SURVEY COVERAGE AND HOUSEHOLD BACKGROUND CHARACTERISTICS

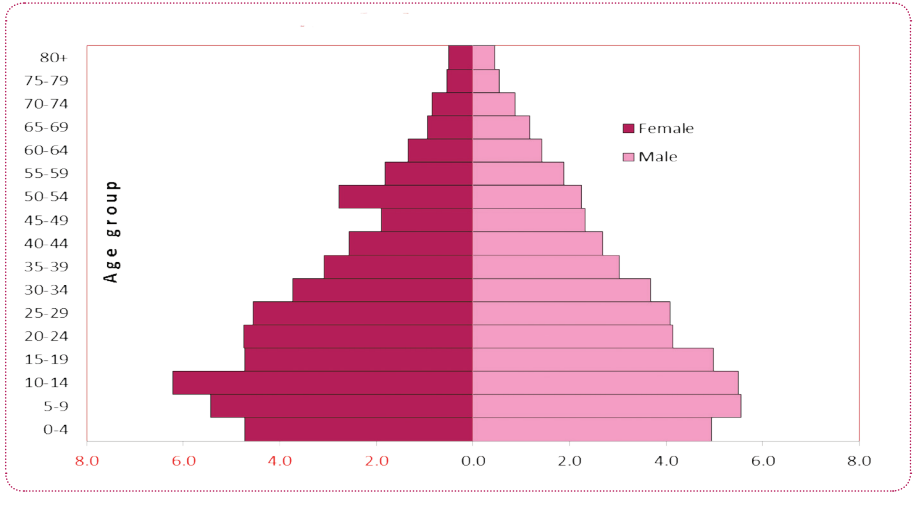
National Statistics Bureau (NSB) conducted the Bhutan Multiple Indicator Survey (BMIS) in 2010 with financial and technical support from the United Nations Population Fund (UNFPA) and United Nations Children's Fund (UNICEF).

Out of a sample of 15,400 households, 14,917 household were interviewed with a response rate of 98%. Within those interviewed households, 16,823 eligible women (aged 15-49 years of age) were identified. Of them 14,018 were interviewed yielding a response rate of 83%. A total of 6,457 under-five children were identified and questionnaires were completed for 6,297 of them with a response rate of 98%.

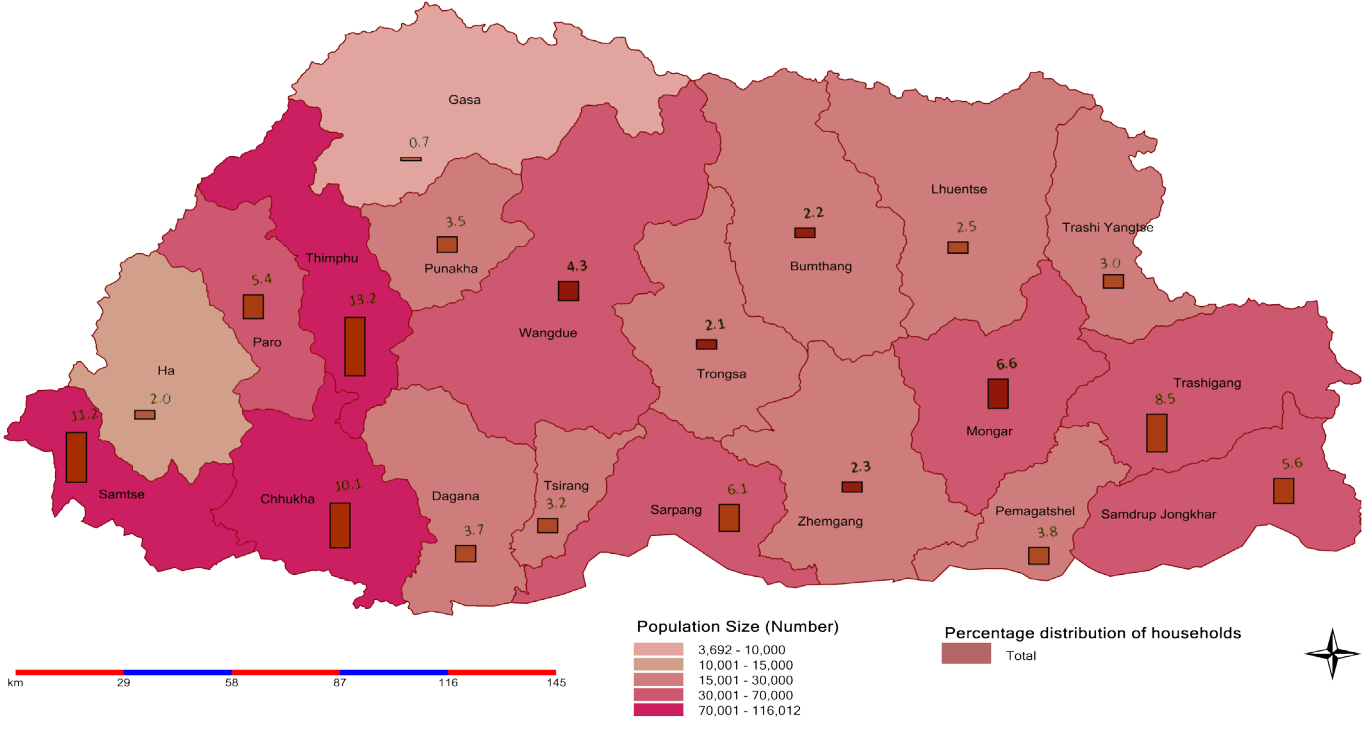
Based on age and sex distribution of the surveyed population, proportion of child population aged 0-4 years is 9.7% and old age population of 65 years and older is 5.9%. The proportion of children 0-17 years is 38% and total dependency ratio is 62% - an increase of 1.1% from the Population and Housing Census of Bhutan (PHCB) 2005. However, the average household size remains the same at 4.6 persons per household.

About 72% of the women aged 15-49 years were married and more than 70% had given birth at least once in their lifetime. 61% had never been to school and only 12% had primary education.

AGE-SEX POPULATION PYRAMID



PERCENTAGE DISTRIBUTION OF SAMPLE HOUSEHOLDS AND PROJECTED POPULATION BY DZONGKHAG



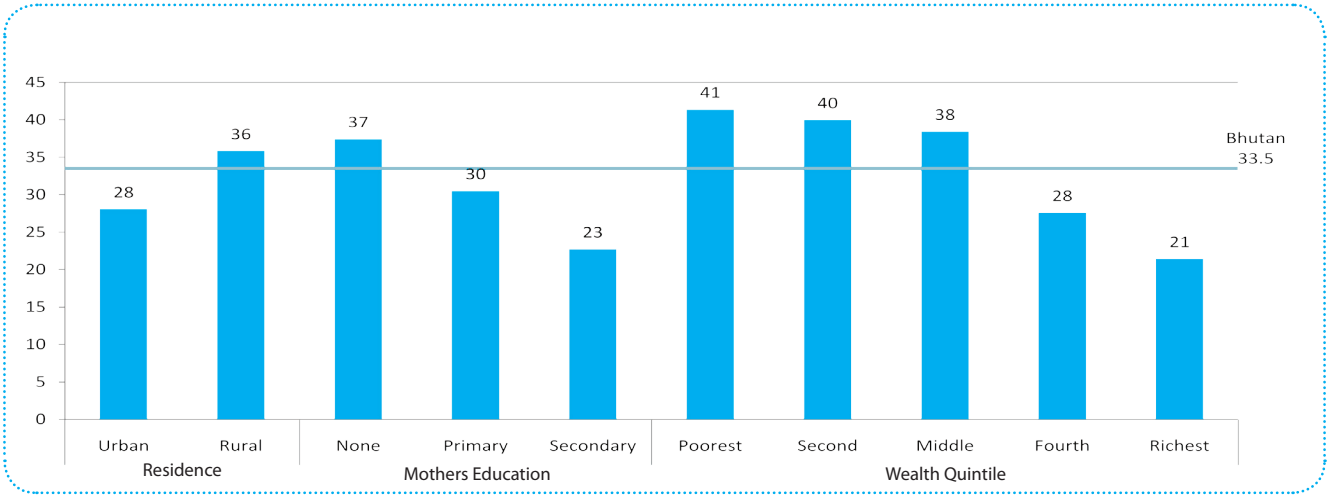
Sources: NSB_Dzongkhag Population Projections 2006-2015, RGoB_2008
BTN_BMIS_2011

MALNUTRITION

Malnutrition causes more than half of all child deaths worldwide. Undernourished children are more likely to die from common childhood illnesses and those who survive fall sick frequently and have poor growth.

