



Human Capital Review

Unleashing People's Full Potential

November 2023



A horizontal banner featuring a vibrant tropical floral arrangement. The word "MALDIVES" is written in large, white, sans-serif capital letters across the center. The background of the banner is filled with various tropical plants, including green monstera leaves, pink hibiscus flowers, yellow and orange flowers, and green ferns.

MALDIVES

Human Capital Review Unleashing People's Full Potential

November 2023



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Acknowledgements

This document was prepared by a core team from the Human Development Department of the South Asia Region (SAR). The drafting of the report was led by Rene Leon Solano (Lead Economist, Human Development Program Leader, HECDR). Core contributors include Adea Kryeziu (Social Protection Specialist and chapter 1 lead, SPGE); Maya Sherpa (Senior Economist and chapters 2 and 4 co-lead, HSAED); Rania Atieh (Senior Social Protection Consultant and chapter 2 co-lead and chapter 3 lead, HMNSP); Khalil Wehbi (Human Development Consultant and chapter 5 lead, HMNSP); Di Dong (Senior Health Economist and chapter 4 co-lead), Jyoti Maya Pandey (Senior Social Protection Specialist and chapter 4 co-lead, HSASP); Yi Zhang (Health Economist); Nuoya Wu (Health Consultant); and Thisuri Jinadhi Wanniarachchi (Extended Term Consultant HSASP). Erdem Atas (Economist, ESAC1) provided and validated country data and information at the local level. Shadiya Adam (Board Operations Officer) and Anita Lakshmi Fernando (Program Assistant) provided support throughout the task implementation.

The document also benefited from the overall guidance, advice and insights from Lynne D. Sherburne-Benz (Regional Director, HSADR), Faris H. Hadad-Zervos (Country Director, SACNP), Nicole Klingen (Regional Director, HSADR), Keiko Inoue (Practice Manager, HSAED), Trina S. Haque (Practice Manager, HAWH3), Stefano Paternostro (Adviser, HSADR) and Chiyo Kanda (Country Manager, SACSL).

Peer review contributions which greatly enriched the report were provided by Pablo Ariel Acosta (Lead Economist, HSPGE), Hebatalla Elgazzar (Program Leader, HAWDR), Igor Kheyfets (Senior Economist, HLCED), Thomas Walker (Lead Economist, Program Leader, HEADR), Janssen Edelweiss Nunes Teixeira (Senior Education Specialist, HEAED), and Kari Hurt (Senior Operations Officer - Health, HEAHN).

Additional valuable comments and contributions were made by D. H. C. Aturupane (Lead Economist, HASED), German Daniel Caruso (Senior Economist, HHCDR), Michael Weber (Senior Economist, HHCDR), Emi Suzuki (Demographer, DECID), Ritika Dsouza (Economist, GGHCE), Syedah Aroob Iqbal (Research Analyst, HECED), Amit Jain (Senior Energy Specialist, ISAE1), Jerome Bezzina (Senior Digital Development Specialist, IDD06), Winnie Wang (Senior Transport Specialist, ITRGK), Peter Mousley (Lead Private Sector Specialist, ESAF1), Suhail Kassim (Senior Economist, ESAF1), Amila Indeewari Dahanayake (Economist, ESAF1), Namoos Zaheer (Senior Financial Sector Specialist, ESAF1), Ruijie Cheng (Young Professional, ESAC1), Sonya Sultan (Lead Social Development Specialist, SSIDR), Martin Heger (Senior Environmental Economist, SSAEN).

We would also like to particularly thank the Ministry of Finance for overall guidance and coordination, the Ministry of Education for its leadership on data collection efforts as well as the Maldives Bureau of Statistics and the Maldives Department for National Registration for providing necessary data and related analysis. Finally, the team is indebted to the Ministry of Health, the Ministry of Economic Development, the Ministry of Gender, Family and Social Services, the Ministry of Environment and Technology, and the National Social Protection Agency for their invaluable input and feedback throughout the HCR drafting process.



Abbreviations

ADB	Asian Development Bank
ADPC	Asian Disaster Preparedness Center
BTEC	Business and Technology Education Council
CEDAW	Convention on the Elimination of all Forms of Discrimination Against Women
COVID	Coronavirus disease
DALYs	Disability-Adjusted Life Years
DHS	(Maldives) Demographic and Health Survey
ECD	Early Childhood Development (Program)
ESC	Employment Sector Council
EYS	Expected Years of Schooling
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
FPA	Family Protection Authority
GBV	Gender-Based Violence
GCE	General Certificate of Education
GDP	Gross Domestic Product
GER	Gross Enrollment Ratio
GoM	Government of Maldives
HIES	Household Income and Expenditure Survey
HLOs	Harmonized Learning Outcomes
HCI	Human Capital Index
HCP	Human Capital Project
HRCM	Human Rights Commission of Maldives
HTS	Harmonized Test Scores
IFAD	International Fund for Agricultural Development
IFRC	International Federation of Red Cross and Red Crescent Societies
IGCSE	General Certificate of Secondary Education
IGMH	Indira Gandhi Memorial Hospital
ILO	International Labour Organization
ICT	Information and Communications Technology
ICU	Intensive Care Unit
LAYS	Learning-Adjusted Years of Schooling
MCCPF	Maldives Climate Change Policy Framework
MDG	Millennium Development Goal
MDP	Multidimensional Poverty
MED	Ministry of Economic Development
MEMIS	Maldives Education Management System
MFDA	Maldives Food and Drug Authority
MGFSS	Ministry of Gender, Family and Social Services
MNQF	Maldives National Qualifications Framework
MNSDA	Maldives National Skills Development Authority
MOE	Ministry of Education
MoGFSS	Ministry of Gender, Family and Social Services

MOH	Ministry of Health
MOHF	Maldives Ministry of Health and Family
MPAO	Maldives Pension Administration Office
MQA	Maldives Qualifications Authority
MRPS	Maldives Retirement Pension Scheme
MVR	Maldivian Rufiyaa
NALO	National Assessment of Learning Outcomes
NAR	Net Attendance Ratio
NCDs	Noncommunicable Diseases
NDMP	National Disaster Management Plan
NER	Net Enrollment Rate
NGO	Nongovernmental Organization
NIC	National Integrity Commission
NIEHS	National Institute for Environmental Health Sciences
NSPA	National Social Protection Agency
OCO	Children's Ombudsperson's Office
OOP	Out-Of-Pocket
OOSC	Out-Of-School Children
OPHI	Oxford Poverty and Human Development Initiative
PWD	People With Disability
PEFA	Public Expenditure and Financial Accountability
PER	Public Expenditure Review
PMT	Proxy Means Test
PPG	Public and Publicly Guaranteed
PSIP	Public Sector Investment Program
SAP	(Maldives) Strategic Action Plan
SAR	South Asia Region
SIDS	Small Island Developing States
SME	Small or Medium Organization
SSC	Senior Secondary Certificate
SDG	Sustainable Development Goal
SNAP	Strategic National Action Plan
SRH	Sexual and Reproductive Health
STO	State Trading Organization
STR	Student-Teacher Ratio
TIMSS	Trends in International Mathematics and Science Study
TVET	Technical and Vocational Education and Training
UHCI	Utilization-adjusted Human Capital Index
UMIC	Upper-Middle Income Country
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNCTAD	United Nations Conference on Trade and Development
UNFCCC	United Nations Framework Convention on Climate Change
UN-IGME	UN Inter-agency Group for Child Mortality Estimation
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WAP	Working-Age Population
WDI	World Development Indicators
WFP	World Food Programme
y-o-y	Year-On-Year



Executive Summary

In the decade leading up to the COVID-19 pandemic, Maldives—an upper-middle income country (UMIC) of 515,122¹ people dispersed across 185 islands in 27 atolls in the north-central Indian Ocean²—sustained stable and rapid economic growth, which contributed to poverty reduction in the country. Between 2011 and 2021, Maldives averaged economic growth of 6.45 percent, ranging from a high of 8.6 percent in 2011 to a low of 2.5 percent in 2012. That growth was spurred by the country’s rich and diverse marine ecological system, which in turn facilitated the development of a thriving, high-end tourism sector. As a result, Maldives performs well on poverty outcomes compared to its regional, income, and small-island peers. In 2019, just 3.9 percent of the population lived below the international poverty line for UMICs of US\$6.85/person/day, more than 90 percent of whom were concentrated in the atolls (World Bank 2022d). Following a strong post-COVID-19 recovery, and under continued growth projections, it is estimated that the poverty rate will decrease to 2.1 percent in 2023 (World Bank 2020).

Through a combination of stable economic growth, poverty reduction, and investment in the social sectors, Maldives has significantly improved its human development outcomes.

Between 1995 and 2021, the country’s Human Development Index score increased by more than a third, from 0.555 to 0.747, and its ranking among the 191 countries on the index improved from 97th to 90th. The development of the tourism sector created sizable revenues that were used to support, among other things, the provision of public and social services. Certainly, Maldives has spent generously on social sectors. From 2014–2021, the government spent an average of 42 percent of its annual budget on three social sectors: health (14 percent), social protection (15 percent), and education (13 percent), which together accounted for roughly 14 percent of annual GDP (World Bank 2022d).

However, the economy remains heavily dependent on tourism, making the country highly vulnerable to shocks, with important implications for human development.

1 According to the Maldives 2022 Census, the Maldives has a population of 515,122: 382,751 native residents, and 132,371 foreigners.

2 An atoll is a ring-shaped island, or chain or islands, formed out of coral, with a lagoon enclosed in the middle of the ring.

