.7	20.9	0.8	-27.1
	Same District	34.3	27.6	0.7	-19.5
	Moshi Municipal	39.7	27.3	1.2	-31.3
	Moshi District	39.7	24.6	1.5	-38.1
	Hai District	29.4	28.1	0.1	-4.4
	Siha District	36.7	27.6	0.9	-24.7
Tanga	Lushoto District	67.1	39.8	2.7	-40.7
	Bumbuli District	67.1	36.3	3.1	-45.9
	Korogwe District	49.6	39.7	1.0	-20.0
	Korogwe Town	49.6	40.4	0.9	-18.6
	Muheza District	52.1	37.4	1.5	-28.2
	Tanga Town	49.5	35.4	1.4	-28.5
	Pangani District	63.0	37.6	2.5	-40.3
	Handeni District	63.1	48.5	1.5	-23.1
	Handeni Town	63.1	33.6	3.0	-46.8
	Kilindi District	55.7	39.1	1.7	-29.7
	Mkinga District	70.4	39.3	3.1	-44.2
Morogoro	Kilosa District	63.4	39.6	2.4	-37.5
	Morogoro District	73.4	44.7	2.9	-39.1
	Morogoro Municipal	73.4	37.1	3.6	-49.4
	Mlimba District	61.9	42.8	1.9	-30.9
	Ifakara Town	61.9	43.8	1.8	-29.3
	Ulanga District	71.4	40.7	3.1	-43.0
	Malinyi District	51.3	33.1	1.8	-35.4
	Mvomero District	59.0	39.8	1.9	-32.6
	Gairo District	61.3	36.9	2.4	-39.8
Pwani	Bagamoyo District	70.1	38.9	3.1	-44.5
	Chalinze District	70.1	43.4	2.7	-38.1

Area		IMR		Average Annual Rate of Reduction in IMR 2012-2022	Percentage Change
Region	Council	2012	2022		
	Kibaha District	58.5	34.0	2.5	-41.9
	Kibaha Town	58.5	34.8	2.4	-40.6
	Kisarawe District	63.0	40.8	2.2	-35.2
	Mkuranga District	81.0	42.9	3.8	-47.0
	Rufiji District	59.2	34.8	2.4	-41.2
	Mafia District	86.3	54.6	3.2	-36.7
	Kibiti District	74.8	41.3	3.4	-44.8
Dar es Salaam	Kinondoni Municipal	65.6	36.2	2.9	-44.8
	Dar es Salaam City	56.2	37.9	1.8	-32.5
	Temeke Municipal	62.7	40.3	2.2	-35.7
	Kigamboni Municipal	64.8	35.2	3.0	-45.7
	Ubungu Municipal	60.8	35.8	2.5	-41.1
Lindi	Kilwa District	66.4	49.0	1.7	-26.2
	Mtama District	66.9	38.5	2.8	-42.5
	Lindi Municipal	66.9	41.7	2.5	-37.7
	Nachingwea District	65.7	43.2	2.2	-34.2
	Liwale District	79.4	47.1	3.2	-40.7
	Ruangwa District	73.3	45.0	2.8	-38.6
Mtwara	Mtwara District	69.3	45.1	2.4	-34.9
	Nanyamba Town	69.3	46.8	2.3	-32.5
	Mtwara Mikindani Municipal	69.3	34.5	3.5	-50.2
	Newala District	66.6	37.1	2.9	-44.3
	Newala Town	66.6	41.1	2.5	-38.3
	Masasi District	64.8	42.5	2.2	-34.4
	Masasi Town	64.8	38.5	2.6	-40.6
	Tandahimba District	68.2	41.3	2.7	-39.4
	Nanyumbu District	75.2	47.4	2.8	-36.9
Ruvuma	Tunduru District	62.8	48.5	1.4	-22.7
	Songea District	82.7	40.3	4.2	-51.3
	Songea Municipal	82.7	36.3	4.6	-56.1
	Madaba District	82.7	41.8	4.1	-49.4
	Mbinga District	50.7	33.8	1.7	-33.4
	Mbinga Town	50.7	34.6	1.6	-31.8
	Nyasa District	59.9	34.1	2.6	-43.0
	Namtumbo District	86.7	51.0	3.6	-41.1
Iringa	Iringa District	68.6	36.3	3.2	-47.1
	Iringa Municipal	68.6	28.9	4.0	-57.9
	Mafinga Town	92.2	43.6	4.9	-52.7
	Mufindi District	92.2	40.0	5.2	-56.6
	Kilolo District	62.5	40.9	2.2	-34.6
Mbeya	Chunya District	51.8	31.7	2.0	-38.8
	Mbeya District	74.9	39.9	3.5	-46.7
	Mbeya City	74.9	32.8	4.2	-56.2
	Kyela District	58.1	34.3	2.4	-41.0
	Rungwe District	55.5	37.0	1.8	-33.3
	Busokelo District	55.5	26.4	2.9	-52.4