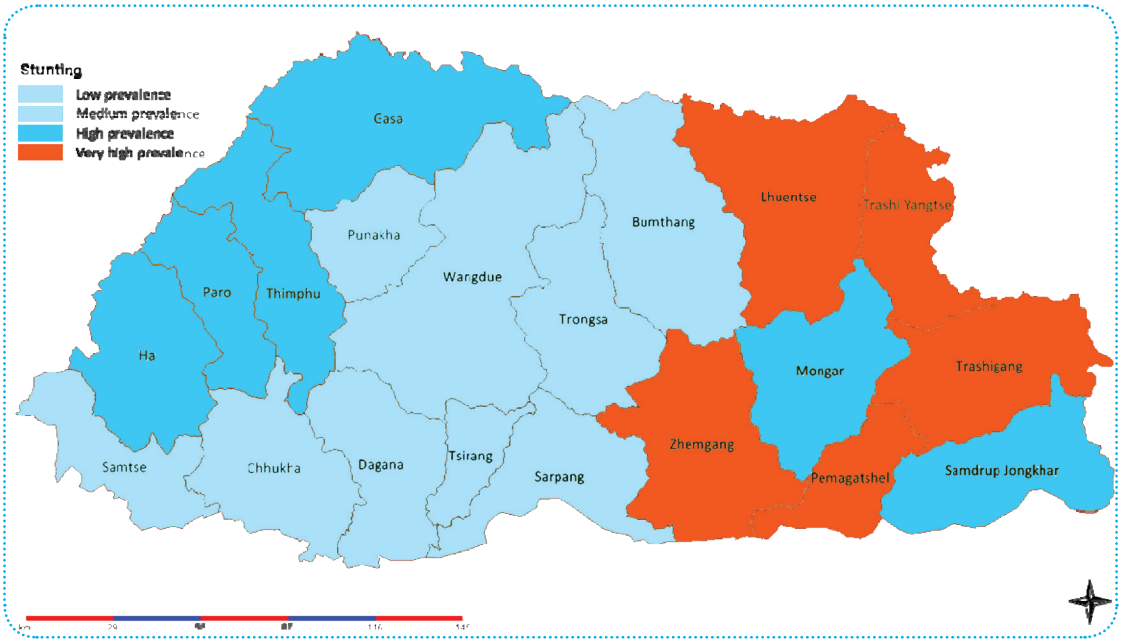
In Bhutan, about one in eight under-five year old children are under weight (12.7 %).Underweight(too thin for the age) is a measure of both acute and chronic malnutrition. More than one third (34%)of under-five year old children are stunted (too short for their age). Stunting is a reflection of chronic malnutrition as a result of failure to receive adequate nutrition over a long period and recurrent or chronic illness.

STUNTING PREVALENCE (MODERATE AND SEVERE) IN PERCENTAGE



Children of uneducated mothers (37%) and from the poorest family (41%) have the highest prevalence of stunting compared to educated mothers (23 %) and from the richest family (21%). In Bhutan eastern region has the highest prevalence of stunted children (43%). The indicator may exhibit significant seasonal shifts associated with changes in the availability of food or disease prevalence.

PERCENTAGE OF STUNTING PREVALENCE BY DZONGKHAGS



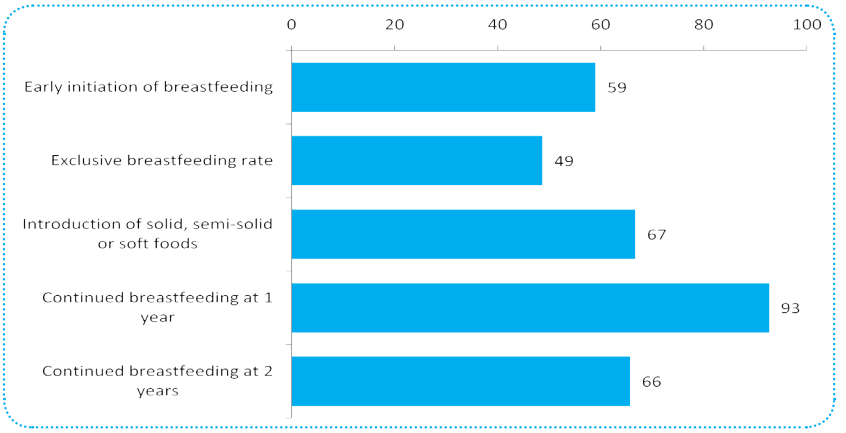
BREAST FEEDING

Breast feeding for the first few years of life protects children from infection, provides an ideal source of nutrients and is economical and safe.

WHO and UNICEF recommend:

- Breast feed within one hour of birth.
- Exclusively breast feed for the first six months
- Feed safe, appropriate and adequate complementary foods after 6 months
- Feed complementary food two times a day for 6-8 month olds and three times a day for 9-11 month olds.
- Continue breast feeding for two years or more

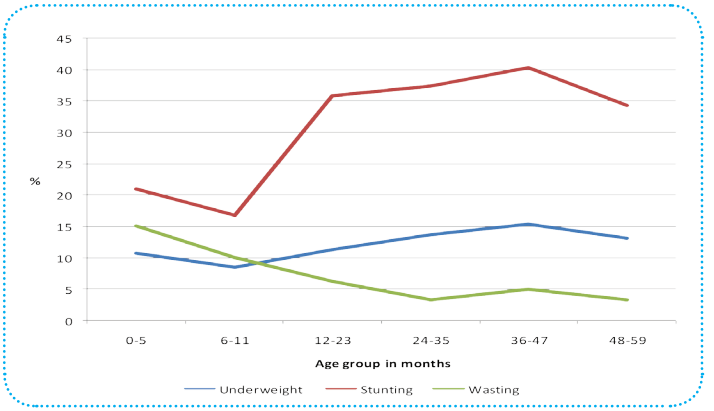
BHUTAN'S STATUS ON WHO/UNICEF RECOMMENDED BREAST FEEDING INDICATORS



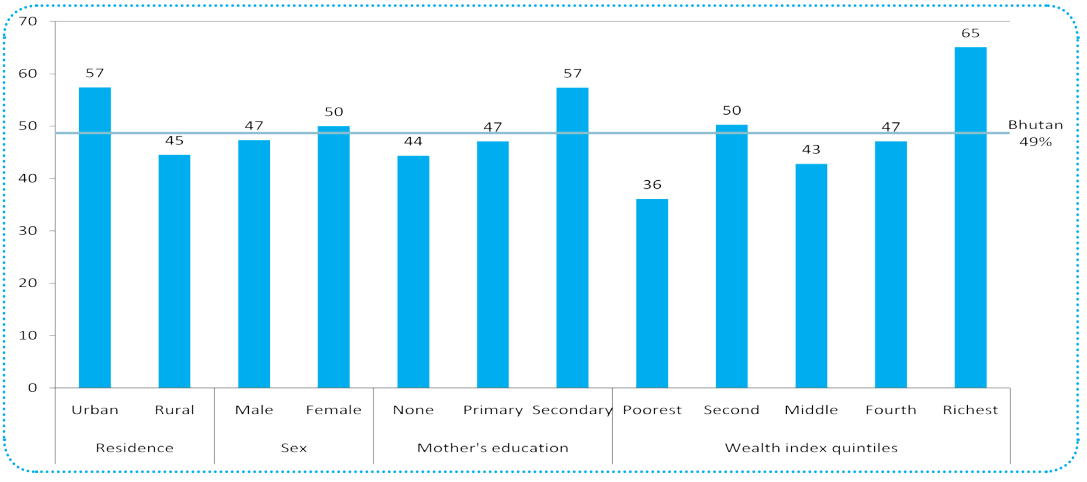
According to BMIS, 49% of children below six months of age are exclusively breast fed. Exclusive breast feeding has strong positive relation with education of the mother and the wealth index. Children living in households falling in the poorest quintile are less likely to be exclusively breast fed (36%) than their peers from the richest quintile (65%). While children in Eastern Bhutan are less likely to be exclusively or predominantly breast fed, they are more likely to continue to be breast fed till two years of age compared to the children from Western and Central Bhutan.

PERCENTAGE OF CHILDREN UNDERWEIGHT, STUNTED AND WASTED BY AGE GROUPS

There is a big jump in stunting and a smaller jump in underweight among children of 12-23 months. This corresponds to the age at which many children cease to be breast fed and are exposed to contamination in water, food and the environment in general.



PERCENTAGE OF EXCLUSIVE BREAST FEEDING RATE BY DIFFERENT BACKGROUND CHARACTERISTICS

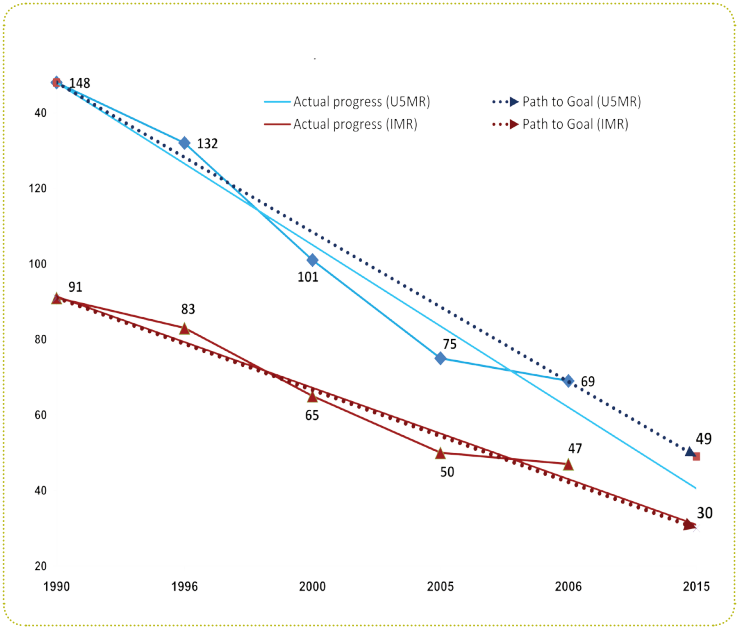


CHILD MORTALITY

Children under five years of age in developing countries are ten times more likely to die than children in developed countries. The Millennium Development Goals (MDG 4) calls for reduction of infant mortality rate (IMR) and under-five mortality rate (UMR) by two-thirds between 1990 and 2015. Monitoring progress towards this goal is an important but challenging objective. The BMIS applies indirect methods to measure child mortality which produces robust estimates that are comparable with the ones obtained from other sources. Indirect methods minimize the pitfalls of memory lapses, inexact or misinterpreted definitions, and poor interviewing technique.