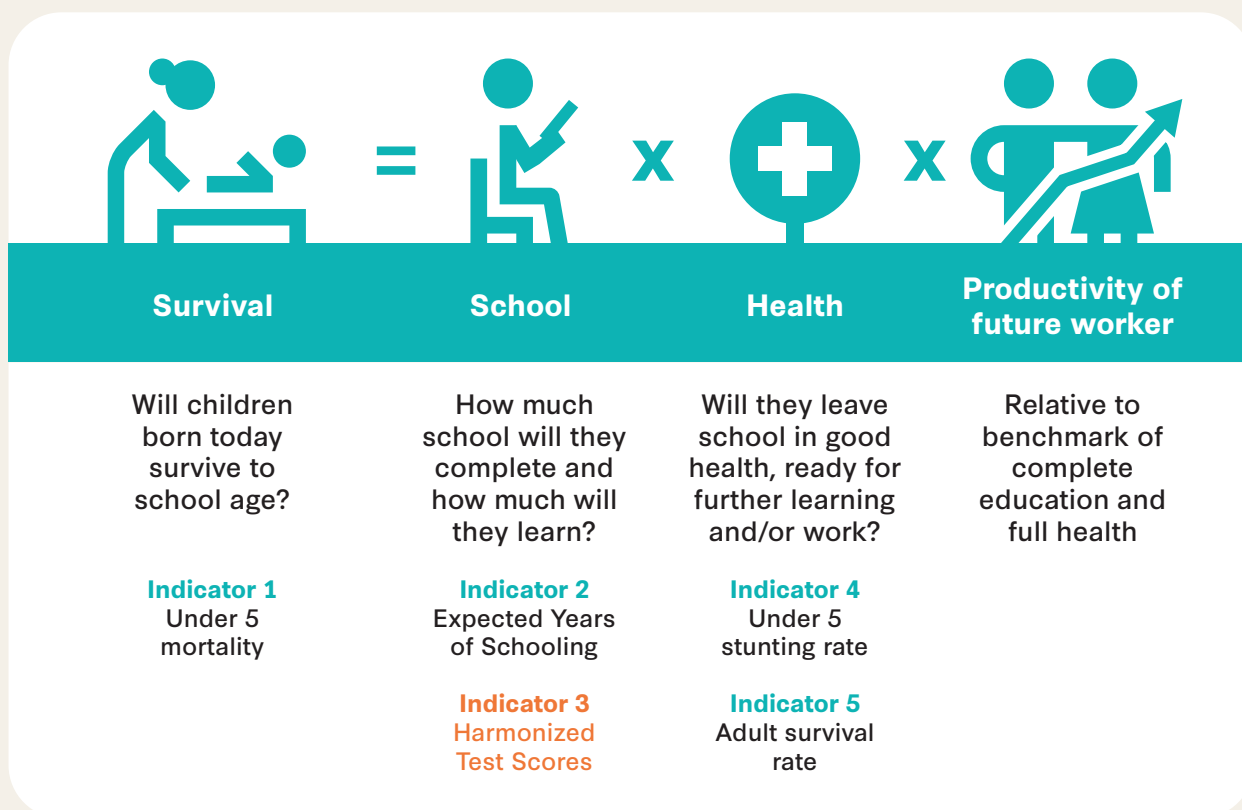
Limited economic diversification renders Maldives highly vulnerable to shocks, as borne out by the COVID-19 pandemic. With tourism and related services accounting for 40 percent of the economy, 80 percent of exports, and half of total revenues (Hadad-Zervos 2022), the pandemic exposed the economy's vulnerability to shocks. Maldives was the hardest-hit economy in South Asia, experiencing an unprecedented decline of 34 percent of its GDP in 2020 (Hadad-Zervos 2022). Nevertheless, bolstered by a rebound in tourism, relatively good public service delivery systems, and crisis preparedness, the economy recovered quickly in 2021. Ultimately, COVID's impact highlighted the vital need for greater economic diversification, which remains a structural challenge for the Maldives because tourism-led growth is accompanied by high levels of public indebtedness, which further constrains the country's fiscal space (World Bank 2022c).

Relatedly, climate change poses a compounding and existential threat to human development progress and the Maldivian economy overall. Climate change threatens health, livelihoods, and education, with vulnerable groups being the most affected. At-risk populations, including migrants, women, persons with disabilities, and children, face systemic barriers and heightened risks due to climate change. Food security remains vulnerable to extreme weather events, with the island's limited storage facilities and potential disruptions in transport. Climate change events affect the education sector through damage to school infrastructure and roads, which limits access to schools and increases dropout rates. Health risks include heat-related illnesses, undernutrition, infectious diseases, air pollution, and food spoilage. Additionally, the

two biggest economic sectors in the country, tourism and fisheries, are highly dependent on a stable and favorable climate and a robust natural environment. They are thus very likely to come under pressure from sea-level rise, temperature extremes, and changes to the consumer decisions and preferences of the global tourism sector, with far-reaching implications for overall human development.

This report is undertaken as a part of the Human Capital Project (HCP), a global initiative of the World Bank Group that aims to increase governments' awareness of the importance of investing in people (World Bank n.d.b). One of the main components of the HCP is a cross-country metric—the Human Capital Index (HCI). The HCI estimates the amount of human capital a child born today can expect to accumulate by the age of 18, thus highlighting how current health and education outcomes shape the work productivity of the next generation. Moreover, given the cumulative nature of human capital, the HCI has clear milestones across the entire human life cycle: at birth, children need to survive; during childhood, they need to be well-nourished; at school age, they must complete all schooling and achieve adequate learning levels; and in adulthood, they need to stay in good health. Finally, the HCI includes a result: a score that ranges from 0 to 1. A country where an average child has virtually no risk of being stunted or dying before age five, receives high-quality education, and becomes a healthy adult, would have an HCI close to 1. Conversely, when the risk of being ill-nourished or prematurely dying is high, access to education is limited, and the quality of learning is low, the HCI would approach zero.

Figure ES1: Human Capital Index (HCI) calculation



Source: Authors' interpretation based on the World Bank Human Capital Project (World Bank n.d.b)

The main objective of this report is to support the Government of the Maldives to calculate its first HCI score, both at the national and subnational levels. Figure ES1 above illustrates how the HCI is measured by means of three components: (a) *survival*—a measure of the likelihood that a child will survive from birth to school age (age 5); (b) *school*—a measure of the quantity and quality of education; and (c) two broad measures of *health*—child stunting rates and adult survival rates. Prior to 2021, Maldives lacked internationally comparable data on learning outcomes, precluding the calculation of the indicator on harmonized test scores (under the school component), and of the

overall HCI score. In February 2023, and with the support of the World Bank, Maldives was able to report the necessary learning outcome data, enabling the calculation of the missing indicator and, consequently, the HCI score at both the national and subnational levels.³

Moreover, this report also calculates the first utilization adjusted HCI (UHCI) score for Maldives at the national and subnational levels, which scales down the HCI by taking into account overall employment rates. The UHCI essentially reveals the existing gaps between accumulated human capital and utilized human capital in the labor market, and by doing so,

3 Because post-COVID data were used for some of the indicators, in particular, quality of education, the World Bank Human Capital Project will release a new score in 2024 that takes into account COVID-19 data considerations and aligns countries' results for better and more realistic comparisons.

prompting countries to better use available skills and experience of workers toward increased labor productivity and economic growth. To complement the HCI and UHCI calculations, the report incorporates a more in-depth analysis of the drivers of, and challenges in, building and utilizing human capital along the life cycle. In addition, the report provides an overview of the country's social sectors and a look at the shocks that could threaten both human capital accumulation and utilization in the country.

Maldives' first national HCI score (0.596) indicates that a Maldivian child born today is expected, on average, to be only 60 percent as productive as he or she could be with complete education and health. In other words, the Maldives is losing 40 percent of its future productivity. Nevertheless, in a global context, Maldives performs relatively well, scoring higher than its regional (HCI 0.48), small-island nation (HCI 0.52) and income-group comparators (HCI 0.56).

Maldives' relatively high HCI score is driven largely by impressive health outcomes. The country shows strong performance on adult survival rates, with a 95 percent probability of an adult surviving to age 60, which is above the average for all comparators. Maldives also does equally well on the probability of children surviving to age 5, with 99 percent of children expected to reach this age. This is well above the average for South Asia and for small island nations, and on par with UMICs, indicating relatively good maternal and child health.

Nevertheless, significant improvements are required for the country to fulfil its full human capital potential, particularly in relation to quality of education, Maldives' most important human capital challenge. A Maldivian born

today can be expected to achieve 12.4 years of education, an average higher than that of South Asia (10.8 years), small island nations (11.4) and upper-middle-income countries (11.8). However, important challenges remain in terms of quality of education, measured by the learning-adjusted years of schooling (LAYS). At the national level, after adjusting for quality of learning, a Maldivian born today can be expected to achieve only 8.17 years of schooling—a loss of 4.32 years. This is greater than UMICs (loss of 4 years of schooling) or small island states (4.1 years) and is on par with South Asia (4.3 years).

Second, and despite high survival rates, the stunting⁴ rate of children under 5 remains relatively high. Only 85 percent of children below 5 are not stunted. This is better than the average for South Asia (69 percent) but below Maldives' other comparators (i.e., UMICs at 87 percent). Stunting, which is linked to poor nutrition, water, and sanitation, is irreversible after the first 1,000 days of life. It is considered the biggest impediment to a child reaching his or her potential and to a country's socioeconomic development. Children who are stunted are at greater risk of illness and death, impaired cognitive development, and poor school performance. Stunted children carry their inhibited physical and cognitive development into adulthood, later translating into lower productivity and earning capacity. Evidence suggests that a reduction in stunting rates of 10 percentage points increases attained adult height by approximately one centimeter and, therefore, increases future productivity by 3.5 percent.

