

National Multidimensional Poverty Index- Maldives

National Bureau of Statistics (NBS)

Oxford Poverty and Human Development Initiative (OPHI)

UNICEF Maldives

Introduction

- Measuring poverty is a complex process
- In Maldives - poverty has been measured using an income approach
- The need to move beyond income poverty- to address the inequalities that exist in services, and within country
- And to achieve the Sustainable Development Goals and to leave no one behind

Human Development
Report **2019**

Beyond income, beyond averages, beyond today:
Inequalities in human development in the 21st century



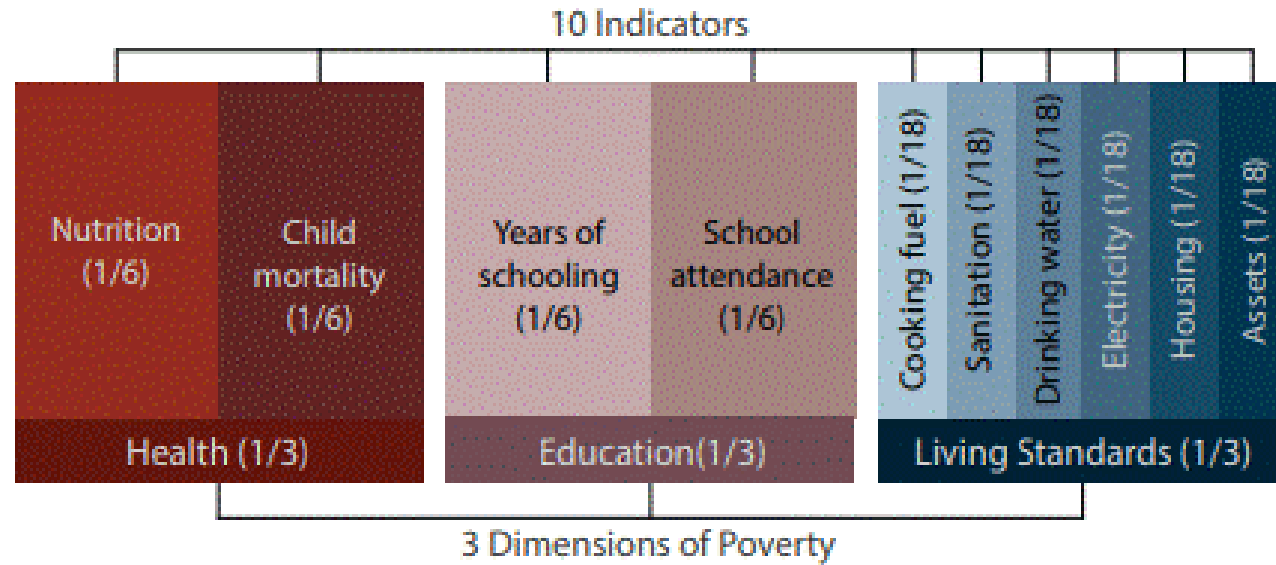
Empowered lives.
Resilient nations.



Multidimensional Poverty (MPI)

- **The Multidimensional Poverty Index (MPI)** captures acute deprivations that people suffer from.
- Captures poverty through different dimensions such as education, health, employment, housing, etc
- It complements traditional income-based poverty measures in the country and identifies a range of disadvantages the poor experience – in terms of accessing services, living condition, etc.

Global MPI Dimensions and indicators



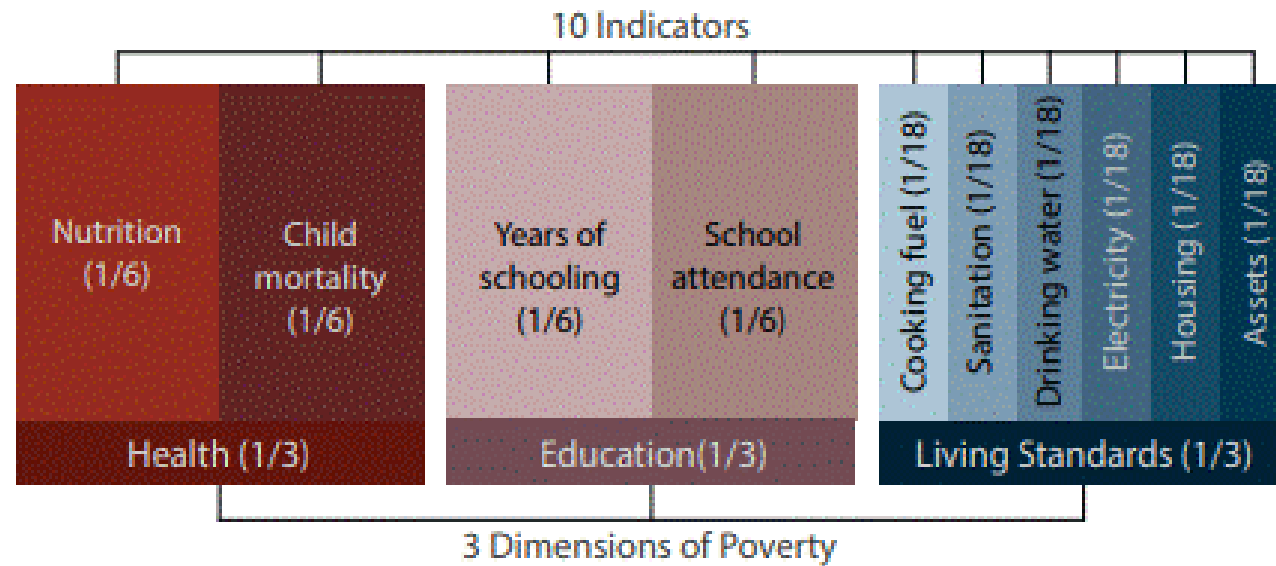
- **The Multidimensional Poverty Index (MPI)** is done at a global level using 3 dimensions and 10 indicators- to compare across countries
- Global MPI currently reports for more than 100 countries (including Maldives)
- Based on Alkire-Foster methodology

Global MPI Dimensions and indicators

(poverty cut-off
as deprived in
one dimension
 $k=33.3$)

Dimension	Indicator	Deprived if...	Related to...	Relative Weight
Education	Years of Schooling	No household member has completed five years of schooling.	MDG2	1/6
	Child School Attendance	Any school-aged child is not attending school up to class 8.	MDG2	1/6
Health	Child Mortality	Any child has died in the family.	MDG4	1/6
	Nutrition	Any adult or child for whom there is nutritional information is malnourished.*	MDG1	1/6
Living Standard	Electricity	The household has no electricity.		1/18
	Improved Sanitation	The household's sanitation facility is not improved (according to MDG guidelines), or it is improved but shared with other households.**	MDG7	1/18
	Safe Drinking Water	The household does not have access to safe drinking water (according to MDG guidelines) or safe drinking water is more than a 30-minute walk from home, roundtrip.***	MDG7	1/18
	Flooring	The household has a dirt, sand or dung floor.		1/18
	Cooking Fuel	The household cooks with dung, wood or charcoal.	MDG7	1/18
	Assets	The household does not own more than one radio, TV, telephone, bike, motorbike or refrigerator and does not own a car or truck.	MDG7	1/18