Bhutan is on track to achieve MDG 4. Child mortality have decreased significantly from U5MR of 148 and IMR of 91 in 1990 to the current rate of approximately 69 and 47 deaths per 1000 live births respectively.

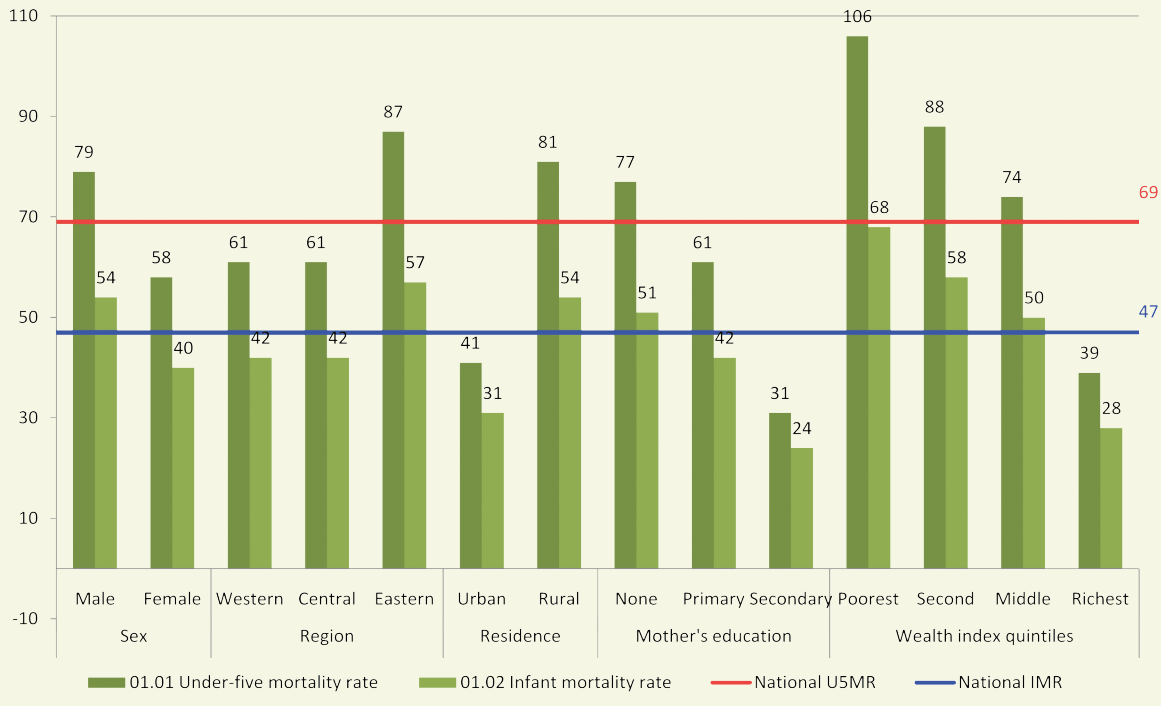
TRENDS OF INFANT MORTALITY RATE (IMR) AND UNDER FIVE MORTALITY RATE (U5MR) IN BHUTAN



Infant and under-five mortality rates are higher in eastern Bhutan than in western and central Bhutan.

Mortality is significantly different in terms of educational levels and wealth. A child born to the poorest family in rural areas and with uneducated mother is more likely to die by the age of five as compared to a child born to a rich and educated family in an urban area.

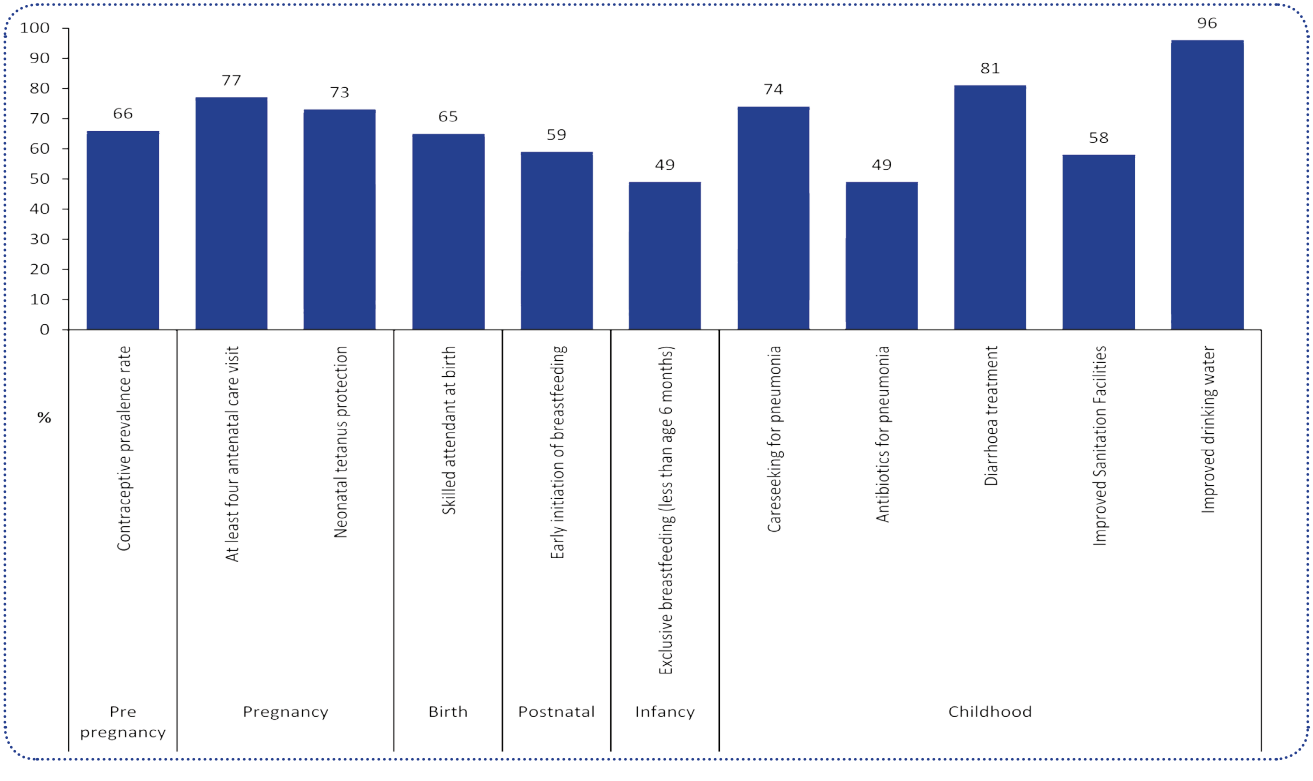
UNDER-FIVE MORTALITY RATE (U5MR) AND INFANT MORTALITY RATE (IMR) IN BHUTAN



CHILD HEALTH

In Bhutan neonatal care and mortality has been mainly addressed in the past within the context of safe motherhood and Emergency Obstetric and Neonatal Care (EmONC) programs. The concept of "continuum of care" approach has been adopted recently. It promotes cost effective interventions on care for mothers and children from (pre)pregnancy, birth and post-neonatal period to childhood. On the other hand it also promotes care for mothers and children from community level care to clinical care.

CONTINUUM OF CARE FROM PRE-PREGNANCY TO CHILDHOOD



Following the logic of continuum of care,two out of three women have access to and use modern contraceptive method.

Prevention of maternal and neonatal tetanus is to insure all pregnant women receive at least two doses of tetanus toxoid vaccine. In Bhutan almost three out of four women had received protection against tetanus with very little differences between women from urban and rural areas. Two-third of the pregnant women delivers with skilled attendance but only half of the babies (50%) are exclusively breast fed for full six months duration.

Pneumonia is the leading cause of death in children. About 7% of under-five children were reported to have had the symptoms of pneumonia and 74% of them were taken to an appropriate health facility. Only less than half of under-five children with suspected pneumonia received antibiotics. The use of antibiotics in under-fives with suspected pneumonia is a key intervention.

Diarrhoea is the second leading cause of death among children under-five worldwide. Most diarrhoea-related deaths in children are due to dehydration from loss of large quantities of water and electrolytes from the body in liquid stools. Management of diarrhoea-either through oral rehydration salts (ORS) or a recommended home fluid (RHF) - can prevent many of these deaths. In Bhutan more than one in four under-five children had diarrhoea (25%) and 85% of them received Oral Rehydration Therapy.