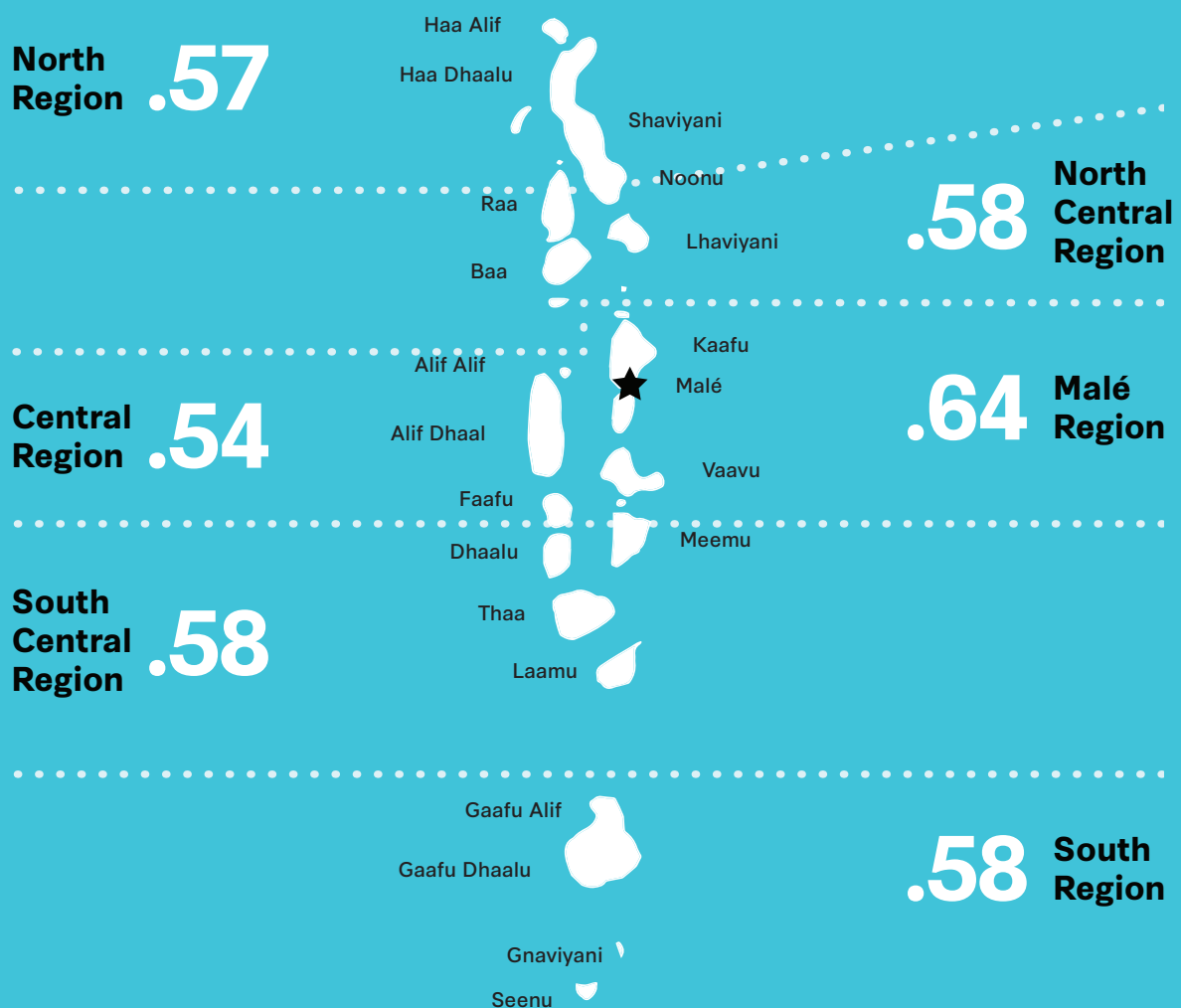
Thirdly, when adjusted for human capital utilization, the Maldives' HCI performance drops significantly, indicating untapped human capital wealth and an opportunity loss of potential national growth. Maldives'

4 Stunting measures the share of children who are unusually small for their age. It is broadly accepted as a proxy for the prenatal, infant, and early childhood health environment, and it summarizes the risks to good health that children are likely to experience in their early years—with important consequences for health and wellbeing in adulthood.

UHCI score is 0.366, compared to its impressive HCI score of 0.596. This means that Maldivian children born today are predicted to be only 37 percent as productive in adulthood as they could have been if they had access to full education and health and they became fully employed adults. In other words, Maldives loses almost 23 percentage points of its potential productivity when Maldivians reach the labor market. At the individual and household levels, underutilization of human capital translates into low productivity, loss of earnings and low household resilience to shocks. At the national level, it translates into forgone economic growth and fiscal imbalances.

Finally, although Maldivian women are predicted to reach working age with marginally higher levels of human capital (HCI 0.6) than men (HCI 0.59), this slight advantage is eroded when employment levels are considered. Indeed, females' UHCI score of 0.28 represents a 32-percentage point drop in their HCI score, compared to males' UHCI score of 0.47, which represents a much smaller drop of 12 percentage points in their HCI score. This suggests that women in the Maldives face significant barriers to their labor market participation, which leaves the Maldives with enormous untapped potential.

Figure ES2: Maldives' regional HCI: an illustrative map



Source: Author's illustration of regional divisions in Maldives using a World Bank image

On the other hand, Maldives’ aggregate national HCI score (0.596) conceals significant regional disparities in human capital accumulation (figure ES2). The subnational HCI calculations reveal that a child born in Malé today is expected to achieve 64 percent of her full potential by age 18, in comparison, for example, to a child born in the Central Region (54 percent of her potential). This means that a child in Malé is expected to be 10 percent more productive by the time he/she reaches 18 years of age than a child born in the Central Region. Malé’s HCI score is also four percentage points above the national score (0.596), practically lifting the national score, while the HCI of all the other regions fall below the national rate. Based on the regional distribution of children ages 0–19, approximately 60 percent of all children in the Maldives are predicted to be less productive by the time they reach 18 than what the national average otherwise predicts.

The high levels of inequality at the regional level are driven primarily by relatively poor education outcomes. Significant regional disparities exist with respect to expected EYS. For example, Children in Malé (EYS of 13.1 years) are predicted to attain two more years of schooling than children in the Central Region (EYS of 11.1 years). Based on empirical literature, whereby an additional year of learning raises earnings by about 8 percent, a child born in Malé today is expected to generate 16 percent greater earnings as a future worker than one born in the Central Region (World Bank 2020b). In addition, the EYS gap between Malé and most other regions widens even further when adjusting for quality of learning. For example, the 0.72 EYS gap between Malé and the South-Central Region increases to 1.3 when

EYS is adjusted for quality of learning. Indeed, it is worth noting that when EYS is adjusted for quality of learning, children born outside Malé are predicted to have an average LAYs that is below that of the national average (8.26).

Second, stunting levels show important regional variations. Most regions have ratios of non-stunted children that are above the national ratio of 84 percent, but the North and the North-Central regions have particularly high stunting rates, weighing down the national ratio. This could be explained by the fact that both regions are home to the highest number of children and the highest concentration of the poor. As a result of their higher stunting rates, and based on empirical evidence, children born in the North and the North-Central Regions can expect to be 1.47 percent and 1.59 percent, respectively, less productive than what the national average would predict (HCI of .596) when they reach the age of 18 (World Bank 2020b).⁵

Additionally, despite their slightly superior HCI scores across the country, females in all six regions fare considerably poorer than males in human capital utilization. Females’ UHCI score in all regions experiences a sharp drop when adjusted to labor utilization. The HCI-UHCI differential ranges from a disconcerting 31.51 percentage points in the South-Central Region to an even greater drop of 38.04 percentage points in the South Region. Females, in short, constitute a grave opportunity loss of national wealth yet to be utilized in the Maldives.

Recognizing the cumulative nature of human capital, the report goes beyond the standard HCI indicators to look more closely

5 “Evidence suggests that a reduction in stunting rates of 10 percentage points increases attained adult height by approximately one centimeter, which increases productivity by $(10.2 \times 0.1 \times 3.4)$ percent, or 3.5 percent” (World Bank, *The Human Capital Index 2020 Update: Human Capital in the Time of COVID-19* (Washington, DC: World Bank, 2020), <http://hdl.handle.net/10986/34432>).

at the drivers of, and challenges to, building human capital along the life cycle. During early childhood (0–5 years), malnutrition in forms other than stunting, such as anemia and wasting, also impact human capital formation in the Maldives. In 2017, almost 15 percent of Maldivian children under 5 were underweight, a rate significantly higher than UMICs (1.8 percent). Access to healthy nutrient-rich foods and knowledge of healthy feeding practices are probable drivers, among others, of malnutrition among Maldivian children. The availability and prices of essential food items are especially affected by the impacts of climate change, the challenges of sea transport, and interruptions in international supply chains. Inequality in access to upper secondary education, in addition to disparities in the quality of education, poses the greatest threat to human capital accumulation among adolescents in the Maldives (ages 13–18), particularly at the subnational level. This later translates into poor labor market prospects, particularly for youth and women. Lastly, for females, social norms and expectations related to female mobility, freedom, roles, and access to sexual and reproductive health (SRH) services affect females’ educational paths and their labor market prospects, impeding their human capital accumulation and limiting its utilization.

In the current fiscally constrained, post-COVID-19 context, Maldives must prioritize high-impact human capital investments that can promote increased equity, resilience, and opportunity, as well as long-term economic growth. Improving human capital accumulation and utilization for all and boosting future productivity require synergistic investments in health, education, and nutrition throughout an individual’s life cycle, supported by resilient delivery systems to support people during crises and to avoid erosion of human capital. Moving forward, and to address the main challenges identified in this report, Maldives should:

(i) address persistent geographic disparities in access to education; (ii) focus on improving the quality of education for all; (iii) tackle the relatively high levels of stunting, with a focus on those regions with the worst outcomes; and (iv) promote better employment outcomes for Maldivian women. At the same time, Maldives ought to: (v) increase the efficiency and effectiveness of social sector spending to enable people to obtain good-quality education, maintain good health, find good jobs, and secure access to comprehensive social protection that enables them to be resilient against shocks of various kinds.