Global MPI Dimensions and indicators



Year and survey ^b	Multidimensional Poverty Index ^a	SDG 1.2							Contribution of deprivation in dimension to overall multidimensional poverty ^a			SDG 1.2		SDG 1.1
		Population in multidimensional poverty ^a		Population in severe multidimensional poverty		Population vulnerable to multidimensional poverty ^a	Health	Education	Standard of living	Population living below income poverty line				
		Headcount (thousands)	Intensity of deprivation (%)	Inequality among the poor	National poverty line					PPP \$1.90 a day				
2007–2018	Value	(%)	In survey year	2017	(%)	Value	(%)	(%)	(%)	(%)	2007–2018 ^c	2007–2017 ^c		
Maldives	2016/2017 D	0.003	0.8	3	3	34.4	.. ^e	0.0	4.8	80.7	15.1	4.2	8.2	7.3

The need for a national MPI

- Maldives performing well in global MPI (multidimensional poverty <1%) – indicators not relevant for national context
- Many countries are moving towards building a national MPI
- A national MPI is needed to measure the acute deprivation the population faces in different aspects with regard to accessing services, education, living condition, etc.
- In partnership with UNICEF Maldives and OPHI, work on national MPI was initiated in 2017

Construction of a national MPI

Identifying universe of indicators for a national MPI

Identifying a single source of data for MPI

Finalizing indicators and deprivation cut-off for each indicator

Agreeing on a multidimensional poverty cut-off

Results and analysis

- through consultative process with key stakeholders, experts
- Capacity building with assistance from UNICEF

A look at other countries national MPIs

TABLE 2.1 Dimensions, Indicators, and Weights of Bhutan's MPI

Dimension (weight)	Indicator (weight)	Deprivation cutoff
Health (1/3)	Child mortality (1/6)	A child has passed away in the household
	Food security (1/6)	The household suffers a shortage

TABLE 2.1 Nepal's National MPI – Indicators, Deprivations Cutoffs, and Weights

Dimension (weight)	Indicator (weight)	Deprivation cutoff
Education (1/3)	School enrollment (1/6)	Any child for whom there is nutritional information is
	School attendance (1/6)	
Living Standards (1/3)	Health	Child Mortality
		Years of School
	Education	School Attendance
		Cooking Fuel
	Living Standard	Improved Sanit
		Improved Drin Water
		Electricity
		Flooring and R
		Assets Ownersh

Source: Authors' calculations

Seychelles MPI

Dimensions and indicators of the Seychelles MPI, 2018



National MPI- Dimensions and indicators

(k=34)

3 Dimension
of poverty

8 Indicators



- The data for MPI needs to come from one data source
- Maldives MPI has been constructed using Demographic Health Survey (DHS) 2009 and 2016/17

National MPI- Dimensions and indicators

(deprivation cut- off for each indicator)

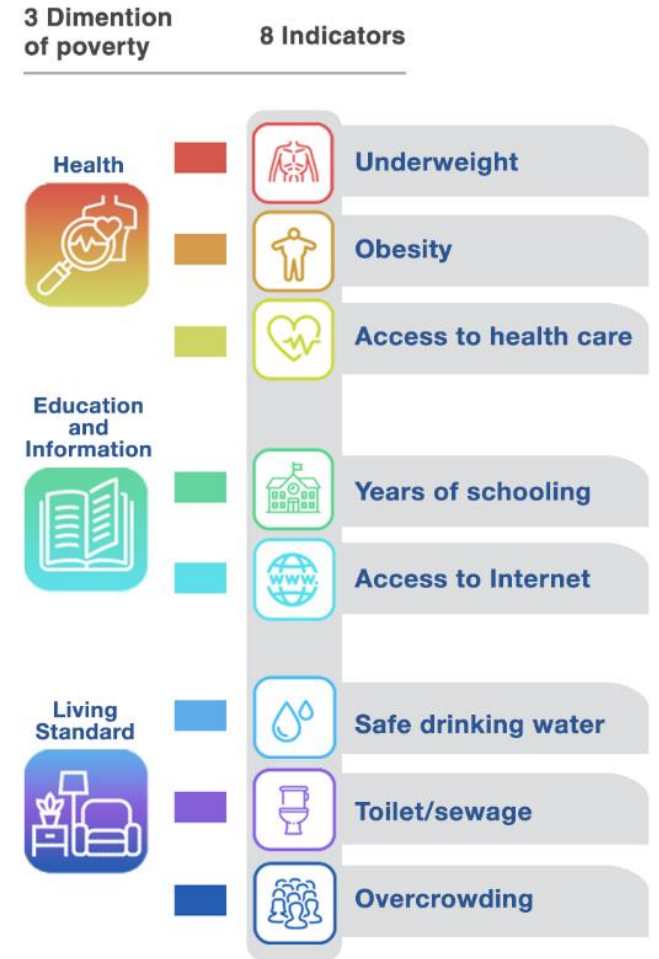
Dimension	Indicator	Deprivation Cutoff	Weights
Health (1/3)	Underweight	- Deprived if household has any child (<5 years) that is either underweight or stunted OR if the household has any adult female (15 to 49 years) that is malnourished (BMI <18.5)	1/9 = 11%
	Obesity	- Deprived if household has any child (<5 years) that is obese OR if household has any adult female (15 to 49 years) that is obese (BMI >=30)	1/9 = 11%
	Access to Health Care	Deprived if the household faces 'big problem' in receiving medical care (ie, distance to health facility or not having a female health provider is considered a 'big problem')	1/9 = 11%
Education and Information (1/3)	Years of Schooling	Deprived if household does not have any person with at least ten (10) years of schooling (for 15+ population)	2/9 = 22%
	Access to Internet	Deprived if household does not have access to internet	1/9 = 11%
Housing (1/3)	Safe drinking water	Deprived if household does not use safe drinking water (e.g. rainwater that is not purified or from unprotected well and purified)	1/9 = 11%
	Toilet/Sewage	Deprived if household does not have toilets connected to public sewage system	1/9 = 11%
	Overcrowding	Deprived if household has more than 3 persons per sleeping room	1/9 = 11%

National MPI- Dimensions and indicators

(k=34)