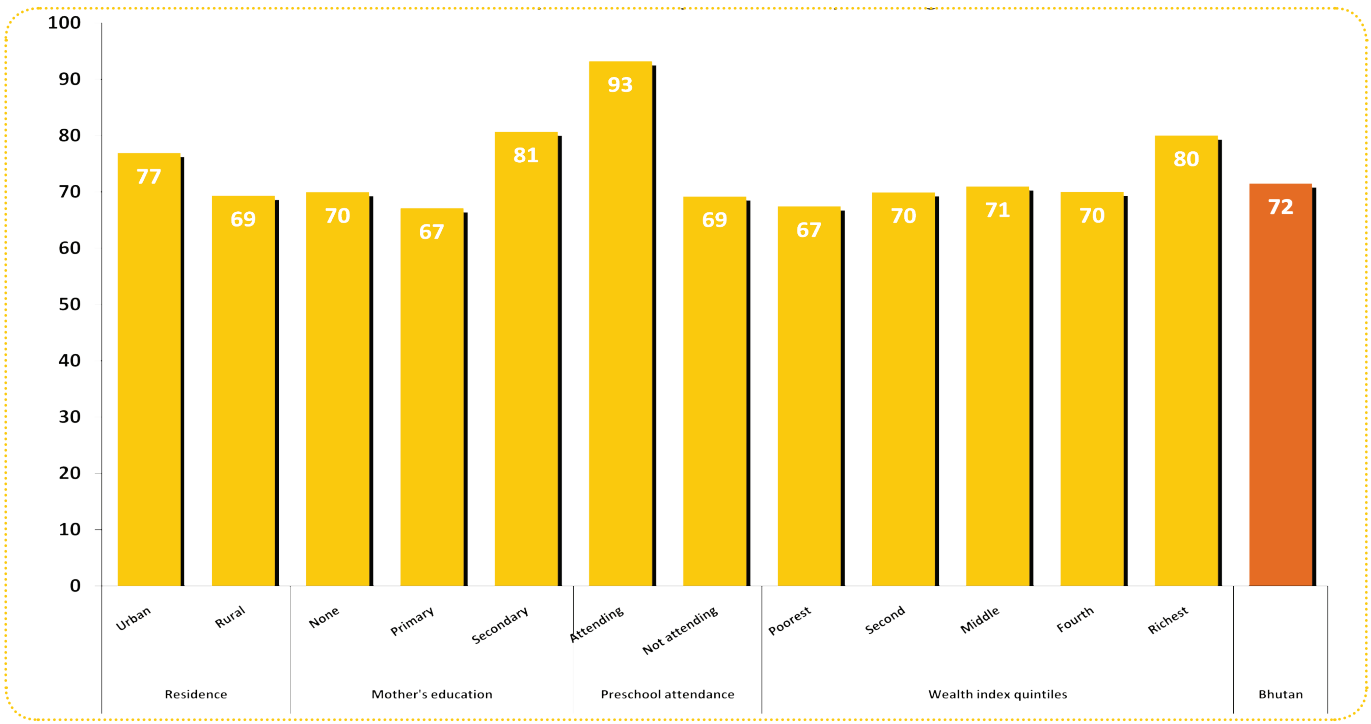
CHILD DEVELOPMENT

Attendance in early childhood education is critical in preparing children for formal schooling. Children participating in such programmes tend to be more successful later in school. They are also socially and emotionally more competent and demonstrate better intellectual and physical development than those children who miss such programmes.

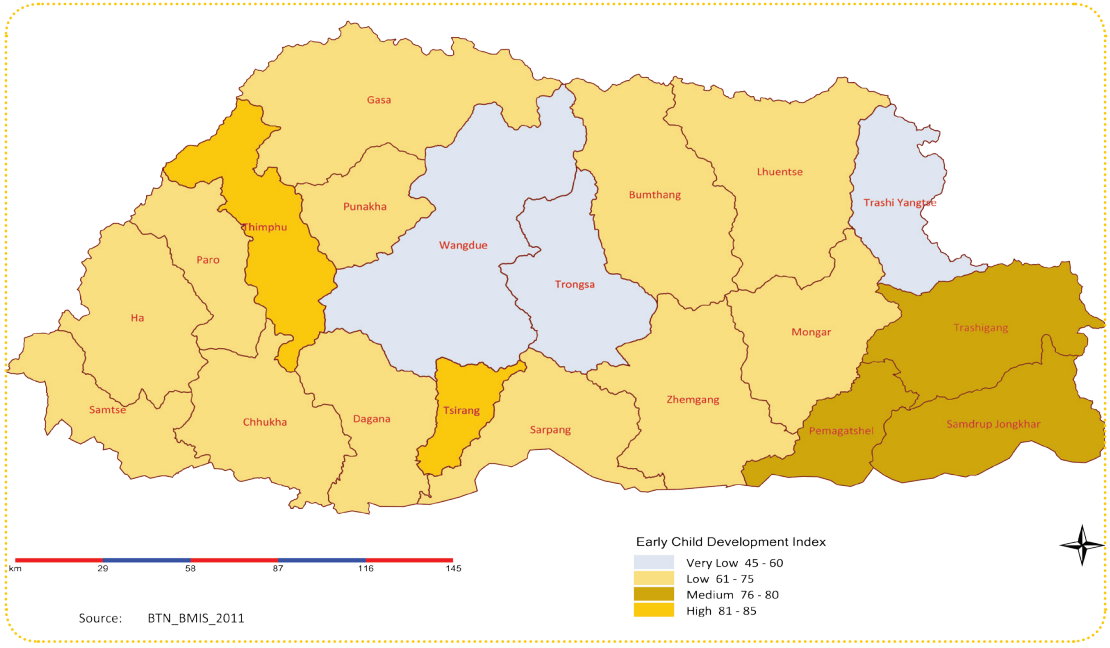
BMIS 2010 indicates that Early Child Development Index (ECDI) is higher among children attending pre-schools (93%) than those who do not (69%). ECDI is based on four domains; literacy - numeracy; physical; social-emotional and learning.

About 80% of children from the richest households are developmentally on track compared to 67% from the poorest households.

PERCENTAGE EARLY CHILD DEVELOPMENT INDEX BY DIFFERENT BACKGROUND CHARACTERISTICS



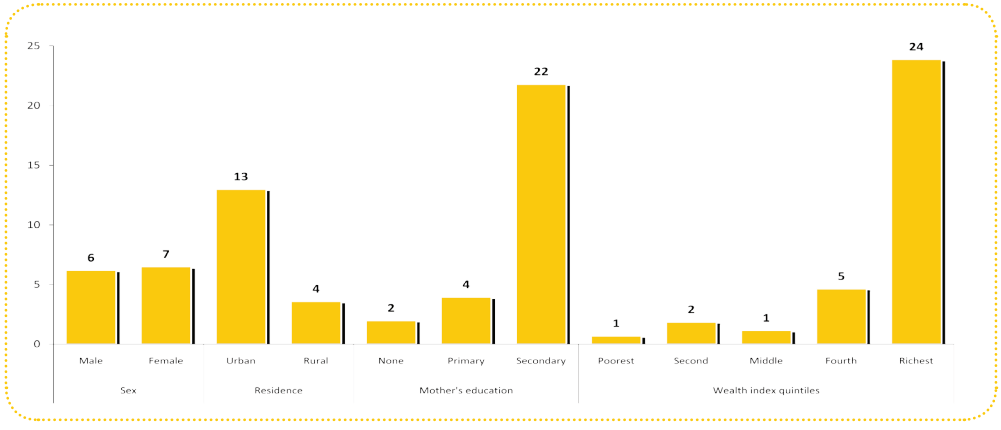
PERCENTAGE OF EARLY CHILD DEVELOPMENT INDEX BY DZONGKHAG



Children acquire the basic skills for learning to read and write through exposure to books and play things. They become aware of what a book is and how to handle it. It helps them in building their confidence and contributes to their performance in school.

About 24% of children in the richest household had three or more children's books compared to the ones in the poorest household with about 1%.

PERCENTAGE OF SUPPORT FOR LEARNING: AVAILABILITY OF CHILDREN'S BOOKS BY DIFFERENT BACKGROUND CHARACTERISTICS



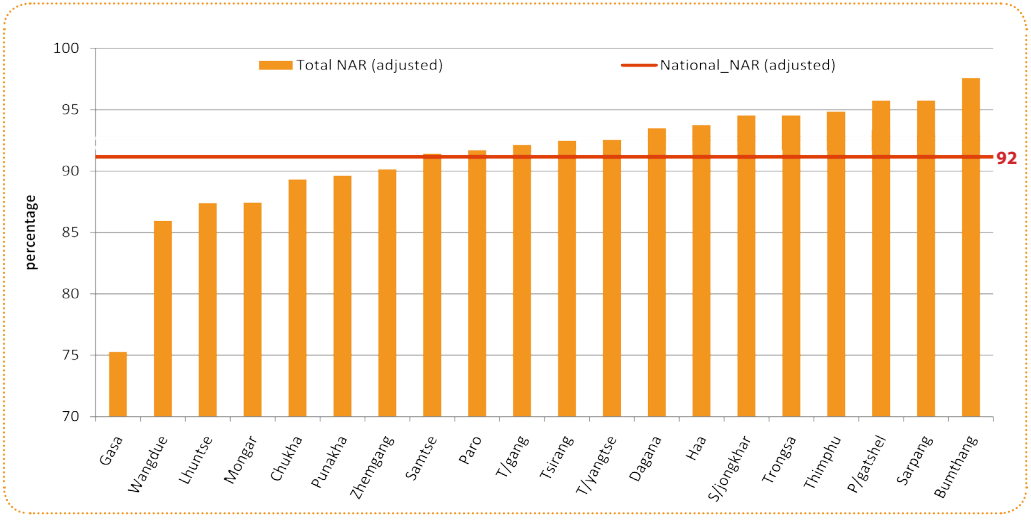
LITERACY AND EDUCATION

Education helps to empower women, protect children, alleviate poverty and promote human rights and democracy.