With this in mind, this report is structured as follows: Chapter 1 introduces human capital as the key to long term economic growth and prosperity. Chapter 2 explains the first HCI score calculation for Maldives, with both national and regional findings. Chapter 3 gives a deeper dive into the drivers and barriers to human capital gains that go beyond the standard indicators that constitute the HCI. Chapter 4 provides an overview of the education, health, and social protection sectors, including challenges and opportunities in delivery systems. Chapter 5 reviews the principal climate shocks that impact human capital formation in the Maldives. Chapter 6 concludes by discussing reform priorities and recommendations.

This report is not intended to be an exhaustive assessment of the country’s human development sectors. Forthcoming studies—specifically, a Human Development Public Expenditure Review and a Country Climate Development Report (CCDR)—will dig deeper into some of the issues identified but not discussed in depth in this report, in particular, additional analyses of the expenditures of the human development sectors and the climate-human development nexus.



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Chapter 1

Human Capital as the Key to Long-Term Economic Growth and Prosperity

1.1. Country context

With an estimated population of 515,122⁶ yet a total land area of less than 300 sq. km, the Maldives is a small, densely populated country in South Asia.⁷ It consists of 185 islands formed around 27 atolls; the largest city and capital, Malé, is home to roughly a third of the total population.

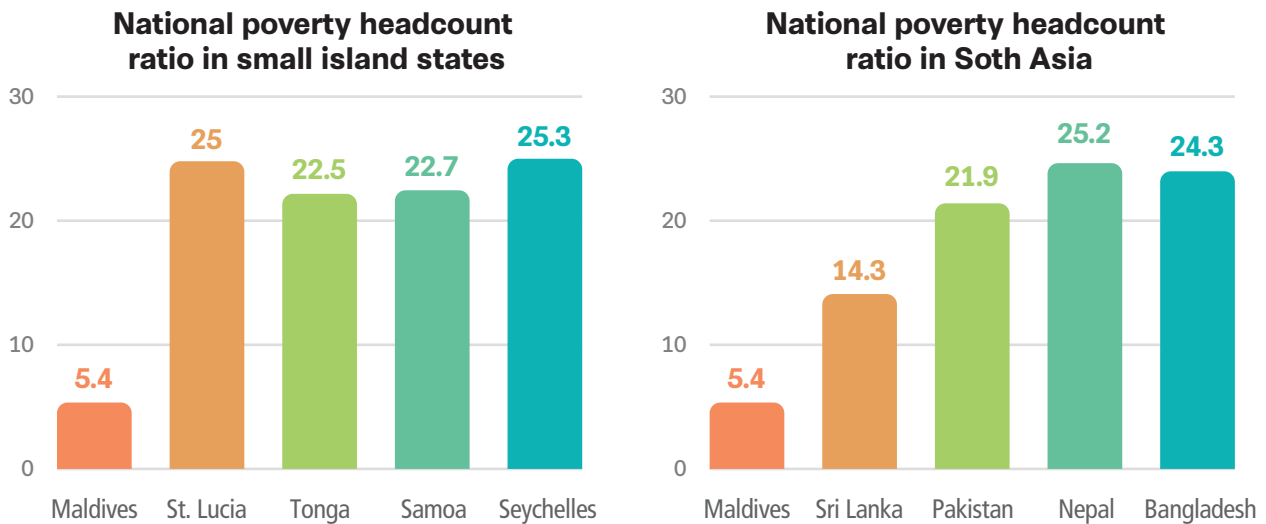
An upper-middle-income country (UMIC), the Maldives has experienced relatively rapid economic growth during the decade leading up to the COVID-19 pandemic, contributing to important but inequitable poverty reduction in the country. Over the past ten years, Maldives averaged economic growth of 6.45 percent per year, ranging from a high 8.6 percent in 2011 to a low of 2.5

percent in 2012. The rich and diverse marine ecological system has enabled the Maldives to develop a thriving high-end tourism sector and spurred economic growth. Tourism accounts for a third of GDP, driving up living standards and contributing to substantial poverty reduction (World Bank 2022d). The Maldives performs well on poverty outcomes compared to its regional, income, and small-island peers (figure 1.1). In 2019, 3.9 percent of the population lived below the international poverty line for UMICs (US\$6.85/person/day), more than 90 percent of them concentrated in the atolls. Driven by the pandemic, the national poverty rate is estimated to have reached as high as 19.8 percent in 2020, but because of the economic rebound after 2021, it is expected to drop back to 3.8 percent in 2023 (World Bank 2022d).

6 According to the Maldives 2022 Census, the Maldives has a population of 515,122: 382,751 native residents, and 132,371 foreigners.

7 Maldives is the eleventh-most densely populated country on the world. World Population Review, *Maldives Population 2023 (Live)*, <https://worldpopulationreview.com/countries/maldives-population>.

Figure 1.1: Maldives poverty rate compared to that of small island nation-states and South Asia comparators



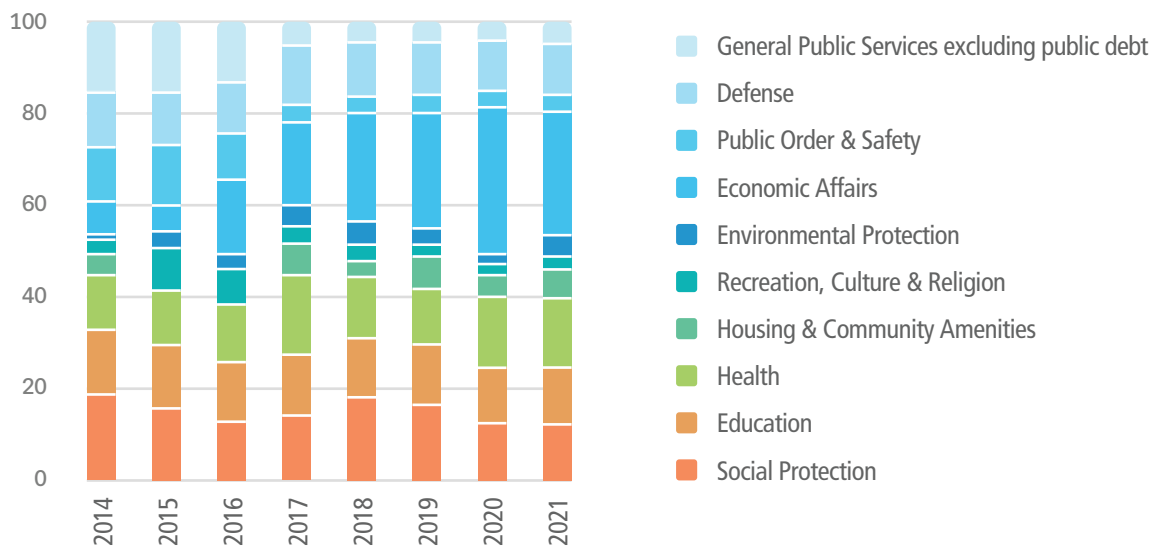
Source: World Bank (2022d)

Note: Data are compiled from official government sources or computed by World Bank staff using national, country-specific poverty lines.

Economic growth, poverty reduction, and investment in the social sectors have helped the Maldives improve its human development outcomes. Between 1995 and 2021, the Maldives’ Human Development Index score increased by more than one-third, from 0.555 to 0.747, and its ranking among the 191 countries on the index improved from 97th to 90th. The development of the tourism sector created sizable revenues that were used to support, among other things, the provision of public and social services. Indeed, Maldives has spent generously on social sectors. From 2014 to 2021, the government spent an average of 42 percent of its annual budget on three social sectors: *health (14 percent), social protection (15 percent), and education (13 percent), together accounting for about 14 percent of annual GDP* (figure 1.2). The health sector made significant strides over the past 40 years by becoming more available across the country, to all levels of society

and at a higher quality. All citizens of the Maldives are covered by the universal health insurance scheme “*Husnuvaa Aasandha*,” introduced in 2012 and fully financed by the government, which has the highest spending on health in the region as a proportion of GDP. Maldives enjoys one of the lowest under-5 mortalities in South Asia and has seen a dramatic decrease in its maternal mortality rate, from 97 deaths per 100,000 live births in 2003 to 53 deaths per 100,000 live births in 2017, all of which has contributed to Maldives having the highest life-expectancy in the region at 79 years (more details in the “Overview of the Health Sector” section of chapter 4). In the education sector, Maldives has achieved near-universal enrollment at primary and lower secondary education levels. This, in turn, has contributed to an important increase in the expected years of schooling from 8.5 years in the mid-1980s to over 12 years in 2019.

Figure 1.2: Share of government spending, by sector

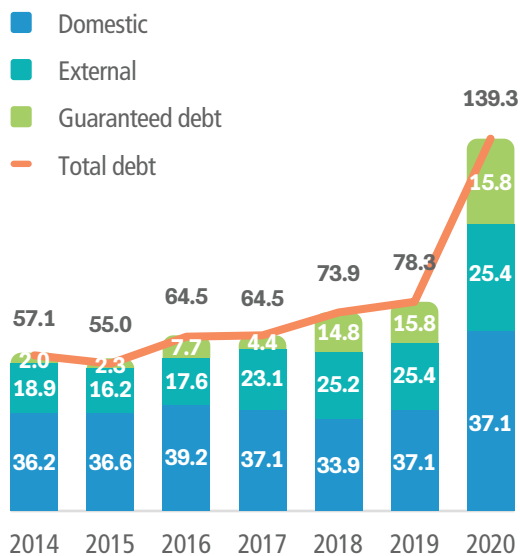


Source: World Bank (2022)

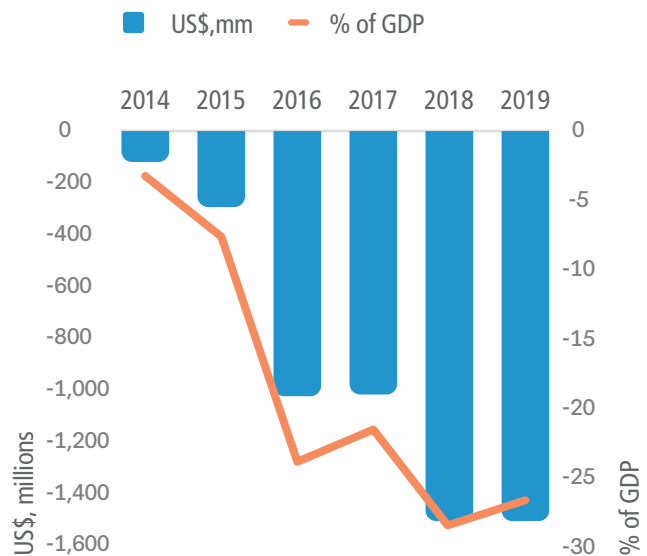
Despite the impressive growth and investments in human development, the economy remains heavily dependent on tourism, with limited economic diversification, rendering Maldives highly vulnerable to external and macroeconomic shocks. Tourism and related services account for 40 percent of the economy, 80 percent of exports, and half of total revenues. The Maldives has been prosperous in revenue mobilization compared to its South Asian peers. Revenues from tourism, including income from resorts, tourism goods and services taxes, green tax, departure charges, and other tourism-related tax and nontax revenues, have financed public spending in education, health, food, and electricity subsidies, as well as a relatively large public sector and a sizable public investment program. Nonetheless, it is important to note that heavy reliance on foreign direct investment (FDI) and foreign labor has resulted in a disconnect between the country's young and expanding working-age population and the economic opportunities that might have been available to them.