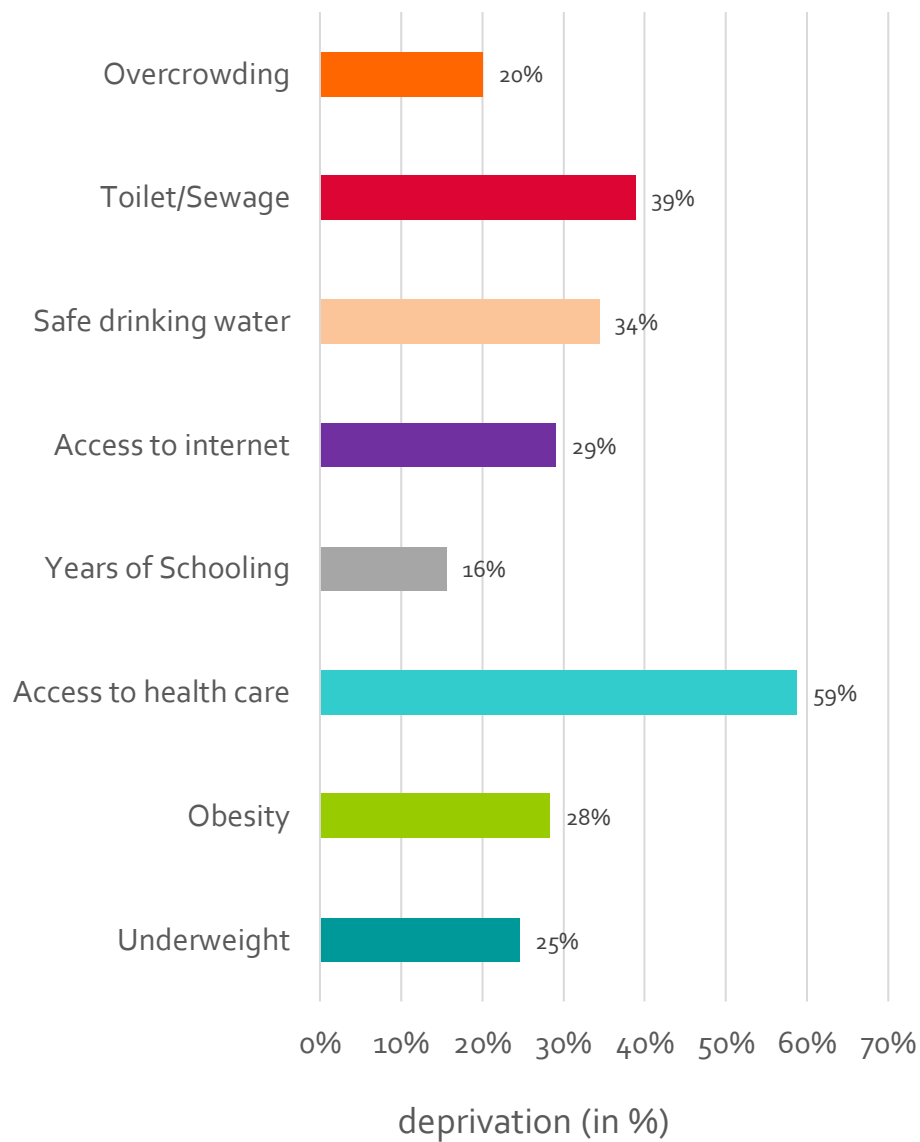
- The data for MPI needs to come from one data source
- Maldives MPI has been constructed using DHS 2009 and 2016/17

- Each dimension is given equal weights (1/3)
- Each indicator is given weights
- A person is considered deprived if he/she is deprived in more than 1 dimension (k=34)



Uncensored headcount-deprivation among the population irrespective of their poverty status

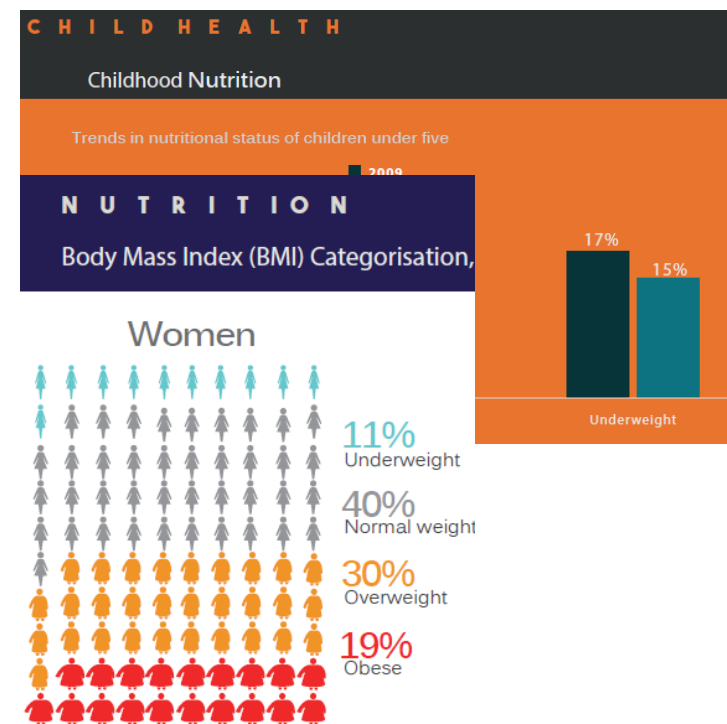
National uncensored headcount ratios (in percent), 2016/17



Note: Each indicator is out of 100 percent

Locality	Problem in accessing health care (%)	
	Distance to health facility	No female health provider
Republic	31.3	47.3
Male'	30.1	45.6
Atolls	32.3	48.7

Source: DHS 2016 (Table 9.14)



How is MPI done?

The MPI is based on the Alkire-Foster methodology as follows:

$$\text{MPI} = H \times A$$

H: the percentage of people who are multidimensionally poor (headcount ratio)

A: Intensity of people's poverty or the average percentage of weighted indicators in which poor people are deprived

MPI: the MPI is the product of H and A

The MPI ranges between 0 and 1 with results closer to 1 showing higher multidimensional poverty.

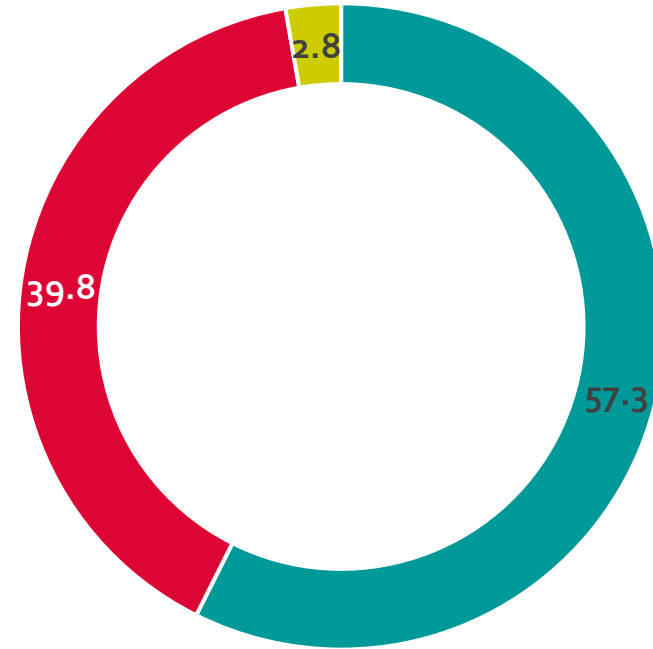
MPI results (k=34)

Poverty Cutoff	Index	Republic
K-value=34%	MPI	0.145
	Headcount ratio (H, %)	28.4
	Intensity (A, %)	51.1

- **28 percent** of the population is multidimensionally poor (close to 3 in every 10 person is multidimensionally poor)
- The poor on average, was deprived in **51 percent** of the weighted indicators. (more than 4 indicators).
- This means that the multidimensionally poor people in Maldives experience **14.5 percent of the total deprivations** that would be experienced if all people were deprived in all the indicators.