Area		IMR		Average Annual Rate of Reduction in IMR 2012-2022	Percentage Change
Region	Council	2012	2022		
	Mbarali District	61.5	36.5	2.5	-40.6
Singida	Iramba District	40.9	25.4	1.5	-37.8
	Singida District	34.3	29.9	0.4	-12.8
	Singida Municipal	34.3	24.8	0.9	-27.7
	Manyoni District	57.3	29.2	2.8	-49.1
	Itigi District	57.3	27.5	3.0	-52.0
	Ikungi District	43.6	28.2	1.5	-35.2
	Mkalama District	41.7	28.1	1.4	-32.7
Tabora	Nzega Town	47.7	37.0	1.1	-22.4
	Nzega District	47.7	38.2	1.0	-19.9
	Igunga District	48.1	28.3	2.0	-41.1
	Uyui District	65.7	36.2	2.9	-44.9
	Urambo District	64.2	37.8	2.6	-41.1
	Sikonge District	45.6	32.2	1.3	-29.4
	Tabora Municipal	63.2	36.7	2.6	-41.9
	Kaliua District	58.4	37.5	2.1	-35.8
Rukwa	Kalambo District	77.1	43.6	3.3	-43.4
	Sumbawanga District	72.6	44.0	2.9	-39.4
	Sumbawanga Municipal	72.6	36.4	3.6	-49.8
	Nkasi District	77.9	42.1	3.6	-45.9
Kigoma	Kibondo District	56.7	36.0	2.1	-36.5
	Kasulu District	47.8	36.7	1.1	-23.2
	Kasulu Town	47.8	28.8	1.9	-39.7
	Kigoma District	80.3	41.3	3.9	-48.6
	Kigoma Ujiji Municipal	80.3	40.3	4.0	-49.8
	Uvinza District	72.3	42.9	2.9	-40.6
	Buhigwe District	64.4	31.8	3.3	-50.6
	Kakonko District	52.5	37.2	1.5	-29.1
Shinyanga	Ushetu District	46.4	37.5	0.9	-19.1
	Kahama Municipal	46.4	33.8	1.3	-27.1
	Msalala District	46.4	37.4	0.9	-19.3
	Kishapu District	41.9	28.1	1.4	-32.9
	Shinyanga District	48.9	33.1	1.6	-32.3
	Shinyanga Municipal	48.9	31.1	1.8	-36.4
Kagera	Karagwe District	75.8	43.0	3.3	-43.3
	Bukoba District	68.5	45.2	2.3	-34.1
	Bukoba Municipal	68.5	33.8	3.5	-50.7
	Muleba District	83.9	41.7	4.2	-50.3
	Biharamulo District	65.1	39.2	2.6	-39.8
	Ngara District	86.7	46.9	4.0	-45.9
	Kyerwa District	62.3	53.3	0.9	-14.4
	Missenyi District	74.4	43.4	3.1	-41.7
Mwanza	Ukerewe District	66.2	46.7	1.9	-29.4
	Magu District	52.7	31.3	2.1	-40.6
	Mwanza City	52.5	29.7	2.3	-43.4
	Kwimba District	48.7	30.7	1.8	-37.0