This tourism-led growth, however, is accompanied by high levels of indebtedness, further constraining the fiscal space. Increases in recurrent spending on energy subsidies, health, and an ambitious infrastructure program have translated into large fiscal deficits and a growing level of indebtedness. Financing large infrastructure projects through external non-concessional sources and sovereign guarantees has contributed to growing fiscal and debt vulnerabilities. Total public and publicly guaranteed (PPG) debt rose from about 55 percent of GDP in 2015 (or US\$2.3 billion) to 78.4 percent of GDP in 2019 (or US\$4.4 billion). The current account deficit contracted to 26.7 percent of GDP from 28.2 percent of GDP in 2018. The large external deficit continued to be financed by foreign direct investment and external borrowing. FDI inflows were a record 15.9 percent of GDP in 2019, concentrated in the development of tourist resorts. The fiscal deficit also remained elevated, at 6.4 percent of GDP, a 1.7 percentage point increase compared to 2018 (Blum and Yoong 2020).

Figure 1.3: (Left) PPG debt as a percentage of GDP; (right) Current account balance as a percentage of GDP



Source: Ministry of Finance; National Bureau of Statistics; World Bank staff projections.



Source: Maldives Monetary Authority.

As an economy that is also heavily import-dependent, Maldives now faces significant current account and inflationary pressures from the sharp rise in global commodity prices, putting increased pressure on public finances. The government makes generous blanket provision of food and fuel subsidies through SOEs to help contain domestic price increases. To promote development and enhance growth, the Maldives has also scaled up infrastructure investments since 2016, which has boosted construction activity, tourism capacity, productivity, and medium-term growth prospects. Investments in physical and social infrastructure have also contributed toward poverty reduction and better living standards for Maldivians. However, financing these large investments through external non-concessional sources and sovereign guarantees has contributed to growing fiscal and debt vulnerabilities. Although the Maldives

has managed to roll over a significant portion of its foreign debt that was due in 2022, debt servicing risks are expected to remain elevated in the medium term.

The anticipated debt refinancing risks due to upcoming large bullet payments—lump sum payments that are to be made at the end of a loan for the entirety of its outstanding balance—in 2026 emphasize the need to improve fiscal sustainability and reduce debt vulnerabilities. The vital recovery in the tourism sector after COVID-19 should replenish the Sovereign Development Fund to service and repay existing debt. Decreasing the levels of debt and ensuring the replenishment of fiscal buffers will absorb future external shocks, improve market confidence in the Maldives’ fiscal strength, and lower the financing costs of critical investments. These objectives can be

achieved by prioritizing capital spending, with a focus on critical areas that spur growth and facilitate economic transformation. Improving the investment climate and regulatory framework should attract private capital investments while reducing the fiscal burden. Rationalizing fuel subsidies and investing in clean energy will help reduce the country's enormous energy costs and move it toward sustainable fiscal and external balances.

1.2. Human capital for sustainable and inclusive development

Human capital investments—in education, training, and health—play an essential role in promoting development and growth (Flabbi and Gatti 2018). Production is the result of three interacting forces: the quantity and quality of labor, which is affected by human capital; physical capital; and total factor productivity—

the ability to use and combine capital and labor effectively through, among other things, good and effective governance and the provision of well-administered public services. Human capital is therefore a key factor supporting long-term growth and prosperity. The extent to which human capital is equitably distributed across the population also affects the sustainability and inclusiveness of development.

It is well established that greater human capital is associated with higher earnings for individuals and higher economic performance for countries. A total of 64 percent of the world's wealth comes from human capital (World Bank 2021b). The research literature indicates that one additional year of schooling raises earnings by 8 percent (Psacharopoulos and Patrinos 2018). Similarly, a reduction in stunting of 10 percentage points increases adult height by 1 centimeter and adult productivity by



Source: ©Sappasit/Shutterstock

3.5 percent. As highlighted in the 2019 *World Development Report: The Changing Nature of Work*, the concept of human capital refers to the knowledge, skills, health, and resilience that people accumulate over their lives, enabling them to become more productive, flexible, and innovate members of a society (World Bank 2019). Investing in human capital is paramount in today's ever-changing, technology-intensive, and competitive global economy. Fostering human capital requires synergistic investments in health, education, and nutrition throughout an individual's life cycle, supported by appropriate policies and institutions.

1.3. World Bank Human Capital Project (HCP)

The World Bank Human Capital Project (HCP), launched in 2018, calls attention to the importance of addressing the “incentive” dimension of investing in human capital. The HCP is a program of advocacy, measurement, and analytical work aimed at creating incentives and policy guidance for more and better investment to accelerate human capital development around the world (World Bank 2018). One of the main components⁸ of the HCP is a cross-country metric—the HCI—designed to measure and forecast a country's human capital. It aims to offer a sharper measure of the components of human capital to enable governments to design focused policies that support human capital development.

The HCI is a measure of the productivity of future generations of workers. It estimates the amount of human capital that a child born

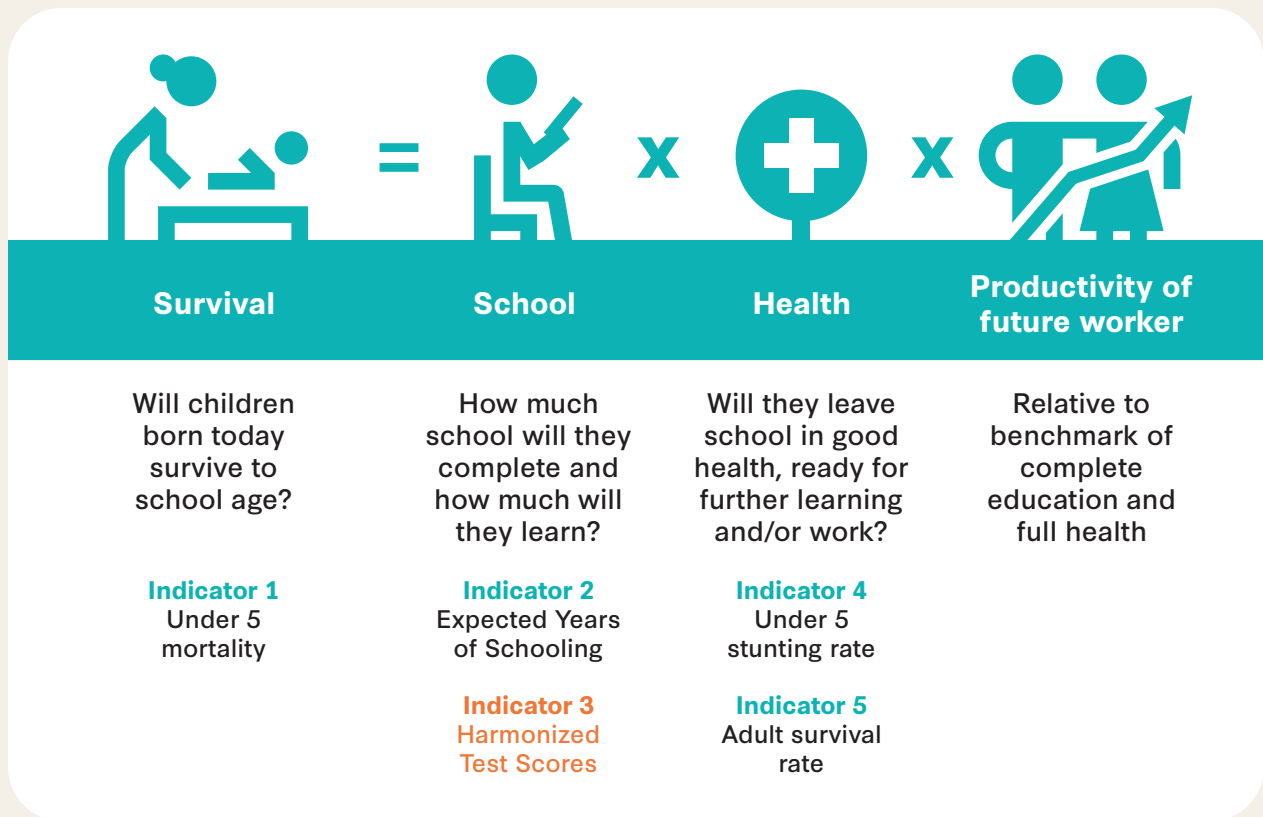
today can expect to attain by their 18th birthday, assuming current health and education conditions prevail. Countries are using this benchmark to assess how much income they forego because of human capital gaps, and how much faster they can turn these losses into gains if they act now. The index measures human capital at key stages over the life cycle of an individual from birth to adulthood, using three components: (a) survival—a measure of whether children survive from birth to school age (age 5); (b) school—a measure of quantity and quality of education; and (c) two broad measures of health—child stunting rates and adult survival rates (see figure 1.4 below for details about the construction of the HCI). The HCI is currently available for 174 World Bank member states (Blum and Yoong 2020). This Human Capital Review will add the first HCI calculation for the Maldives.