How poor are the poor?

Intensity of poverty among the poor, 2016/17



■ 3- 4 indicator ■ 5-6 indicator ■ 7-8 indicator

- **More than half of the poor population deprived in 3-4 indicators.**
- Less than 3 % of the poor population deprived in more than 7 indicators.

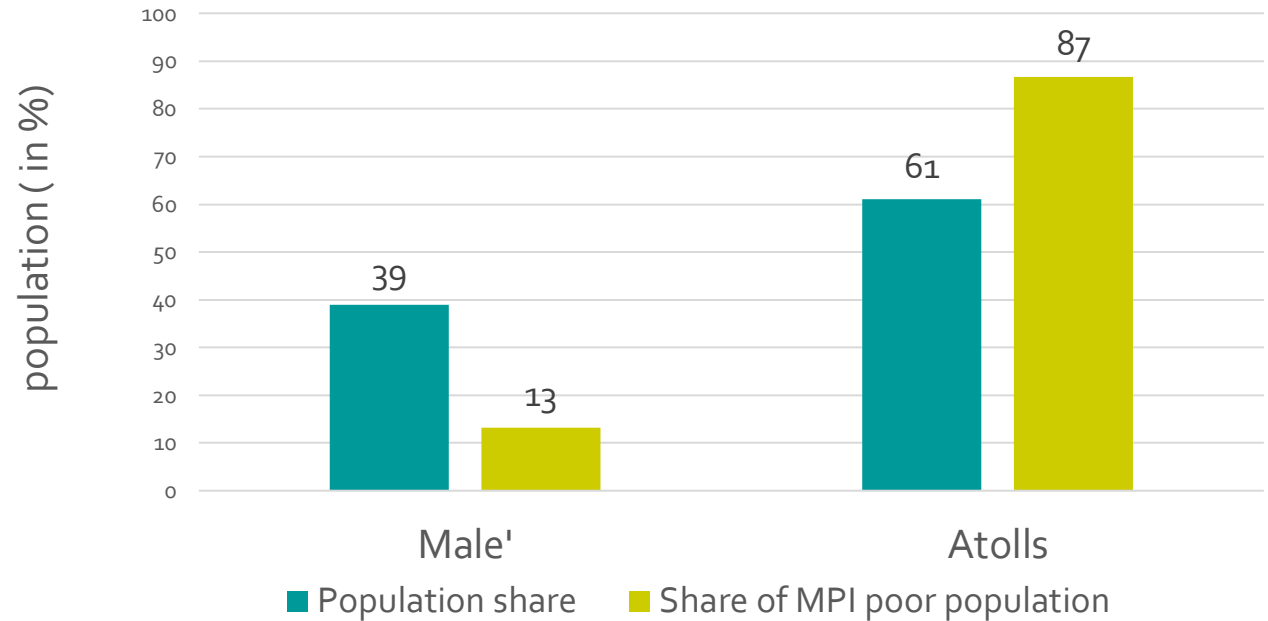
MPI results- Male' and Atolls (k=50)

Index	Population Share (in %)	Male'	Population Share (in %)	Atolls
		Value		Value
MPI	38.98	0.047	61.02	0.207
Headcount ratio (H, %)		9.6		40.3
Intensity (A, %)		48.7		51.4

- **Higher multidimensional poverty in the Atolls than in Male'.**
- A regional comparison reveals that 10% of the population in Male' was multidimensionally poor whereas 40% of the population is poor in the Atolls.

MPI results- share of population and poor population

Distribution of population and poor population by Male' and Atolls, 2016/17



- Even though only 61% of the population lived in the Atolls, 87% of Maldives' poor population lived in the Atolls.
- In other words, the Atoll's relative contribution to the country in terms of poverty (87%) is larger than their contribution in terms of population (61%).

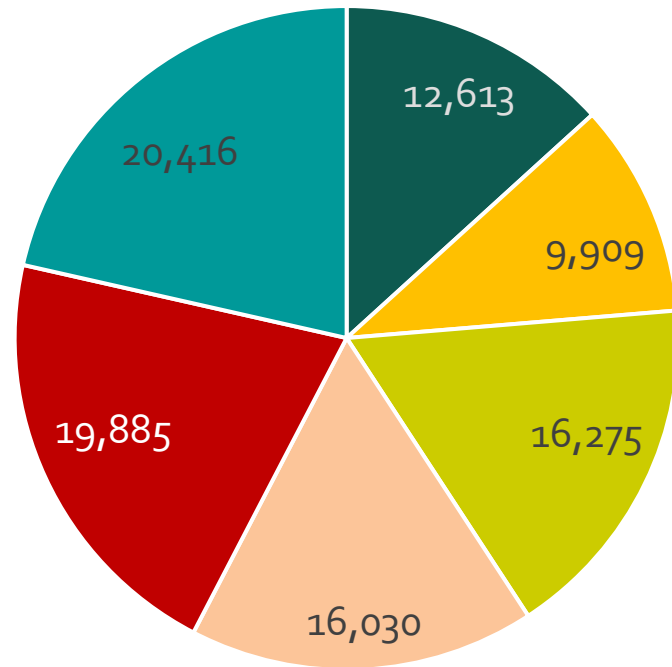
MPI results- across regions (k=50)

Region	Population Share (%)	MPI	H (%)	A (%)
Male'	39.0	0.047	9.6	48.7
North Region (HA, HDh, Sh)	13.8	0.231	44.0	52.4
North Central Region (N, Raa, Baa, Lh)	13.3	0.185	36.5	50.7
Central Region(K, AA, Adh, V)	6.3	0.239	46.7	51.2
South Central (M, F, Dh,Th, L)	12.4	0.198	38.5	51.4
South (GA, GDh, Gn, S)	15.2	0.200	39.0	51.1