Area		IMR		Average Annual Rate of Reduction in IMR 2012-2022	Percentage Change
Region	Council	2012	2022		
	Sengerema District	46.1	32.0	1.4	-30.6
	Buchosa District	46.1	36.6	1.0	-20.7
	Ilemela Municipal	53.2	31.4	2.2	-40.9
	Misungwi District	47.1	31.1	1.6	-33.9
Mara	Tarime District	58.1	37.7	2.0	-35.1
	Tarime Town	58.1	37.1	2.1	-36.1
	Serengeti District	53.8	33.4	2.0	-37.9
	Musoma District	72.7	43.6	2.9	-40.0
	Musoma Municipal	72.7	28.6	4.4	-60.6
	Bunda District	57.9	35.1	2.3	-39.4
	Bunda Town	57.9	28.5	2.9	-50.8
	Butiama District	62.3	35.8	2.7	-42.6
	Rorya District	83.1	47.6	3.6	-42.7
Manyara	Babati District	44.5	28.9	1.6	-35.0
	Babati Town	44.5	29.1	1.5	-34.6
	Hanang District	37.5	30.6	0.7	-18.4
	Mbulu District	46.7	29.8	1.7	-36.2
	Mbulu Town	46.7	23.1	2.4	-50.5
	Simanjiro District	27.0	19.2	0.8	-29.0
	Kiteto District	50.8	26.0	2.5	-48.9
Njombe	Njombe District	69.2	38.4	3.1	-44.5
	Njombe Town	69.2	43.3	2.6	-37.5
	Makambako Town	69.2	38.2	3.1	-44.8
	Ludewa District	60.7	37.7	2.3	-37.8
	Makete District	76.3	39.2	3.7	-48.7
	Wanging'ombe District	76.9	36.7	4.0	-52.3
Katavi	Mpanda Municipal	64.0	43.0	2.1	-32.8
	Nsimbo District	64.0	42.8	2.1	-33.1
	Tanganyika District	80.1	33.1	4.7	-58.7
	Mlele District	75.3	33.9	4.1	-55.0
	Mpimbwe District	75.3	32.2	4.3	-57.2
Simiyu	Bariadi District	47.9	38.5	0.9	-19.6
	Bariadi Town	47.9	35.6	1.2	-25.7
	Itilima District	42.0	32.6	0.9	-22.3
	Meatu District	46.0	32.4	1.4	-29.6
	Maswa District	47.0	30.2	1.7	-35.8
	Busega District	61.5	35.4	2.6	-42.4
Geita	Geita District	54.5	36.6	1.8	-32.8
	Geita Town	54.5	35.4	1.9	-35.0
	Nyang'hwale District	46.4	34.2	1.2	-26.3
	Mbogwe District	47.0	35.7	1.1	-24.1
	Bukombe District	50.2	35.4	1.5	-29.5
	Chato District	50.2	37.8	1.2	-24.7
Songwe	Momba District	54.5	44.8	1.0	-17.8
	Tunduma Town	54.5	38.7	1.6	-29.0
	Songwe District	68.8	38.6	3.0	-43.9