This report marks the first calculation of the HCI score for the Maldives. Before 2021, the lack of internationally comparable, harmonized learning outcome data for Maldives precluded the calculation of the indicator on Schooling and the overall HCI. In 2021, the Maldives National Assessment of Learning Outcomes (NALO) for Grade 4 Math included adequate Trends in International Mathematics and Science Study (TIMSS) items, which allowed for the calculation of the harmonized test scores (HTS). The HTS is an essential indicator for calculating the second HCI component, schooling (see figure below). The TIMSS data⁹ were made available to the World Bank team in February 2023, leading to the first HCI calculation for the Maldives.

8 The other two components of the Human Capital Project are (i) a program of measurement and research to inform policy action, and (ii) a program of support for country strategies to accelerate investment in human capital.

9 Data collected through the World Bank's Learning Advancement and Measurement Project (LAMP) and financed by the Global Partnership for Education.

Figure 1.4: HCI Calculation; World Bank Human Capital Project



Source: Authors' interpretation based on the World Bank HCP



Source: ©Hussain Shafiq/Shutterstock

Chapter 2

Calculating the First HCI Score for the Maldives at the National and Subnational Levels

Chapter 2: Key Findings

- A child born in Maldives today is expected to achieve 59.6 percent of his or her full potential by age 18, given the current state of health and education in the country.
- Maldives' national HCI performance is above its regional, small island state, and same-income group comparators, largely due to the country's impressive performance on survival to age 5 and age 65.
- To fulfill its full potential, Maldives has important national human capital challenges to address, particularly in terms of quality of education.
- Indeed, while a Maldivian born today can be expected to achieve 12.4 years of education, after adjusting for quality of learning, he or she can be expected to achieve only 8.17 years of schooling—a loss of 4.32 years. This loss is greater than UMICs (4 years) or small island states (4.1 years) and is on par with South Asia (4.3 years).
- Maldives also needs to close the gap on stunting rates. Only 85 percent of children below 5 are not stunted in the country. While this is better than the average rate for South Asia (69 percent), it is below the average rate for UMICs (87 percent).

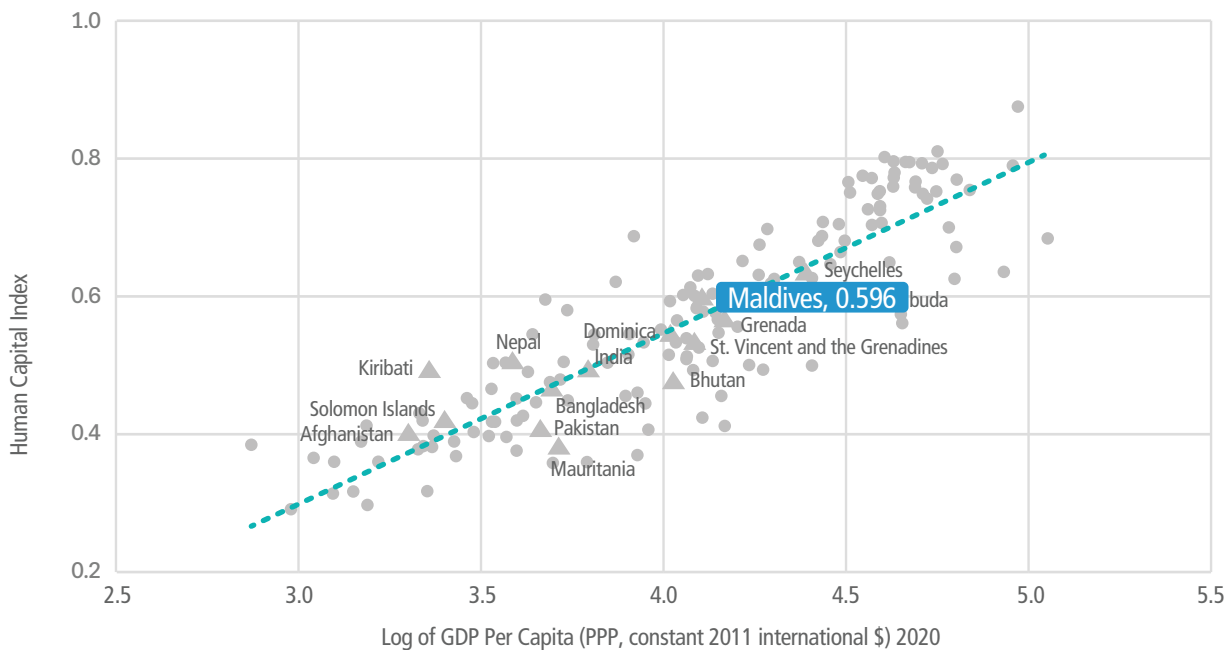
- Maldives' utilization adjusted HCI (UHCI), which scales down the HCI by taking into account overall employment rates, reveals untapped human capital wealth and an opportunity loss of potential national growth (UHCI for Maldives is 0.366, down from an HCI of 0.596). This is primarily driven by low employment rates among women (UHCI for men is 0.601 vs. 0.277 for women).
- The relatively impressive national HCI performance also masks significant disparities at the subnational level that warrant attention. For example, according to subnational HCI scores, a child born in Malé today is expected to achieve 64 percent of her full potential by age 18, compared to one born in the Central Region, who is expected to achieve only 54 percent of her full potential by age 18.
- Based on the regional distribution of child population, some 60 percent of Maldivian children are not expected to realize their full potential, contrary to the prediction of the national HCI.
- The high levels of inequality at the regional level are driven primarily by relatively poor education outcomes. For example, Children in Malé are predicted to attain two more years of schooling than children in the Central Region (13.1 vs. 11.1 years respectively). This gap widens further when taking into account quality of education.
- Based on the two-year differential in expected years of schooling between Malé and the Central Region, a child born in Malé today is expected to generate 16 percent greater earnings than one born in the Central Region.
- Stunting rates are high in all six regions in Maldives, but regional variations are observed with a high rate of non-stunted children of 88.6 percent in the Central Region, to a low rate of non-stunted children of 80.2 percent in the North-Central Region.
- All regional HCIs drop sharply when adjusted for labor utilization. Malé's impressive HCI score of 0.64, for example, drops to 0.41 when adjusted for labor utilization.
- This is largely due to low female employment rates across all regions. Females' HCI in all regions experience a sharp drop when adjusted to labor utilization with an HCI-UHCI differential that ranges from a troubling 31.51 percentage points in the South-Central Region to an even larger HCI-UHCI differential of 38.04 percentage points in the South Region.
- Regional variations in UHCIs are also observed with Malé leading the nation, and all other regions falling below the national UHCI average by 1 to 6 percentage points.

2.1. Maldives' HCI performance in the global context

The Maldives performs moderately well on the HCI score, but significant improvements are needed to fulfil the country's full human capital potential. Maldives' HCI score stands at 59.6 percent, which implies that a child born today in the Maldives will achieve only 59.6 percent of his/her full potential by age 18, given the current state of health and

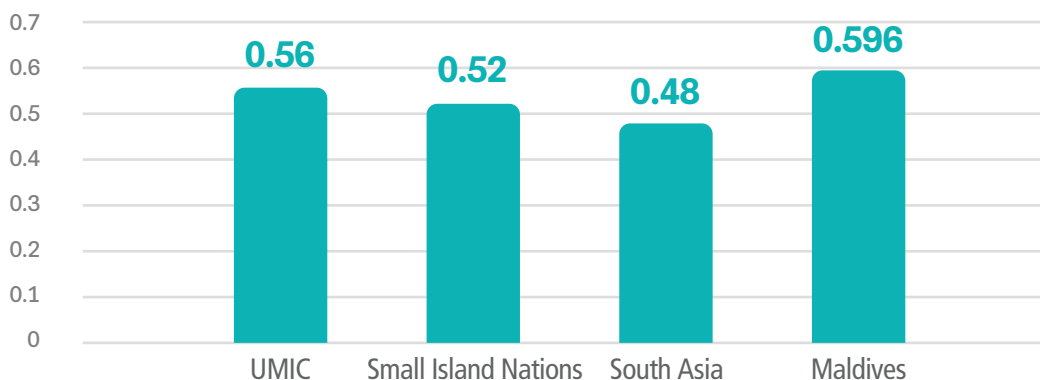
education in the country. In other words, around 40 percent of Maldives potential human capital will not be fulfilled. Although the country's performance is encouraging relative to its peers and comparator countries (figure 2.1 below), the national average masks significant regional variation, discussed in detail in the following section.