The level of multidimensional poverty across regions is the same

MPI results- poor in numbers

Distribution of poor in numbers, 2016/17



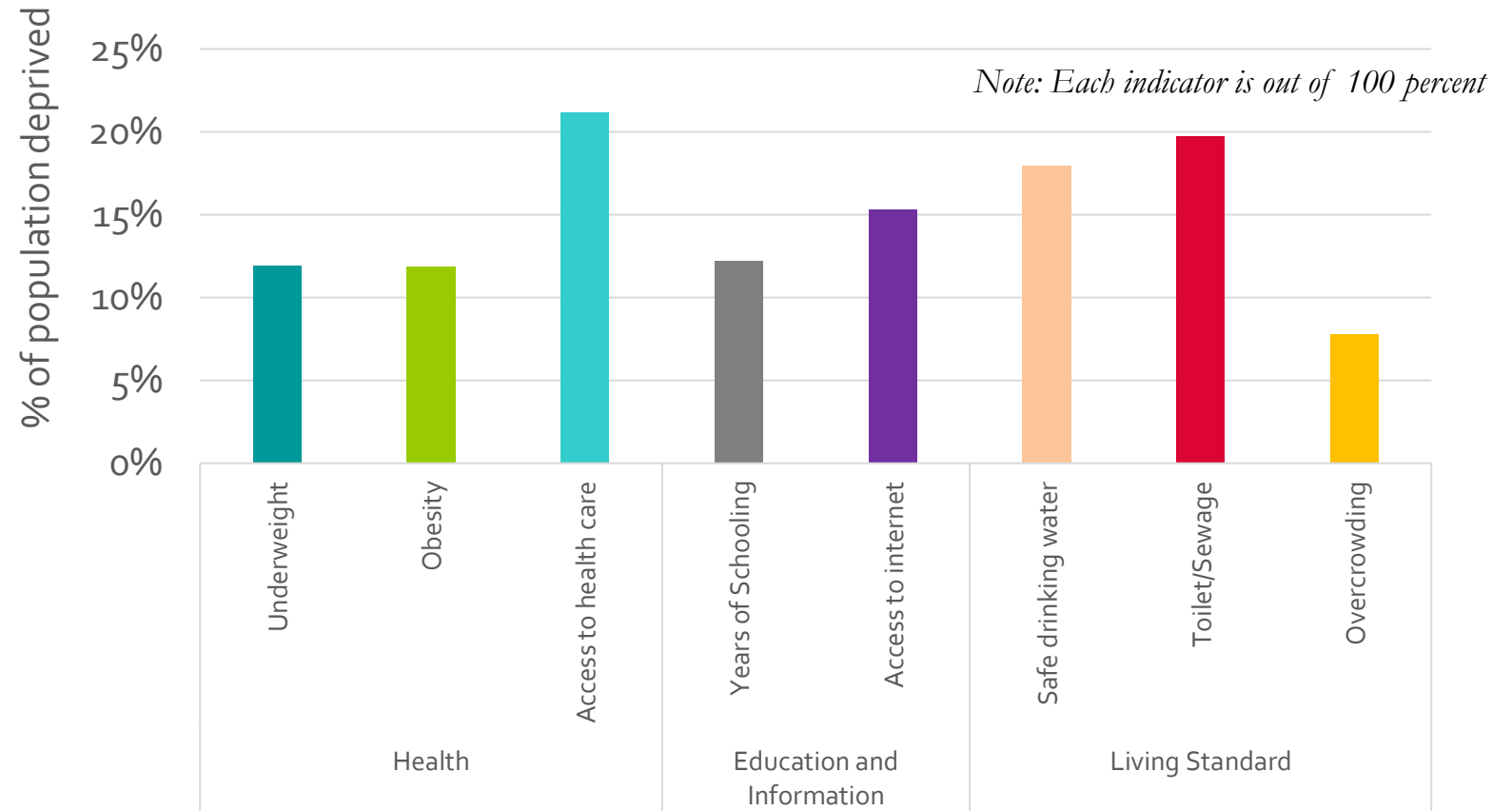
- Male'
- Central Region (K, AA, Adh, V)
- North Central Region (N, Raa, Baa, Lh)
- South Central (M, F, Dh, Th, L)
- South (GA, GDh, Gn, S)
- North Region (HA, HDh, Sh)

**95,000 people are
multidimensionally poor in
Maldives.**

Most poor 'in numbers' found
in North and South Region

The poor are deprived in....

Censored headcount ratio, 2016/17

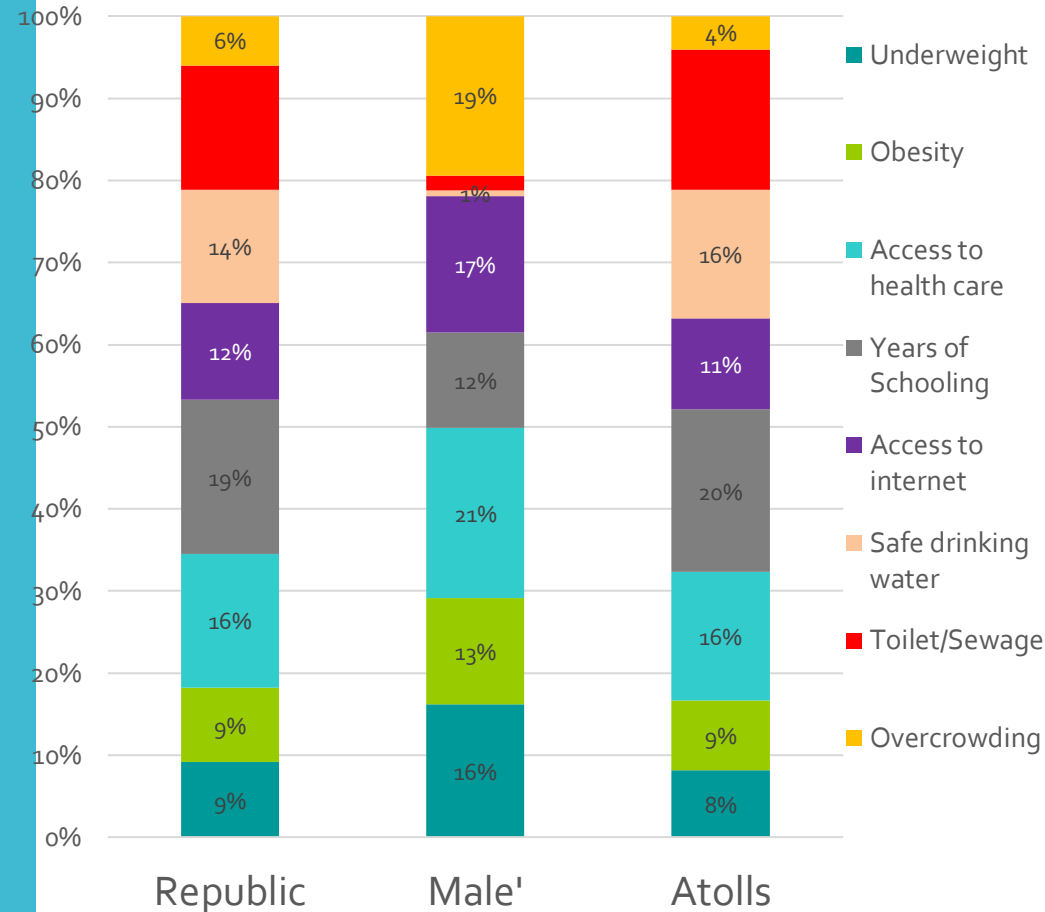


Multidimensionally poor are deprived mostly in access to health care, toilet/ sewage

The biggest contribution comes from health and living standard dimension

Which indicator drives multidimensional poverty in Maldives?