Area		IMR		Average Annual Rate of Reduction in IMR 2012-2022	Percentage Change
Region	Council	2012	2022		
	Mbozi District	60.9	38.4	2.3	-37.0
	Ileje District	66.1	35.1	3.1	-46.9
Kaskazini Unguja	Kaskazini A Town	51.3	38.8	1.3	-24.4
	Kaskazini B Town	44.7	35.5	0.9	-20.5
Kusini Unguja	Kati Town	65.3	42.0	2.3	-35.7
	Kusini District	71.9	47.3	2.5	-34.2
Mjini Magharibi	Mjini Municipal	52.1	36.0	1.6	-30.9
	Magharibi A Municipal	53.9	36.3	1.8	-32.6
	Magharibi B Municipal	51.9	38.1	1.4	-26.7
Kaskazini Pemba	Wete Town	39.1	30.7	0.8	-21.4
	Micheweni District	57.5	41.7	1.6	-27.5
Kusini Pemba	Chakechake Town	49.0	26.6	2.2	-45.7
	Mkoani Town	55.0	32.3	2.3	-41.3

Appendix 1.4: Levels and Trends on Under-five Mortality Rates by Councils, Tanzania; 2012 and 2022 PHCs

Area		U5MR		Average Annual Rate of Reduction in U5MR 2012-2022	Percentage Change
Region	Council	2012	2022		
Dodoma	Kondoa District	62.6	53.4	0.9	-14.7
	Kondoa Town	62.6	51.5	1.1	-17.7
	Mpwapwa District	99.3	57.6	4.2	-42.0
	Kongwa District	100.1	58.7	4.1	-41.4
	Chamwino District	105.5	53.1	5.2	-49.7
	Dodoma City	89.6	48.2	4.1	-46.2
	Bahi District	123.8	51.4	7.2	-58.5
	Chemba District	106.7	56.8	5.0	-46.8
Arusha	Monduli District	45.4	29.4	1.6	-35.3
	Meru District	64.9	37.0	2.8	-43.0
	Arusha District	64.9	37.1	2.8	-42.8
	Longido District	53.6	32.2	2.1	-40.0
	Karatu District	57.1	40.2	1.7	-29.7
	Ngorongoro District	25.5	21.3	0.4	-16.6
	Arusha City	56.3	37.3	1.9	-33.8
Kilimanjaro	Rombo District	54.2	46.7	0.7	-13.8
	Mwanga District	45.5	33.3	1.2	-26.8
	Same District	54.3	43.9	1.0	-19.1
	Moshi Municipal	62.7	43.3	1.9	-30.9
	Moshi District	62.7	39.2	2.3	-37.5
	Hai District	46.7	44.6	0.2	-4.5
	Siha District	57.9	43.8	1.4	-24.4
Tanga	Lushoto District	104.1	62.8	4.1	-39.7

Area		U5MR		Average Annual Rate of Reduction in U5MR 2012-2022	Percentage Change
Region	Council	2012	2022		
	Bumbuli District	104.1	57.3	4.7	-45.0
	Korogwe District	77.8	62.6	1.5	-19.6
	Korogwe Town	77.8	63.7	1.4	-18.2
	Muheza District	81.6	59.0	2.3	-27.7
	Tanga Town	77.7	55.9	2.2	-28.0
	Pangani District	97.9	59.4	3.9	-39.4
	Handeni District	98.2	76.1	2.2	-22.5
	Handeni Town	98.2	53.2	4.5	-45.8
	Kilindi District	87.0	61.7	2.5	-29.1
	Mkinga District	109.1	62.1	4.7	-43.1
Morogoro	Kilosa District	98.6	62.5	3.6	-36.6
	Morogoro District	113.4	70.3	4.3	-38.0
	Morogoro Municipal	113.4	58.7	5.5	-48.3
	Mlimba District	96.4	67.4	2.9	-30.1
	Ifakara Town	96.4	69.0	2.7	-28.4
	Ulanga District	110.6	64.2	4.6	-41.9
	Malinyi District	80.3	52.4	2.8	-34.8
	Mvomero District	92.1	62.8	2.9	-31.8
	Gairo District	95.4	58.2	3.7	-39.0
Pwani	Bagamoyo District	108.6	61.4	4.7	-43.5
	Chalinze District	108.6	68.3	4.0	-37.1
	Kibaha District	91.3	53.8	3.8	-41.1
	Kibaha Town	91.3	55.1	3.6	-39.7
	Kisarawe District	98.0	64.3	3.4	-34.4
	Mkuranga District	124.7	67.6	5.7	-45.8
	Rufiji District	92.2	55.1	3.7	-40.3
	Mafia District	132.4	85.4	4.7	-35.5
	Kibiti District	115.6	65.1	5.1	-43.7
Dar es Salaam	Kinondoni Municipal	101.9	57.3	4.5	-43.8
	Dar es Salaam City	87.7	59.8	2.8	-31.8
	Temeke Municipal	97.5	63.6	3.4	-34.8
	Kigamboni Municipal	100.7	55.7	4.5	-44.7
	Ubungu Municipal	94.7	56.7	3.8	-40.2
Lindi	Kilwa District	103.1	76.8	2.6	-25.5
	Mtama District	103.9	60.8	4.3	-41.5
	Lindi Municipal	103.9	65.7	3.8	-36.8
	Nachingwea District	102.0	68.0	3.4	-33.3
	Liwale District	122.3	73.9	4.8	-39.6
	Ruangwa District	113.4	70.8	4.3	-37.6
Mtwara	Mtwara District	107.4	71.0	3.6	-33.9
	Nanyamba Town	107.4	73.5	3.4	-31.6