Figure 2.1: Comparison HCI scores



Source: World Bank team's calculations for Maldives; World Bank (2022c) for the HCI of other countries; World Bank open data for GDP per capita

Figure 2.2: Benchmarking Maldives' HCI performance



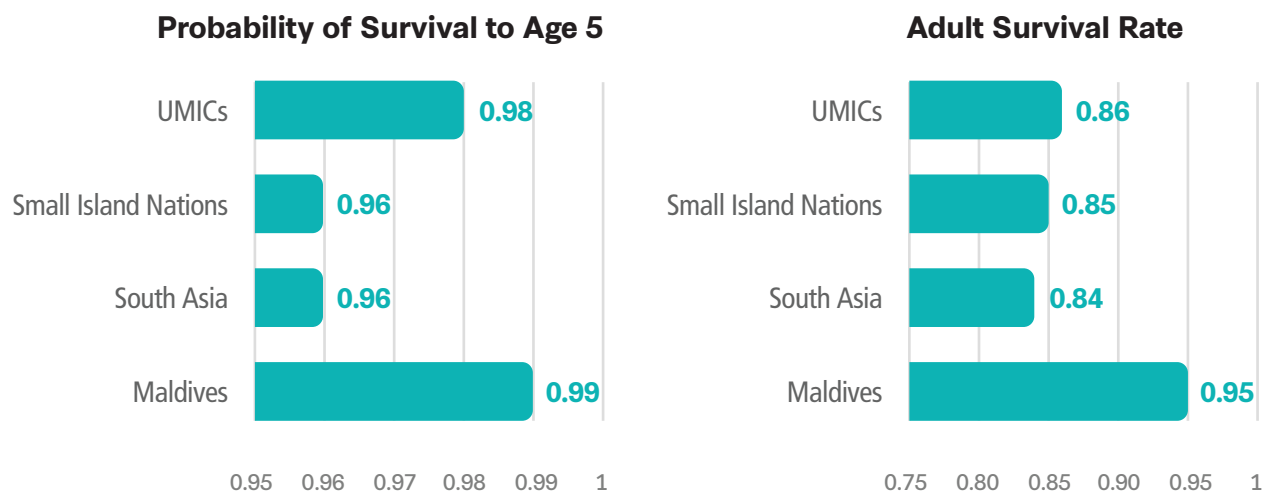
Source: World Bank team's calculations for Maldives; World Bank (2022c) for the comparators

Compared to the region, small island states, and its income comparator group, the performance of the Maldives is encouraging across the HCI indicators, with impressive health outcomes driving up the HCI score, although the stunting indicator still has room for improvement.

In the area of adult survival rates, Maldives performs very well compared to all its comparators, with a notably high 95 percent probability of an adult surviving to age 60. This is well above its comparators and above the average for UMICs (86 percent). Empirical evidence indicates that health improvements that raise adult survival rates by 10 percentage points are associated with a 6.5 percent improvement in worker productivity (Blum and Yoong 2020). The Maldives does equally well on the probability of children surviving to age 5—99 percent—performance well above that of its comparators and on par with UMICs, indicating relatively good maternal and child health. Nonetheless, within the

health component of the HCI, the stunting of children under 5 is still relatively high. Only 85 percent of children below age 5 are not stunted, although this is better than the average for the South Asia region (69 percent) but somewhat behind its income comparator (UMICs: 87 percent). Stunting—linked to poor nutrition, and poor water and sanitation—is irreversible after the first 1,000 days of life. It is considered the biggest impediment to children reaching their potential, and to the country’s socioeconomic development. Stunted children are at greater risk of illness and death, impaired cognitive development, and poor school performance. They carry their inhibited physical and cognitive development into adulthood, which later translates into lower productivity and earning capacity. Evidence suggests that a reduction in stunting rates of 10 percentage points increases attained adult height by approximately one centimeter and raises future productivity by 3.5 percent (Blum and Yoong 2020).

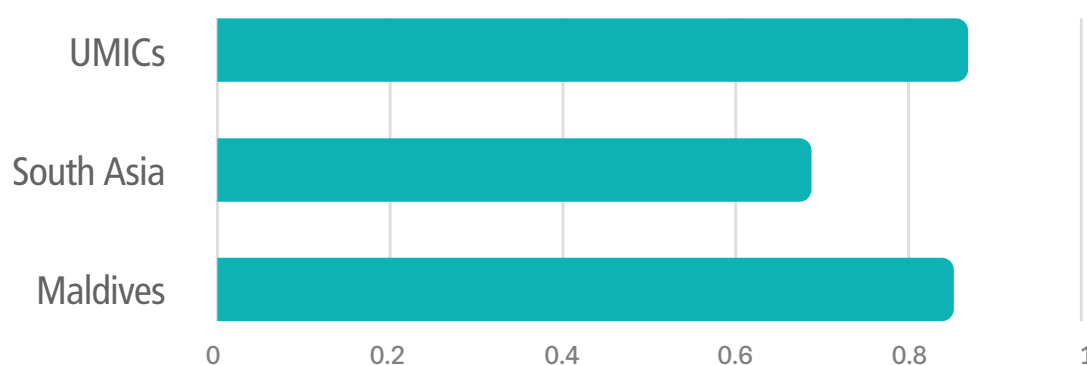
Figure 2.3: Health components of HCI



Source: World Bank team’s calculation for Maldives, World Bank (2020) for comparators



Figure 2.4: Maldives' stunting rate compared to South Asia Region and UMICs



Source: World Bank team's calculation for Maldives, World Bank 2020c for comparators

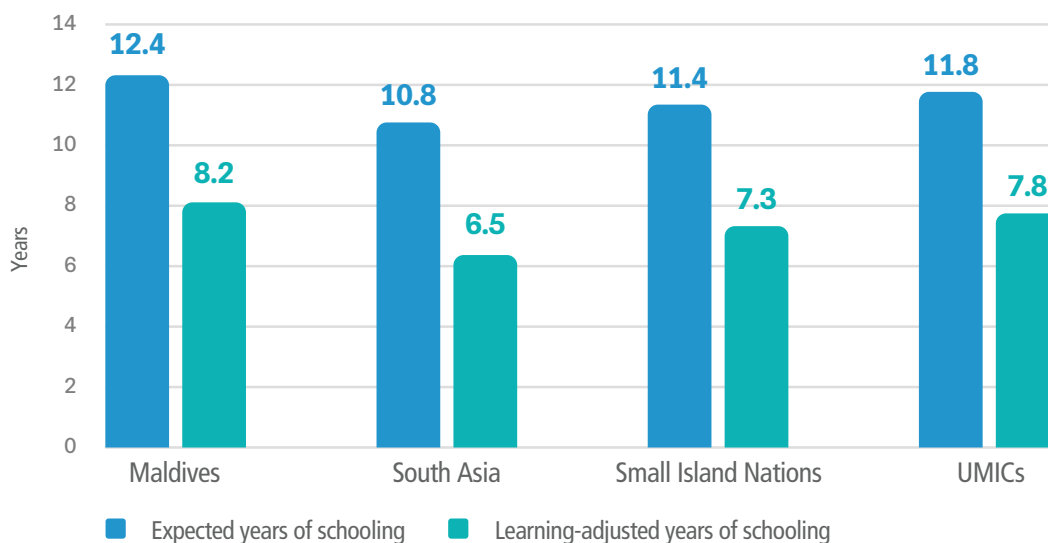
The Maldives also fares relatively well in access to education at the national level (figure 2.5). For example, a Maldivian born today can be expected to attain 12.4 years of education, an average higher than that of South Asia (10.8 years), small-island nations (11.4), and UMICs (11.8).

However, the quality of education—as measured by learning-adjusted years of schooling (LAYS)¹⁰—negatively affects overall

education performance as measured by the HCI score because the country exhibits subpar performance when benchmarked against relevant comparators. At the national level, adjusting for quality of learning, the expected years of schooling decreases from 12.4 years to 8.17 years; a loss of 4.32 years of schooling, which is substantial and greater than that of UMICs (loss of 4 years of schooling) or small-island states (4.1 years), and at par with the South Asia region (4.3 years).

¹⁰ The measures of the quantity and quality of education are combined into quality-adjusted school years using the “learning-adjusted years of school” conversion metric proposed in the 2018 *World Development Report*. LAYS are obtained by multiplying expected years of schooling by the ratio of TIMSS test scores to 625.

Figure 2.5: Education Components of HCI



Source: World Bank team’s calculations for Maldives, World Bank 2022 for comparators

There is only a marginal gender difference in the overall HCI score, in favor of women (table 2.1).

The HCI score for women is 0.60 compared to 0.59 for men. Although the probability of survival to age 5 is similar for both males and females at 0.99, women slightly outperform men on most other

indicators, with the exception of harmonized test scores. The gender difference in expected years of schooling is about 0.3 years in favor of women, whereas the gender difference in the adult survival rate and in the rate of non-stunted children under 5 is, in each case, 2 percent in favor of women.

Table 2.1: Gender-disaggregated HCI

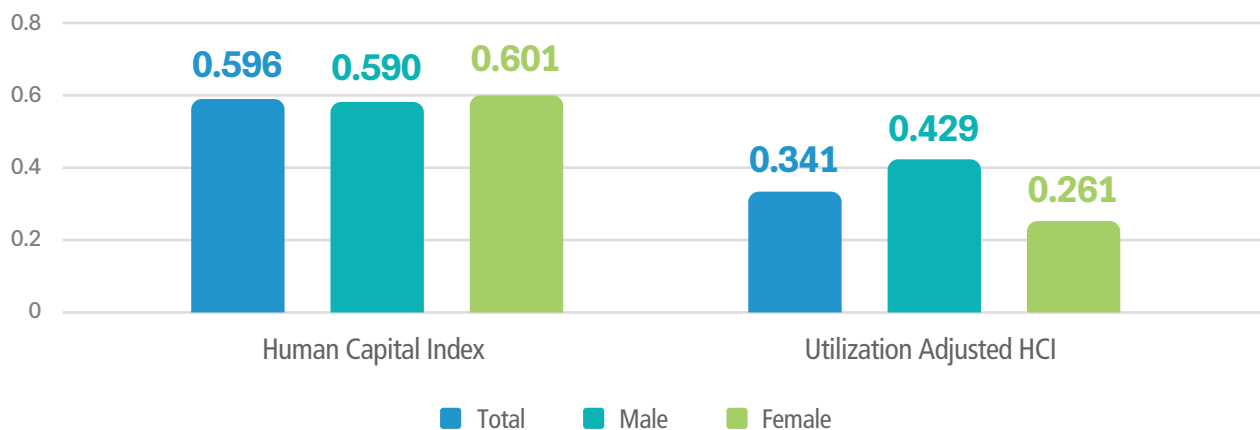
Components	Males	Females	Overall
HCI Component 1: Survival			
Probability of Survival to Age 5	0.99	0.99	0.99
HCI Component 1: School			
Expected years of schooling	12.2	12.5	12.4
Harmonized test scores	415	408.6	411.9
HCI Component 3: Health			
Adult survival rate	0.94	0.96	0.95
Fraction of children under 5 not stunted	0.84	0.86	0.85
Human Capital Index (HCI)	0.59	0.601	0.596

Source: World Bank team’s calculation

Adjusting the Maldives’ human capital performance to labor force utilization results in a significant drop in the country’s rather impressive HCI score (figure 2.6), indicating the need to examine labor market conditions to address the drivers of low human capital utilization rates. The HCI shows a sharp decline when adjusted for labor force utilization. Indeed, the utilization-adjusted Human Capital Index (UHCI)¹¹

for Maldives is 0.366, down from its HCI of 0.596 (Maldives Bureau of Statistics 2019). This suggests that more than 63 percent of Maldivians’ potential human capital is unrealized due to gaps in access to quality education, health, and employment. In other words, the UHCI indicates that a Maldivian born today can be expected to achieve only 37 percent of his/her full potential productivity by age 18.