Percentage contribution of each indicator to MPI for National, Male' and Atolls, 2016/ 17



Poverty equally driven by health and living standard dimensions

Years of schooling contributed close to one fifth (19%) to overall poverty at the national level.

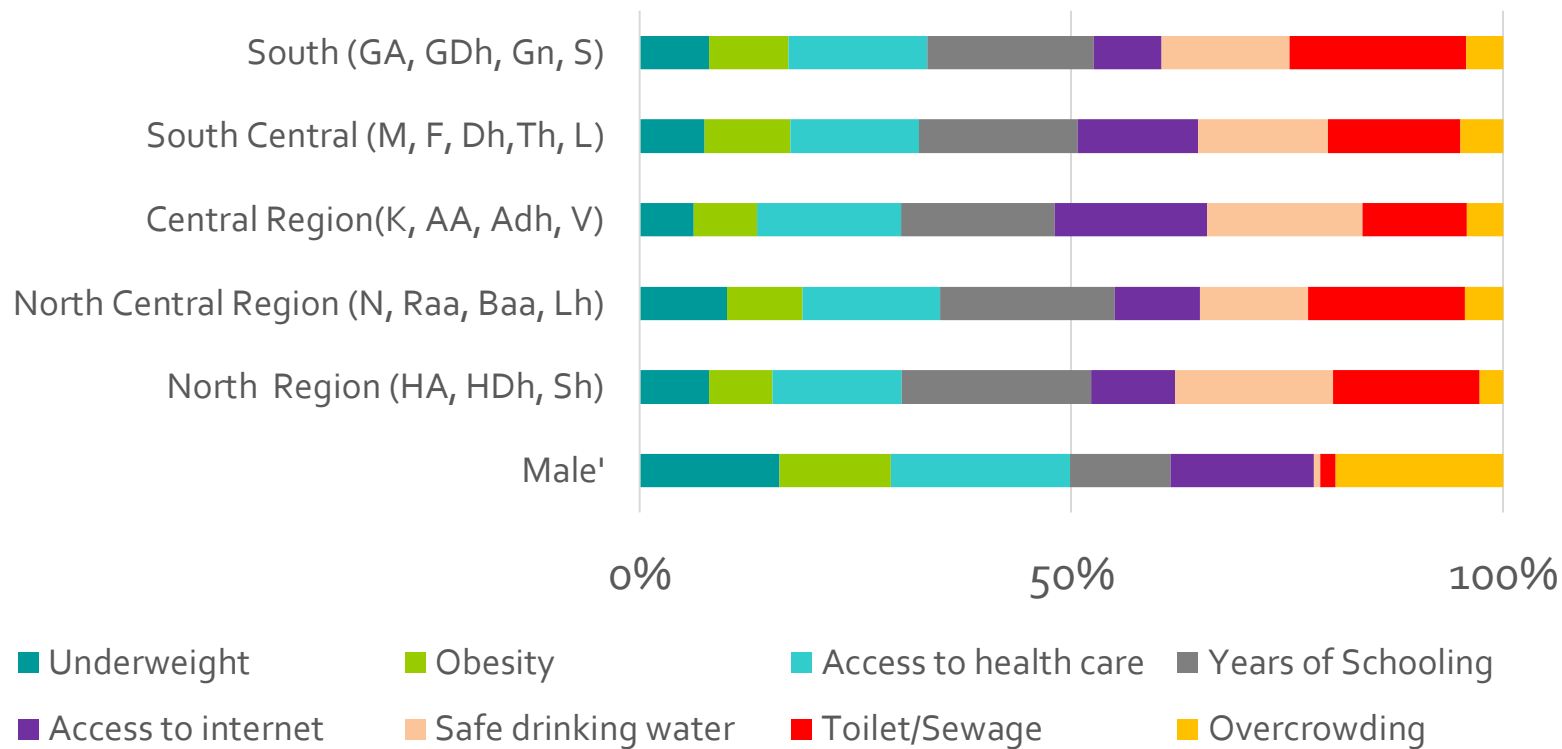
Access to health – 16%

In the Atolls – years of schooling is the main contributor to overall poverty; lack of adequate toilet facilities or sewage connection was the second main contributor to overall poverty.

In Male' - overcrowding and the lack of access to health care are the two main contributors to the MPI.

Percentage contribution of each indicator to MPI- by regions

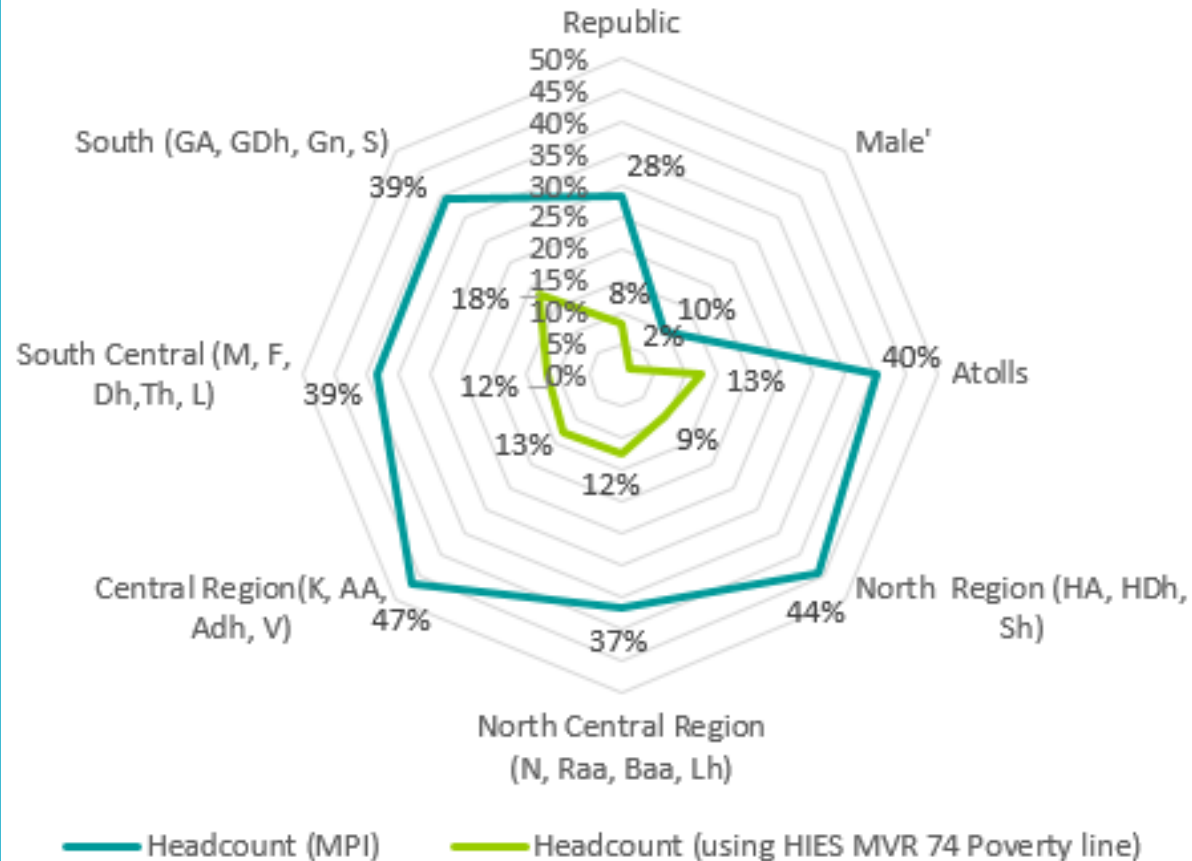
Percentage contribution of each indicator to MPI by regions, 2016/ 17