Area		U5MR		Average Annual Rate of Reduction in U5MR 2012-2022	Percentage Change
Region	Council	2012	2022		
	Mtwara Mikindani Municipal	107.4	54.6	5.3	-49.2
	Newala District	103.4	58.5	4.5	-43.4
	Newala Town	103.4	64.7	3.9	-37.4
	Masasi District	100.7	66.9	3.4	-33.5
	Masasi Town	100.7	60.8	4.0	-39.6
	Tandahimba District	105.7	65.1	4.1	-38.4
	Nanyumbu District	116.1	74.4	4.2	-35.9
Ruvuma	Tunduru District	97.6	76.0	2.2	-22.2
	Songea District	127.1	63.5	6.4	-50.1
	Songea Municipal	127.1	57.4	7.0	-54.9
	Madaba District	127.1	65.9	6.1	-48.2
	Mbinga District	79.5	53.6	2.6	-32.6
	Mbinga Town	79.5	54.7	2.5	-31.2
	Nyasa District	93.3	53.9	3.9	-42.2
	Namtumbo District	132.9	79.9	5.3	-39.9
Iringa	Iringa District	106.4	57.4	4.9	-46.1
	Iringa Municipal	106.4	45.9	6.0	-56.9
	Mafinga Town	141.0	68.7	7.2	-51.3
	Mufindi District	141.0	63.0	7.8	-55.3
	Kilolo District	97.3	64.5	3.3	-33.7
Mbeya	Chunya District	81.1	50.2	3.1	-38.1
	Mbeya District	115.7	62.9	5.3	-45.6
	Mbeya City	115.7	51.9	6.4	-55.1
	Kyela District	90.7	54.3	3.6	-40.1
	Rungwe District	86.7	58.5	2.8	-32.5
	Busokelo District	86.7	42.0	4.5	-51.5
	Mbarali District	95.8	57.8	3.8	-39.6
Singida	Iramba District	64.4	40.4	2.4	-37.3
	Singida District	54.3	47.5	0.7	-12.5
	Singida Municipal	54.3	39.5	1.5	-27.2
	Manyoni District	89.5	46.4	4.3	-48.2
	Itigi District	89.5	43.6	4.6	-51.3
	Ikungi District	68.5	44.9	2.4	-34.5
	Mkalama District	65.8	44.6	2.1	-32.2
Tabora	Nzega Town	74.9	58.5	1.6	-21.9
	Nzega District	74.9	60.3	1.5	-19.5
	Igunga District	75.4	45.0	3.0	-40.4
	Uyui District	102.0	57.2	4.5	-43.9
	Urambo District	99.9	59.8	4.0	-40.1
	Sikonge District	71.7	51.1	2.1	-28.7
	Tabora Municipal	98.3	58.0	4.0	-41.0