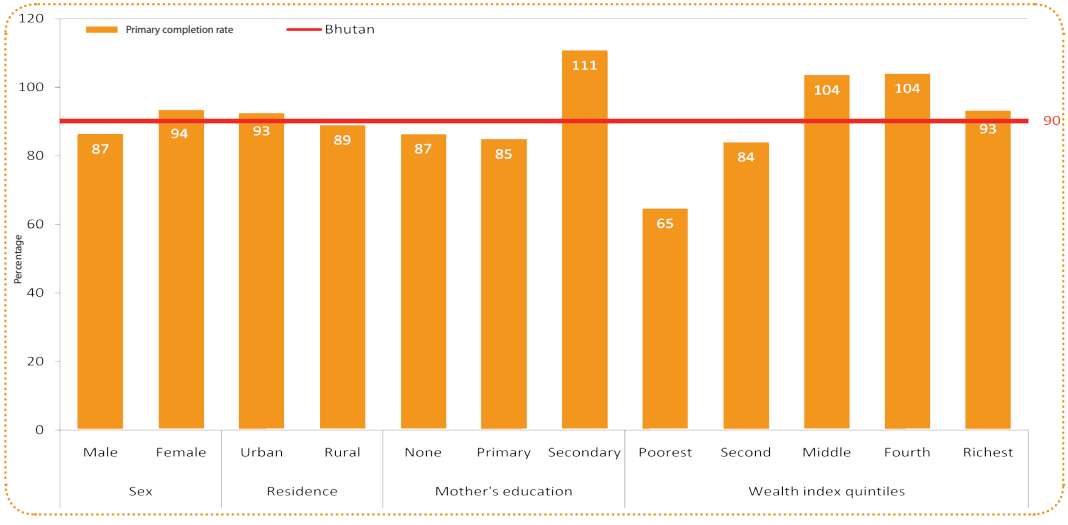
With net attendance rate (NAR) at 92%, Bhutan is on track to achieve universal primary enrolment by 2013. However, one out of every 10 children aged 6 to 12 years is out of school. Concerted efforts are needed to enrol the remaining 6 -12 years old children.

In Bhutan, though primary completion rate is 90%, children in the poorest quintile have much lower completion rate at about 65% compared to those in the highest quintile at 94%. Level of mother's education has positive relation with higher primary school completion rate.

NET ATTENDANCE RATE BY DZONGKHAG



PRIMARY COMPLETION RATE BY DIFFERENT BACKGROUND CHARACTERISTICS



A girl's education has enormous social, economic and political implications of a nation. Higher female literacy rate has relationship with low maternal and neonatal mortality, early marriage and better economic and social status of a community. On the other hand young women who are not literate are more likely to suffer from poverty, illness and malnutrition.

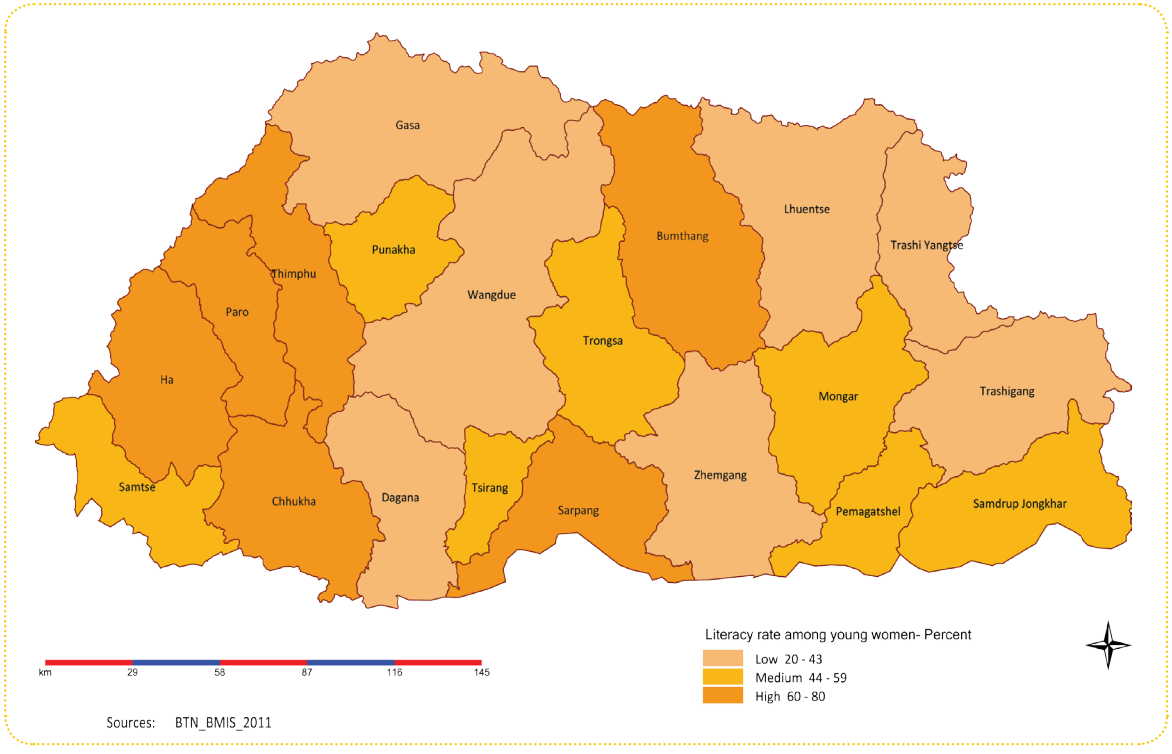
SUMMARY OF EDUCATION INDICATORS, BMIS 2010

Indicator	National Average
Literacy rate among young women	56%
School readiness	1.4%
Net intake rate in primary education	68%
Primary school net attendance rate (adjusted)	92%
Secondary school net attendance rate (adjusted)	55%
Children reaching last grade of primary	94%
Primary completion rate	90%
Transition rate to secondary school	89%
Gender parity index (primary school)	1.02
Gender parity index (secondary school)	1.03

BMIS assessed literacy based on the ability of women to read a short simple statement or on school attendance. More than half (56%) of women aged 15-24 years in Bhutan are literate. Of women who stated that primary school was their highest level of education, 44% were actually able to read the statement shown to them.

Literacy rate among young women 15 -24 years is higher in urban areas (78%) compared to those in rural areas (46%). It is even less among young women from the poorest households (21%) compared to those in the richest ones (85%).

PERCENTAGE OF LITERACY RATE AMONG YOUNG WOMEN (15-24YEARS) BY DZONGKAG



CHILD PROTECTION

Child protection (preventing and responding to violence, abuse and exploitation against children) should be an integral part of all programmes, plans and strategies to ensure achievement of the Millennium Development Goals (MDGs) by 2015.

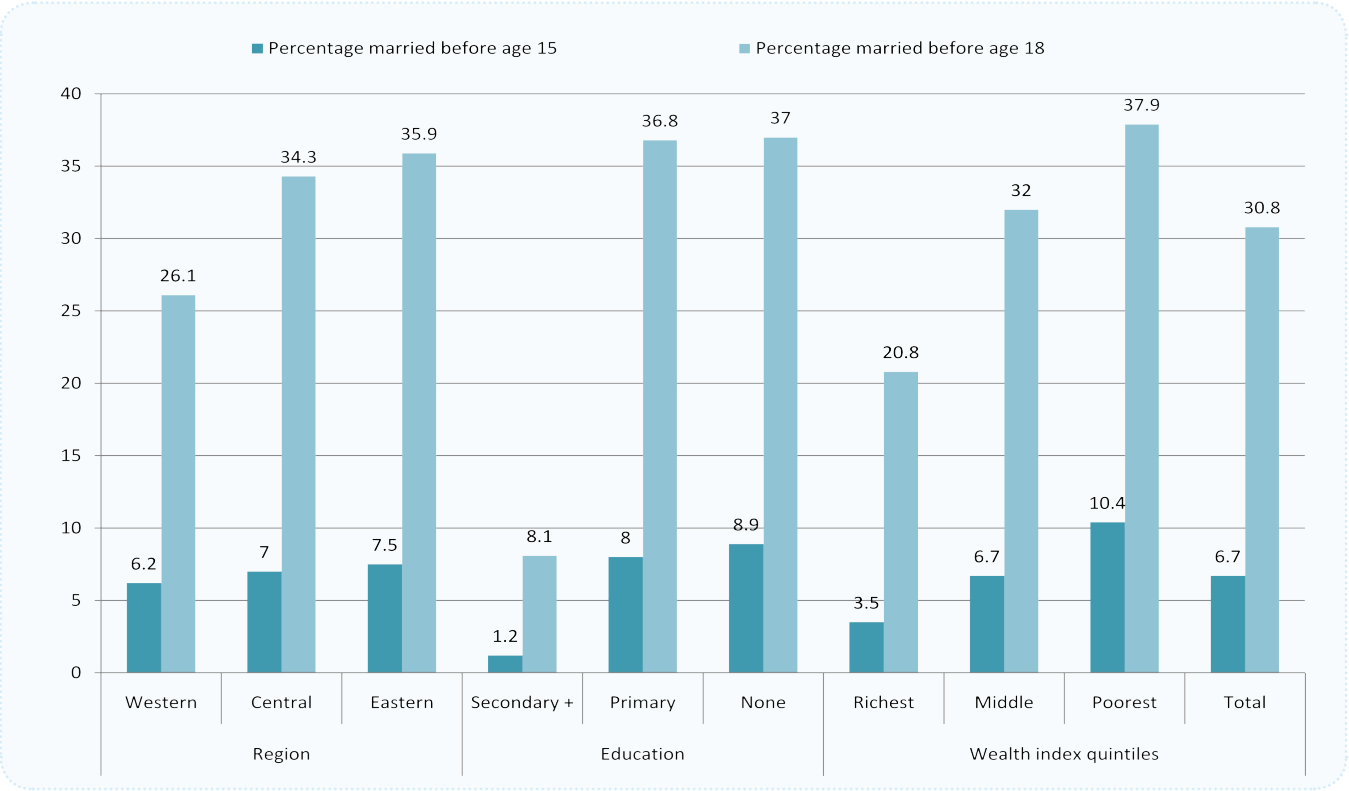
Despite the prohibition on marriage of minors under the Marriage Act, 1980, girls still marry at a young age.