Living standard indicators contributed to MPI poverty in most of the regions

MPI and Income Poverty - HIES 2016 and DHS 2016/17

Comparison of headcount ratio for poverty (% of poor) using MPI and HIES



More people were multidimensionally poor than income poor.

Income poverty (HIES 2016) of MVR 74 :

Republic - 8%

Male- 3 %

Atolls -13%

At the national level, the headcount ratio of multidimensional poverty was **20 percentage points** higher than the income poverty rate.

MPI and population by age group

Age Group	Population Share (%)	MPI	H (%)	A (%)
0-17	34	0.176	33.9	51.8
18-35	33	0.108	21.8	49.8
36+	33	0.149	29.2	51.0

Multidimensional poverty high among children in Maldives.

Children are more likely to live in multidimensional poverty (**1 in every 3 children** lives in multidimensional poverty)

MPI by household head status

head of household	Population Share (%)	MPI	H (%)	A (%)
Male-head household	55.6	0.136	26.8	51.0
Female-head household	44.1	0.156	30.5	51.2

No difference in the level of poverty of poverty between male and female headed household

MPI by wealth quintile

Wealth Status	Population Share (%)	MPI	H (%)	A (%)
Poorest	21.0	0.302	57.1	52.9
Poorer	20.5	0.205	40.6	50.6
Middle	20.3	0.121	24.6	49.0
Richer	19.6	0.061	12.7	48.3
Richest	18.6	0.015	3.1	47.8

The population in the poorest quintile in terms of assets ownership was 19 times poorer than the richest quintile.

While 57% of the people in the poorest quintile lived in poverty, less than 4% in the richest quintile were poor.

MPI by disability status of the household

Household's disability status	Population Share (%)	MPI	H (%)	A (%)
No disability	77.8	0.135	26.7	50.7
With disability	22.2	0.178	34.2	51.9

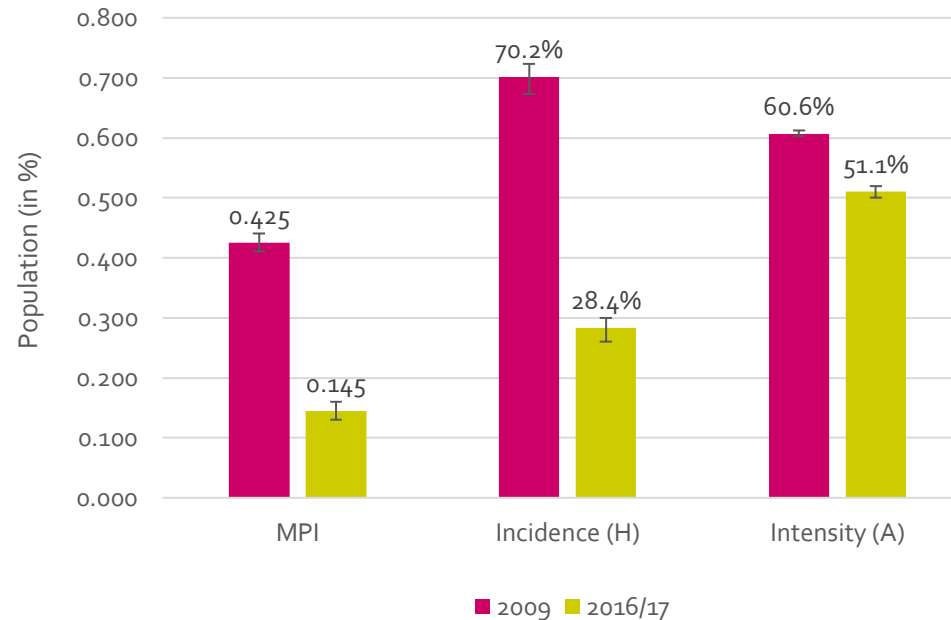
Households with a disabled person is likely to experienced more multidimensional poverty than households without a disability member.

In 2016/17, 22% of the households reported having at least one member with some form of disability.

Such households experienced a higher incidence of multidimensional poverty (34%) than households without any disabled member (27%).