Area		U5MR		Average Annual Rate of Reduction in U5MR 2012-2022	Percentage Change
Region	Council	2012	2022		
	Kaliua District	91.2	59.2	3.2	-35.1
Rukwa	Kalambo District	118.9	68.6	5.0	-42.3
	Sumbawanga District	112.2	69.2	4.3	-38.3
	Sumbawanga Municipal	112.2	57.6	5.5	-48.7
	Nkasi District	120.1	66.3	5.4	-44.8
Kigoma	Kibondo District	88.6	56.9	3.2	-35.7
	Kasulu District	75.0	58.0	1.7	-22.7
	Kasulu Town	75.0	45.7	2.9	-39.1
	Kigoma District	123.6	65.0	5.9	-47.4
	Kigoma Ujiji Municipal	123.6	63.6	6.0	-48.6
	Uvinza District	111.8	67.6	4.4	-39.5
	Buhigwe District	100.1	50.4	5.0	-49.7
	Kakonko District	82.1	58.8	2.3	-28.4
Shinyanga	Ushetu District	72.8	59.2	1.4	-18.7
	Kahama Municipal	72.8	53.5	1.9	-26.5
	Msalala District	72.8	59.1	1.4	-18.9
	Kishapu District	66.0	44.6	2.1	-32.4
	Shinyanga District	76.7	52.5	2.4	-31.5
	Shinyanga Municipal	76.7	49.4	2.7	-35.6
Kagera	Karagwe District	117.1	67.7	4.9	-42.2
	Bukoba District	106.3	71.0	3.5	-33.2
	Bukoba Municipal	106.3	53.4	5.3	-49.8
	Muleba District	129.0	65.6	6.3	-49.1
	Biharamulo District	101.1	61.8	3.9	-38.9
	Ngara District	133.0	73.6	5.9	-44.7
	Kyerwa District	96.9	83.5	1.3	-13.8
	Missenyi District	115.0	68.3	4.7	-40.6
Mwanza	Ukerewe District	102.8	73.4	2.9	-28.6
	Magu District	82.4	49.6	3.3	-39.8
	Mwanza City	82.2	47.1	3.5	-42.7
	Kwimba District	76.5	48.7	2.8	-36.3
	Sengerema District	72.5	50.7	2.2	-30.1
	Buchosa District	72.5	57.9	1.5	-20.1
	Ilemela Municipal	83.2	49.8	3.3	-40.2
	Misungwi District	73.9	49.2	2.5	-33.4
Mara	Tarime District	90.6	59.6	3.1	-34.2
	Tarime Town	90.6	58.6	3.2	-35.3
	Serengeti District	84.1	52.9	3.1	-37.1
	Musoma District	112.4	68.6	4.4	-39.0
	Musoma Municipal	112.4	45.4	6.7	-59.6
	Bunda District	90.3	55.5	3.5	-38.5