Less than one in five young women between 15-19 years is currently married (15.2%). An estimate of 3.5% of young women between 15-24 years were in polygamous marriage/union.

About one in seven women aged 20-24 is currently married or in union with a man who is older by 10 years or more.

Child marriage is a violation of child rights compromising the development of girls and often resulting in premature pregnancy and social isolation.

PERCENTAGE OF WOMEN MARRIED BEFORE THE AGE OF 15 AND 18



The national child labour prevalence was 18% with little gender variation (18% boys and 19% girls). Child labour is largely related with poverty. Poor parents send their children to work, not out of choice, but for economic reasons.

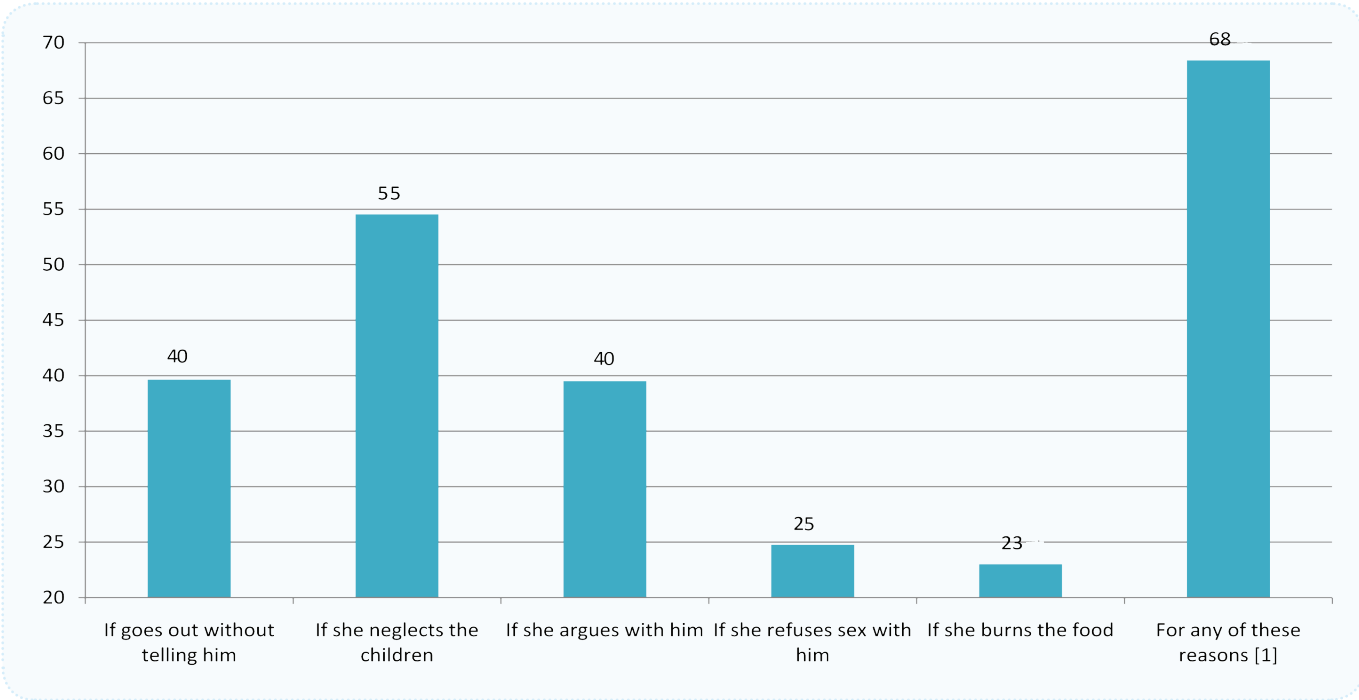
Prevalence of child labour decreases significantly with mother's education and household wealth. The poorest household is almost six times more likely to engage their children in child labour as compared to the richest household.

DOMESTIC VIOLENCE

Domestic violence not only affects women's health and safety and also the wellbeing and education of their children.

The overall attitudes towards acceptance of domestic violence among women age 15-49 years is 68% which is the second highest rate in South Asia. Attitudes towards Acceptance of domestic violence is highest among young women aged 15-24 years at 70%.

PERCENTAGE OF WOMEN AGE 15-49 YEARS WHO BELIEVE A HUSBAND IS JUSTIFIED IN BEATING HIS WIFE/PARTNER FOR VARIOUS REASONS



HIV/AIDS, SEXUAL BEHAVIOUR

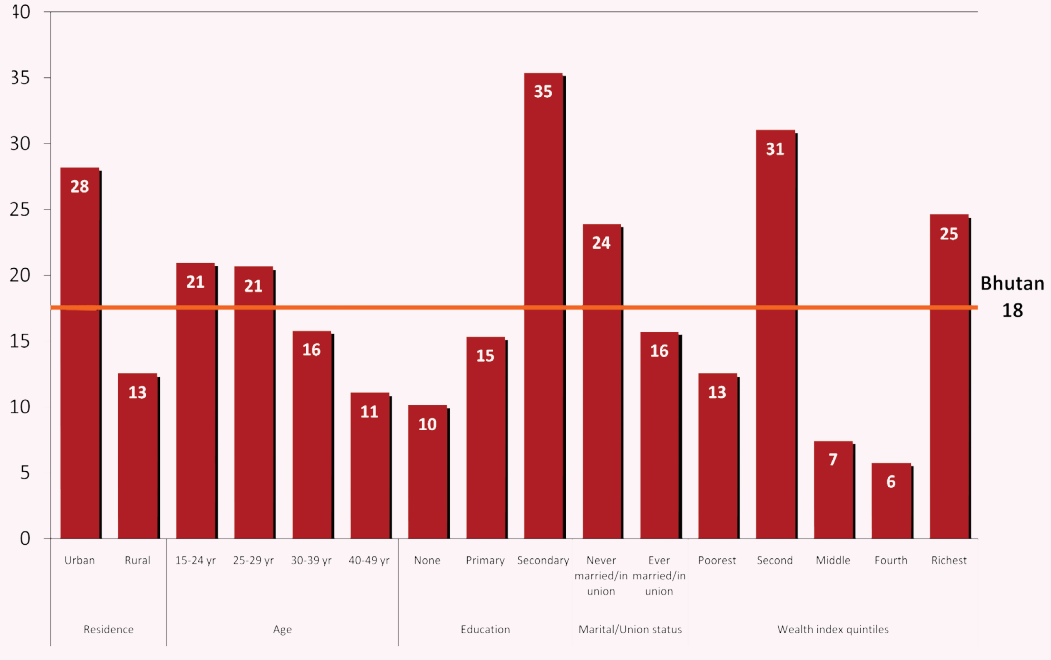
The Ministry of Health detected 29 new HIV positive cases across the country in the last one year, taking the total number of detected cases to 246 (122 females and 124 males). Most infected are between 25 to 39 years - the most economically productive age groups. Almost 90% of infections were through the following three main causes:

- Unsafe sex with multiple partner
- Increased casual sex
- Low condom use

According to BMIS 2010, one fifth of women (15-49 years) were unaware that HIV can be transmitted from the mother to her unborn child. One in four women aged 15-49 years have heard of HIV/AIDS but only 18% knew how HIV was transmitted.

Less than half of rural women received counseling on HIV/AIDS compared to two third of women in urban areas. Therefore, women in rural areas are comparatively more vulnerable to HIV infections.

PERCENTAGE OF WOMEN AGED 15-49 YEARS WITH COMPREHENSIVE KNOWLEDGE ABOUT HIV/AIDS BY DIFFERENT BACKGROUND CHARACTERISTICS



There is positive relationship between women's knowledge of mother-to-child transmission of HIV and their education level and household wealth. Women aged 15-49 years with secondary plus education possess three times more comprehensive knowledge of HIV compared to those without any education. It also varies between urban and rural areas.