MPI over time- 2009 to 2016/17

Multidimensional poverty in Maldives, 2009-2016/17



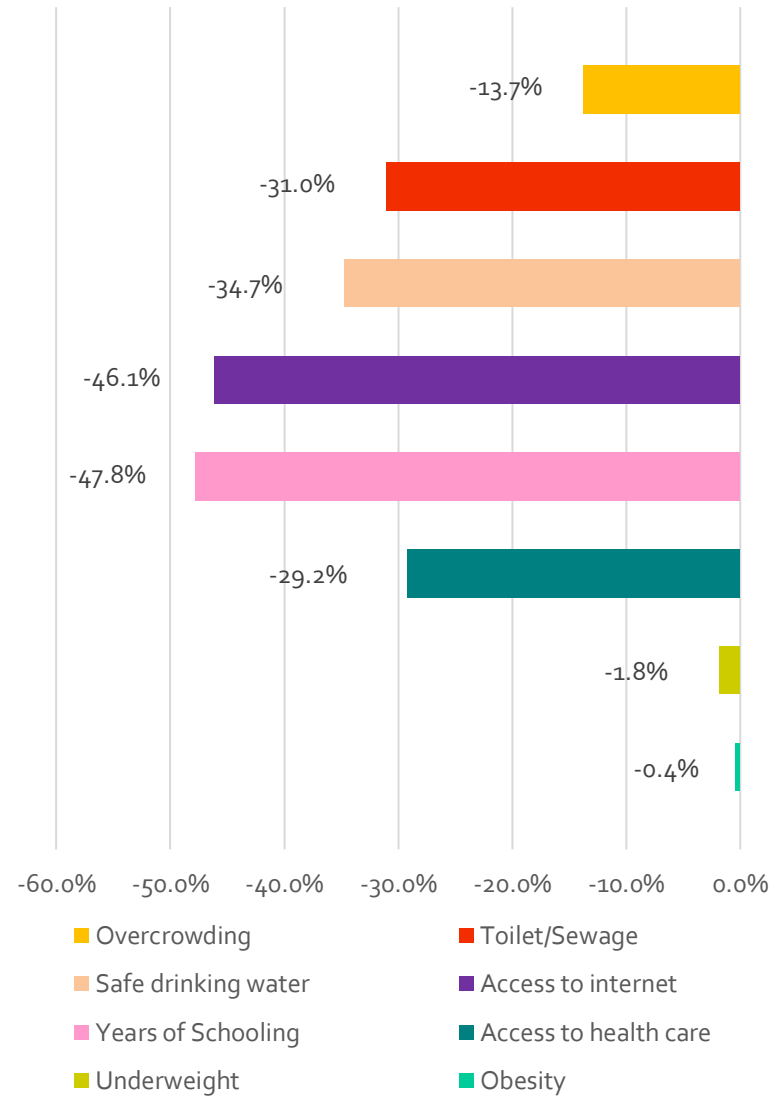
Multidimensional poverty has reduced overtime.

Between 2009 and 2016/17, multidimensional poverty has reduced significantly. The MPI has decreased to close one third of its original value – from 0.425 to 0.145.

MPI over time-

changes in the deprivation among the poor

Censored headcount ratio, 2009-2016/17

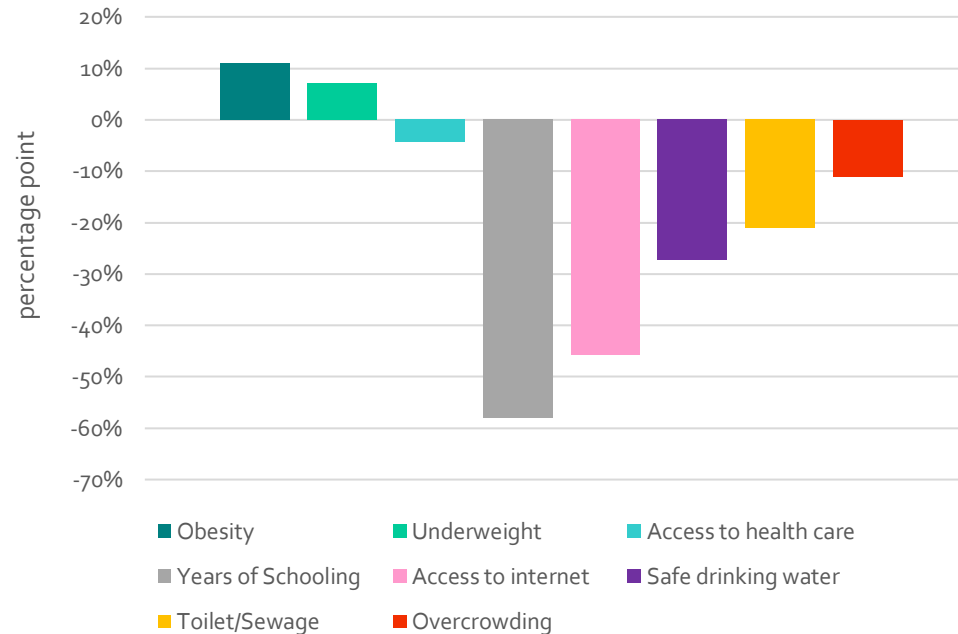


Improvement visible in education and living standard dimension

Improvement seen in access to health services but situation has worsen for underweight and obesity.

MPI over time- changes over time (in general)

Changes over time, 2009-2016/17



health indicators showed lowest improvement

80 percent of the indicators have shown improvement over the years, immediate action is needed to improve the health condition of the population given that health indicators remained without much improvement.



Policies addressing public health, nutritional of child and mother needs to be revitalized in order to garner improvement in the next round of DHS.

Moving Forward





Target 1.2: By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions

- **Indicator 1.2.1:** Proportion of population living below the national poverty line, by sex and age

See Metadata :  

- **Indicator 1.2.2:** Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions

See Metadata :  

With national MPI, Maldives can start reporting for Goal 1, indicator 1.2.2

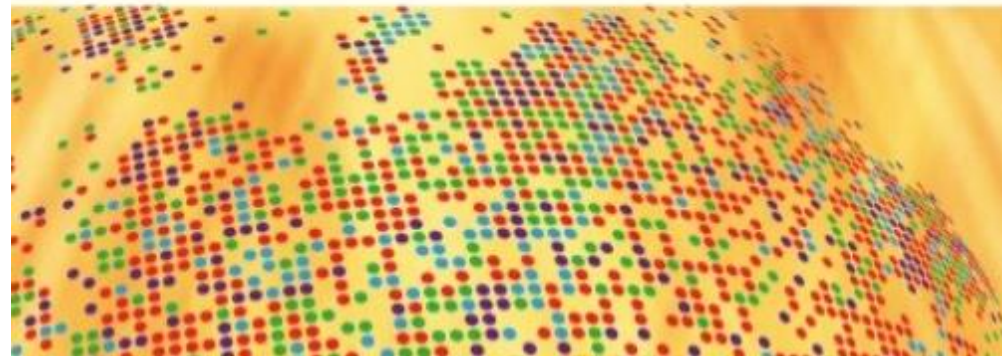
Moving
Forward

Human Development Report 2019

Beyond income, beyond averages, beyond today:
Inequalities in human development in the 21st century



Empowered lives.
Resilient nations.



And one step closer to doing **National Human Development Report of Maldives**

MPI as a policy tool

MPI is an effective policy tool and can be used for:

- Use of the MPI to measure multidimensional poverty and allocate resources,
- Resource allocation formula based on both multidimensional poverty and consumption poverty,
- Dialogue on MPI among policy makers,
- The Maldives MPI is directly linked to the Sustainable Development Goals (SDGs) and the National Plan,
- Evidence-based policies should draw on insights from MPI trends,
- Atoll level MPI reports should inform regional policies,
- Atoll-level policies should be informed by the composition of poverty in each region,
- MPI variables should be included in future surveys and census,
- The Maldives MPI needs to be disseminated widely and transparently, so it can help to advance policy research,
- Further research on drivers of multidimensional poverty to be undertaken within the Maldives.

- Thank you