Area		U5MR		Average Annual Rate of Reduction in U5MR 2012-2022	Percentage Change
Region	Council	2012	2022		
	Bunda Town	90.3	45.2	4.5	-50.0
	Butiama District	97.0	56.6	4.0	-41.7
	Rorya District	127.8	74.8	5.3	-41.5
Manyara	Babati District	69.9	45.9	2.4	-34.4
	Babati Town	69.9	46.1	2.4	-34.1
	Hanang District	59.2	48.5	1.1	-18.1
	Mbulu District	73.4	47.3	2.6	-35.5
	Mbulu Town	73.4	36.7	3.7	-50.0
	Simanjiro District	43.0	30.7	1.2	-28.6
	Kiteto District	79.7	41.4	3.8	-48.0
Njombe	Njombe District	107.3	60.6	4.7	-43.5
	Njombe Town	107.3	68.1	3.9	-36.6
	Makambako Town	107.3	60.4	4.7	-43.7
	Ludewa District	94.5	59.6	3.5	-36.9
	Makete District	117.8	61.9	5.6	-47.5
	Wanging'ombe District	118.7	58.0	6.1	-51.1
Katavi	Mpanda Municipal	99.4	67.7	3.2	-31.9
	Nsimbo District	99.4	67.4	3.2	-32.2
	Tanganyika District	123.3	52.4	7.1	-57.5
	Mlele District	116.3	53.6	6.3	-53.9
	Mpimbwe District	116.3	51.0	6.5	-56.2
Simiyu	Bariadi District	75.2	60.7	1.4	-19.3
	Bariadi Town	75.2	56.3	1.9	-25.1
	Itilima District	66.1	51.7	1.4	-21.8
	Meatu District	72.4	51.3	2.1	-29.1
	Maswa District	73.9	48.0	2.6	-35.0
	Busega District	95.7	56.0	4.0	-41.5
Geita	Geita District	85.2	57.9	2.7	-32.0
	Geita Town	85.2	56.0	2.9	-34.3
	Nyang'hwale District	72.9	54.1	1.9	-25.8
	Mbogwe District	73.9	56.4	1.7	-23.7
	Bukombe District	78.7	56.0	2.3	-28.9
	Chato District	78.7	59.8	1.9	-24.0
Songwe	Momba District	85.2	70.5	1.5	-17.2
	Tunduma Town	85.2	61.0	2.4	-28.4
	Songwe District	106.7	60.9	4.6	-42.9
	Mbozi District	94.9	60.6	3.4	-36.1
	Ileje District	102.7	55.5	4.7	-46.0
Kaskazini Unguja	Kaskazini A Town	80.4	61.2	1.9	-23.9
	Kaskazini B Town	70.2	56.1	1.4	-20.1
Kusini Unguja	Kati Town	101.5	66.1	3.5	-34.9

Area		U5MR		Average Annual Rate of Reduction in U5MR 2012-2022	Percentage Change
Region	Council	2012	2022		
	Kusini District	111.2	74.2	3.7	-33.3
Mjini Magharibi	Mjini Municipal	81.6	57.0	2.5	-30.2
	Magharibi A Municipal	84.3	57.4	2.7	-31.9
	Magharibi B Municipal	81.4	60.2	2.1	-26.0
Kaskazini Pemba	Wete Town	61.7	48.7	1.3	-21.0
	Micheweni District	89.8	65.7	2.4	-26.8
Kusini Pemba	Chakechake Town	76.9	42.2	3.5	-45.1
	Mkoani Town	86.0	51.2	3.5	-40.4

Appendix 1.5: Target for Global, Regional and National Development Plans

The targets of various mortality and health indicators adopted in this report from international, regional, national and sectoral development plans are as follows:

No.	Indicator	2030 Sustainable Development Goals (SDGs)	Africa Development Agenda (Agenda 2063)	East Africa Vision (2050)	Third National Five-Year Development Plan 2021/22 - 2025/26 (FYDP)	Zanzibar Development Plan (ZADEP) 2025/26	Health Sector Strategic Plan (HSSP) 2021 - 2026
1.	Infant Mortality Rate	NIL	NIL	Reduce IMR to 36 deaths per 1,000 live births by 2050	Reduce IMR to 30 deaths per 1,000 live births by 2025/26	Reduce to 15 deaths per 1,000 live births by 2025/26	Achieve IMR 25 deaths per 1,000 live births by 2026
2.	Under-five Mortality Rate	Reduce U5MR to at least as low as 25 deaths per 1,000 live births by 2030	NIL	NIL	Reduce U5MR to 40 deaths per 1,000 live births by 2025/26	Reduce U5MR to 37 deaths per 1,000 live births by 2025/26	Reduce U5MR to 37 deaths per 1,000 live births by 2026