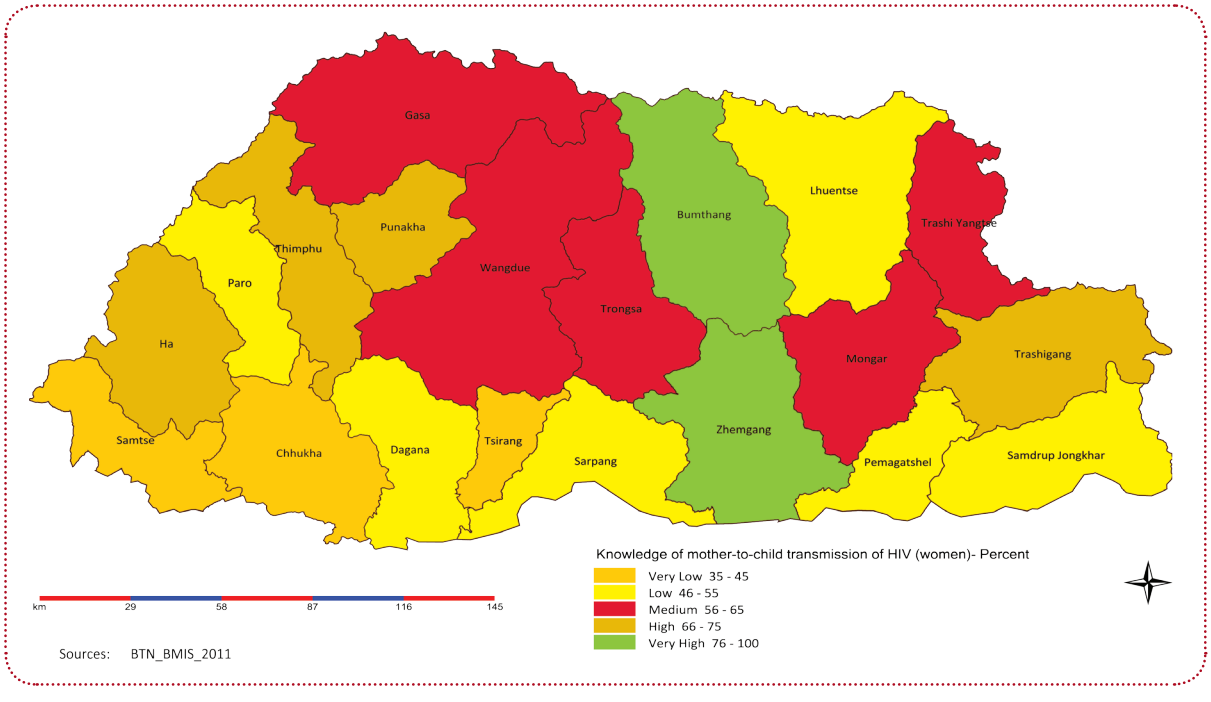
SUMMARY OF HIV INDICATORS, BMIS 2010

Indicator	Value
Comprehensive knowledge about HIV prevention	18%
Comprehensive knowledge of HIV prevention among young people	21%
Knowledge of mother to child transmission of HIV	56%
Accepting attitude towards people with HIV	28%
Women who know where to be tested for HIV	55%
Women who have been tested and know the result	9.8%
Sexually active young women who have been tested for HIV and know the results	13%
HIV counseling during antenatal care	54%
HIV testing during antenatal care	47%
Young women who have never had sex	96%
Sex before age 15 among young women	3.7%
Sex with multiple partners	0.3%
Condom use during sex with multiple partners	21%
Sex with non-regular partners	1.4%
Condom use with non-regular partners (61% in urban and 54% in rural areas).	62%

About 10% of the 246 detected cases in Bhutan are 'mother-to-child transmission.' Research indicates if expecting mothers volunteered to be screened for HIV during ante-natal care (ANC), they could have prevented HIV transmission to their unborn children.

Women in southern and eastern dzongkhags have the poorest knowledge on Mother-to-child transmission of HIV. Bumthang and Zhemgang has the highest proportion of women with the knowledge on mother-to-child transmission of HIV.

PERCENTAGE OF WOMEN AGED 15-49 YEARS WITH KNOWLEDGE OF MOTHER-TO-CHILD TRANSMISSION OF HIV (WOMEN) BY DZONGKHAG



REPRODUCTIVE HEALTH

Investments in reproductive health, including family planning and maternal care, are essential for meeting the Millennium Development Goals. Complications during pregnancy and childbirth are the leading causes of death and disability among women of reproductive age in developing countries. Three quarters of all maternal deaths occur during birth and immediately after delivery to six weeks.

Recommended minimum of 4 ante-natal care (ANC) visits and delivery with assistants of health workers can reduce the risks of deaths from pregnancy and birth related complications.

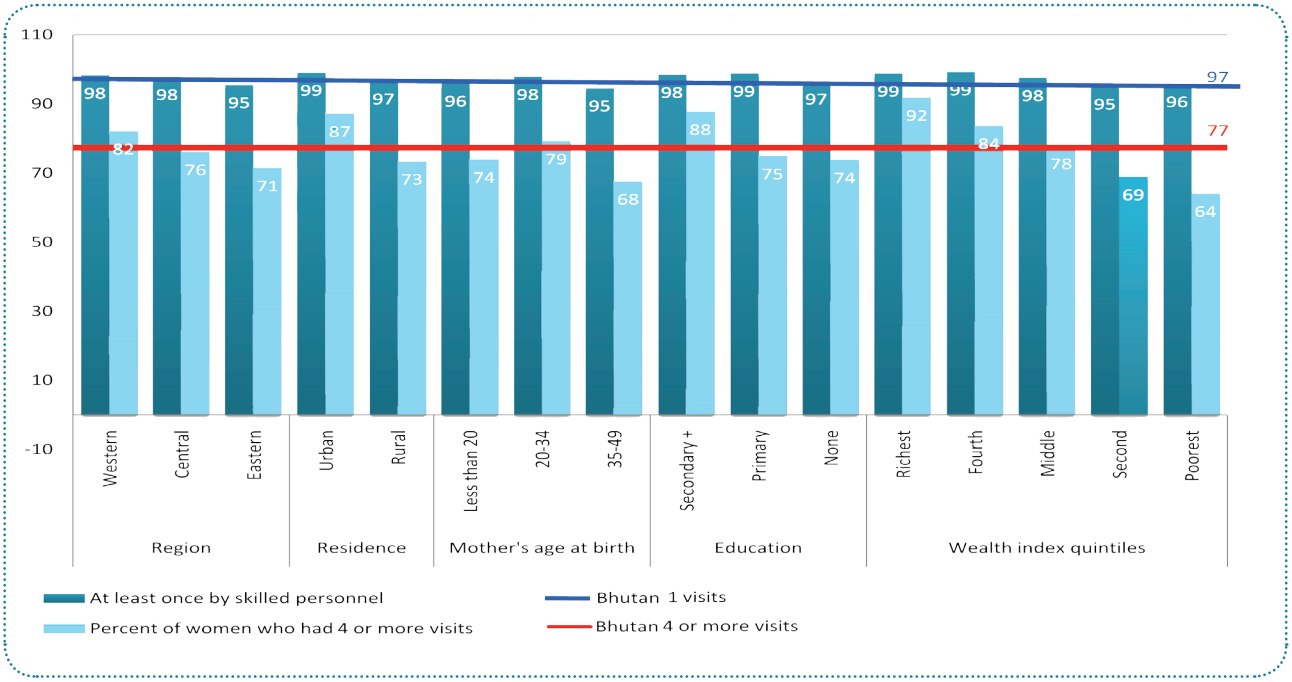
In Bhutan, 97% of pregnant receive ANC more than once during pregnancy. However only 77 pregnant women receive ANC at least four times.

Non-literate mothers and those from the poorest households are less likely to receive the recommended four visits. About 64% of women living in the poorest households reported four or more antenatal care visits compared to 92% among those living in the richest households.

SUMMARY OF REPRODUCTIVE AND MATERNAL HEALTH INDICATORS, BMIS 2010

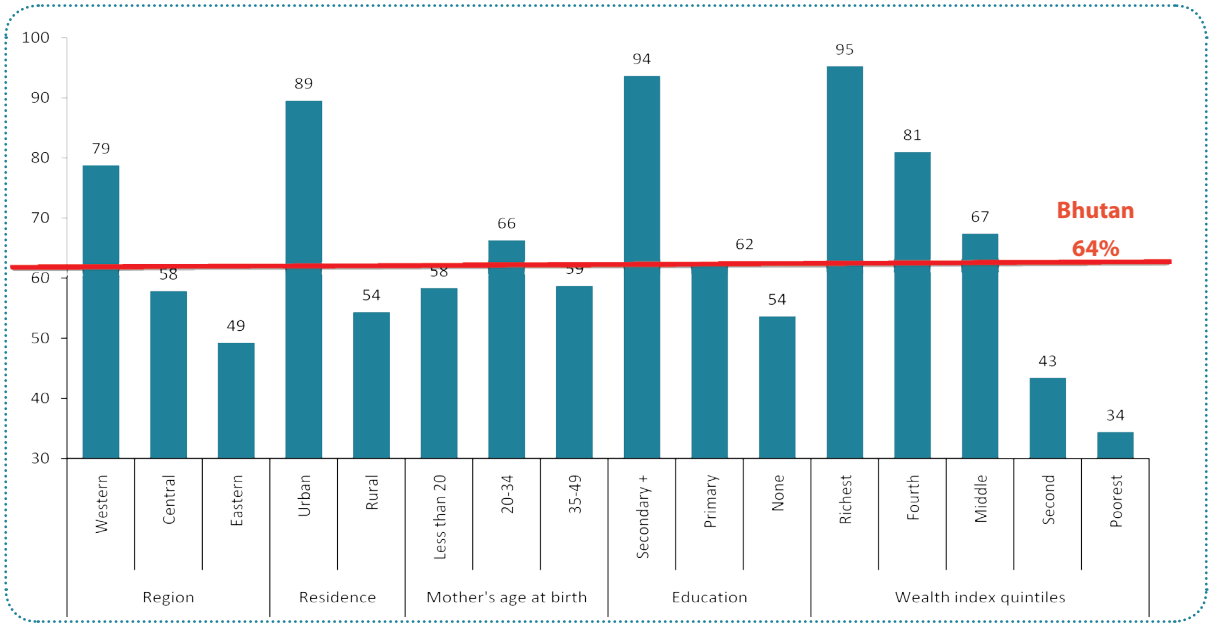
Indicator	Value
Adolescent fertility rate	59 %
Early childbearing	15%
Contraceptive prevalence rate	66%
Unmet need	12%
Antenatal care (at least once)	97%
Antenatal care (four times)	77%
Content of antenatal care	88%
Skilled attendant at delivery	64%
Institutional deliveries	63%
Caesarean section	12%

PERCENTAGE OF WOMEN WHO HAD ONE ANC VISIT COMPARE TO THOSE WHO HAD FOUR OR MORE VISITS



About 64% of pregnancy is attended by skilled health personnel in Bhutan. However there is a wide regional variation of about 79% in west, 58% in central and 49% in east Bhutan.

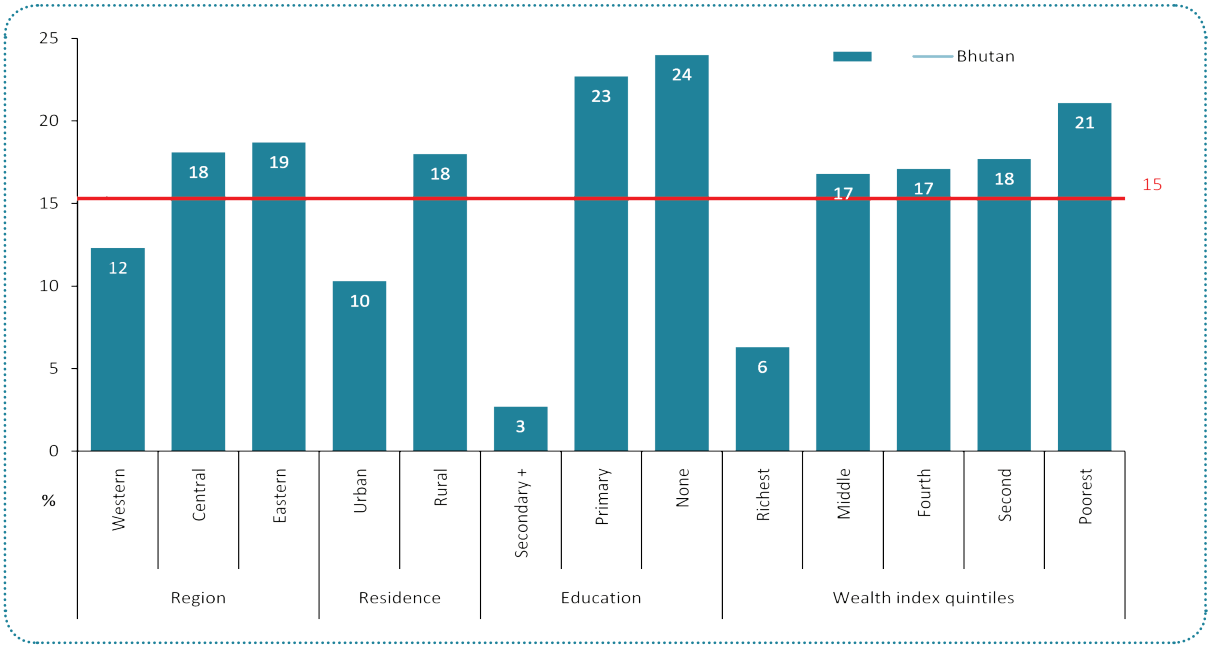
PERCENTAGE OF BIRTHS ATTENDED BY SKILLED HEALTH PERSONNEL BY DIFFERENT BACKGROUND CHARACTERISTICS



In Bhutan, about 15% of the women aged 20-24 who had no education (25%) and were poorest (18%) are more likely to give birth before the age of 18 compare to the rich and educated women.

Girls aged l0-14 years are five times more likely to die during pregnancy or childbirth than women aged 20-24. Girls aged 15-19 years are twice as likely to die and adolescent are less likely to use contraceptive as compared to older women.

PERCENTAGE OF WOMEN AGE 20-24 WHO HAVE HAD A LIVE BIRTH BEFORE AGE 18 BY DIFFERENT BACKGROUND CHARACTERISTICS

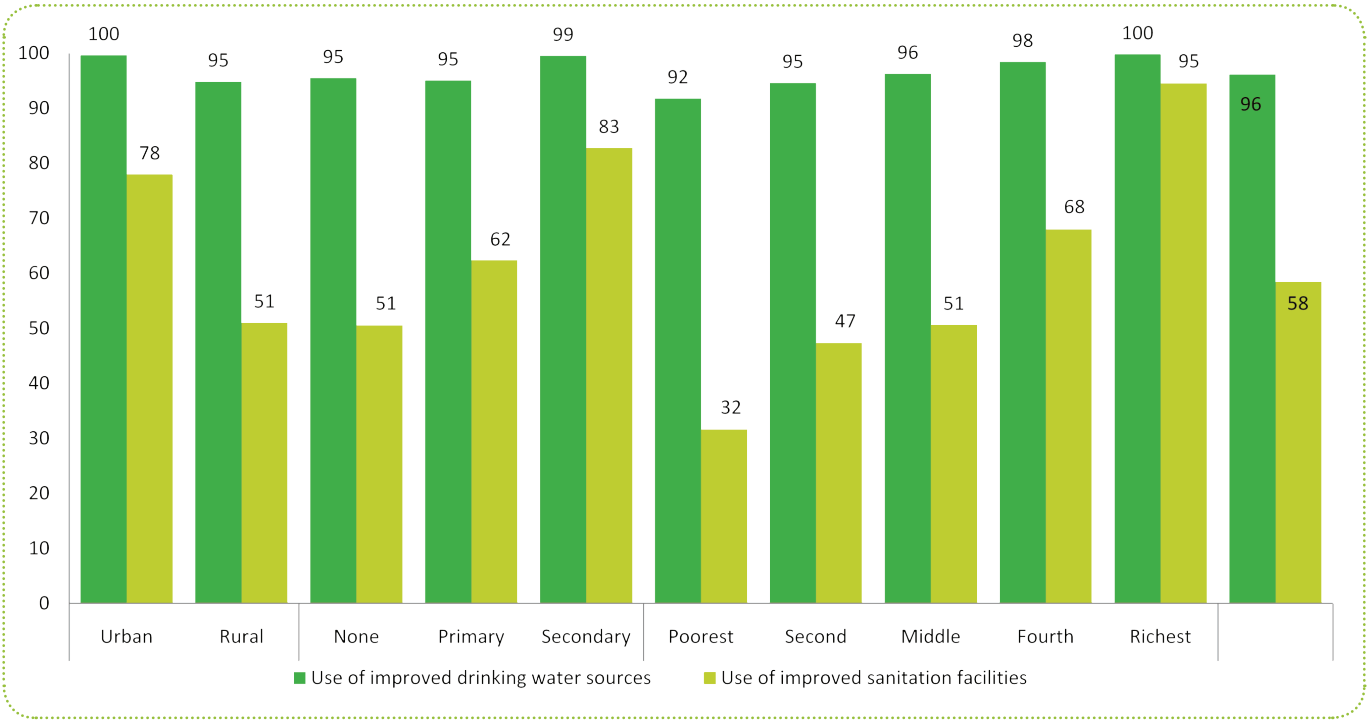


WATER AND SANITATION

Lack of safe drinking water and basic sanitation undermines efforts to combat poverty and diseases. Access to safe drinking water and basic sanitation can prevent child death and free up hours each day for women to go for work and children to attend schools. Evidence shows that access to basic sanitation facilities in schools prevent girls from dropping out!

In Bhutan 96% of the population use improved source of drinking water and 58% have access to improved sanitation facilities as per the global sanitation standard (without sharing with other households). Only 3% of the population are practicing open defecation. The practice safe disposal of child's faeces amongst 58% of household implies poor hygiene practices at the household level.

PERCENTAGE OF WATER AND SANITATION COVERAGE BY DIFFERENT BACKGROUND CHARACTERISTICS



There is slight variation in use of improved source of drinking water by rural and urban with 95% in rural areas and almost 100 % in urban areas. The coverage in western and eastern regions at 92% and 90% respectively is higher as compared to 82% in the central region.

Use of improved sources of drinking water and improved sanitation facilities relates positively with the education level of the household head and wealth index of the household. The richest quintile is more than three times likely to use improved drinking water sources and improved sanitation than the poorest quintile.

SUMMARY OF WATER AND SANITATION INDICATORS, BMIS 2010

Indicator	Value
Use of improved drinking water sources	96 %
Water treatment	56 %
Use of improved sanitation facilities (not shared)	58%
Safe disposal of child's faeces	58 %
Place for hand washing (water and soap available)	81 %
Availability of soap	99%

At district level, sanitation coverage is very low in the dzongkhags of eastern region. Bumthang, Thimphu, Paro and Chhukha dzongkhags have high sanitation coverage.

PERCENTAGE OF USE OF IMPROVED SANITATION FACILITIES BY DZONGKHAG