Figure 2.6: Comparing HCI and UHCI, disaggregated by gender



Source: World Bank Staff calculation

Significant gender differences are observed in the UHCI, driven by the gender gap in employment rates. The UHCI for females is 0.277 (versus 0.469 for males), down from an HCI for females of 0.601. This means that, when employment levels are factored in, female Maldivians lose more than 20 percent more in human capital potential than men (females

lose 0.324 and males lose 0.121). Indeed, in 2019, 79.6 percent of working-age men were employed, compared to only 46.1 percent for women (Maldives Bureau of Statistics 2019). Despite superior human capital accumulation, Maldivian women fare poorer in the labor market as evidenced in labor market outcomes. This is explored in the next chapter.

11 The Utilization-Adjusted Human Capital Index (UHCI) adjusts the HCI to take account of the labor-market’s underutilization of human capital, based on the fraction of the working-age population who are employed or are under-employed—that is, in jobs where they may be better able to use their skills and abilities to increase their productivity (“better employment”).

2.2. Maldives' HCI scores at the subnational level

The section above established that a Maldivian child today, due to quality of education, is expected to achieve only approximately 60 percent of his or her potential by age 18. In this section, we look at subnational HCIs to better understand whether human capital potential is distributed evenly across the country, and whether children throughout the Maldives are enjoying the same opportunities to develop their talents optimally, given the standard health and education conditions in their country.

The calculation of the Maldives' regional HCI is based on the country's division into six distinct regions. The decision to follow a regional approach in calculating the subnational HCI, as opposed to an atoll-level representation, is aligned with the government's objectives to develop regional hubs, with regional service provision boosting local opportunities outside

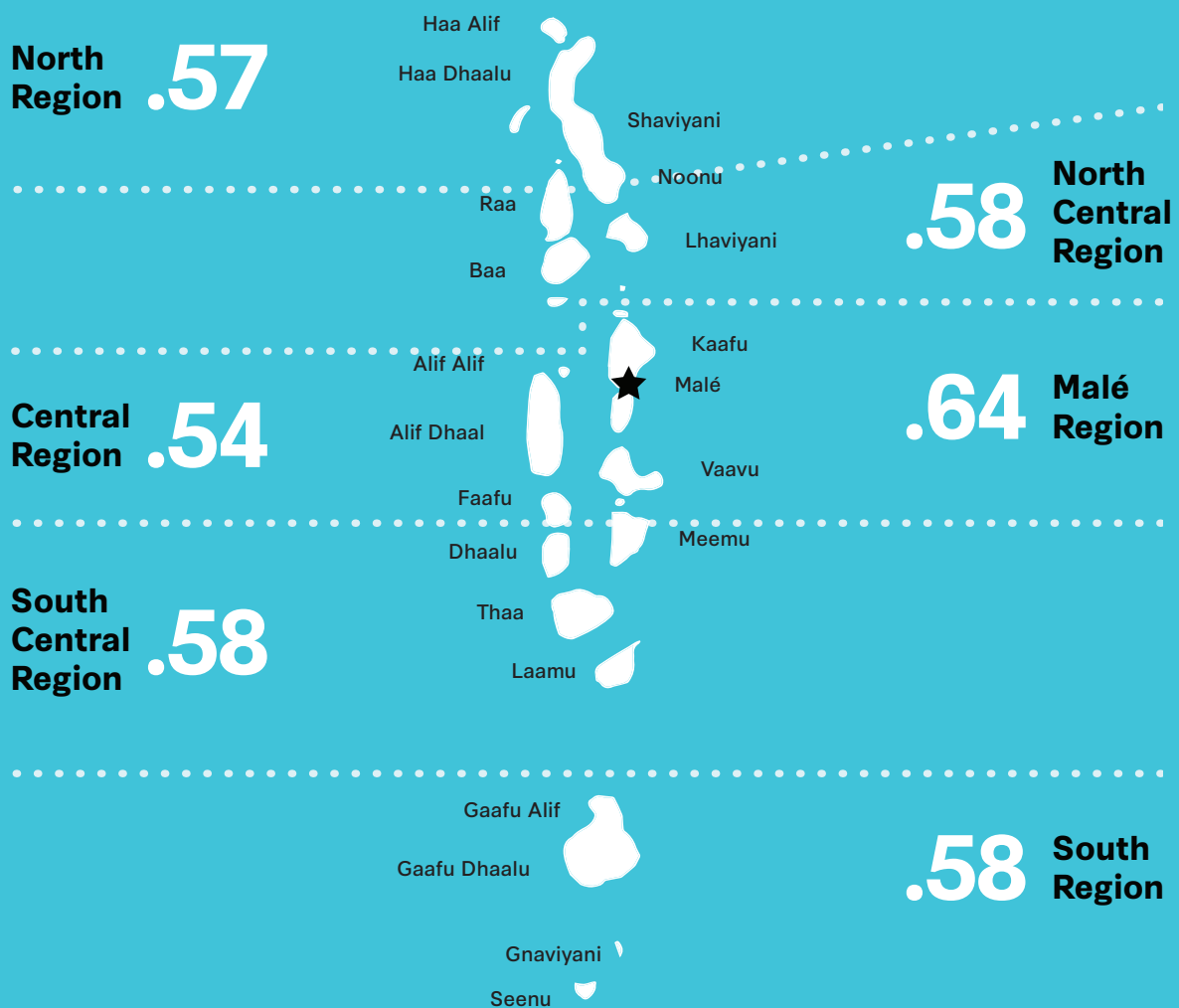
the capital region. Additionally, given the small size of the population, especially at the atoll level, regional-level representation allows for more statistical accuracy because it reduces the margin of error. The six regions are:¹²

- Malé region—Malé, Villimalé and Hulhumale
- North region—Haa Alif (HA), Haa Dhaal (H. Dh) and Shaviyani (Sh)
- North-Central region—Noonu (N), Raa (R), Baa (B) and Lhaviyani (Lh)
- Central region—Kaafu (K), Alif Alif (AA), Alif Dhaal (A Dh) and Vaavu (V)
- South-Central region—Meemu (M), Faafu (F), Dhaalu (Dh), Thaa (Th) and Laamu (L)
- South region—Gaafu Alif (Ga), Gaafu Dhaal (GDh), Gnaviyani (Gn) and Seenu (S)



12 This regional division and map are used by the Maldives Bureau of Statistics to calculate multidimensional poverty. They have also been used by successive Maldives Demographic and Health Surveys, most recently the 2016-17 survey.

Figure 2.7: Maldives HCI across regions

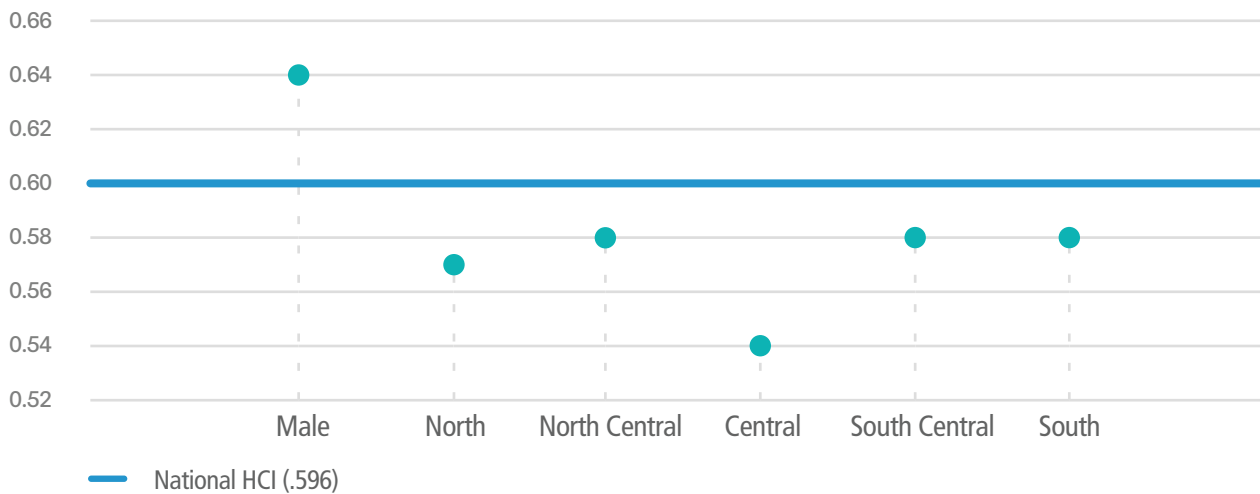


Source: World Bank staff calculation.

Although the national HCI score of 59.6 is impressive in relation to regional and income-group comparators, the score masks significant regional disparities, with Malé being a clear outlier. Based on the calculation of regional HCIs in the Maldives, a child born in Malé today is expected to realize 64 percent of his/her potential by age 18, in comparison to a child born in the Central Region who is expected

to realize only 54 percent of her potential (figure 2.8). This means a child in Malé will be 10 percent more productive than one in the Central Region by the time they turn 18. Additionally, compared to the national HCI, Malé leads the nation with four percentage points over; all other regions trail behind with a range between 2 to 6 percentage points.

Figure 2.8: Subnational HCI scores compared to the national HCI



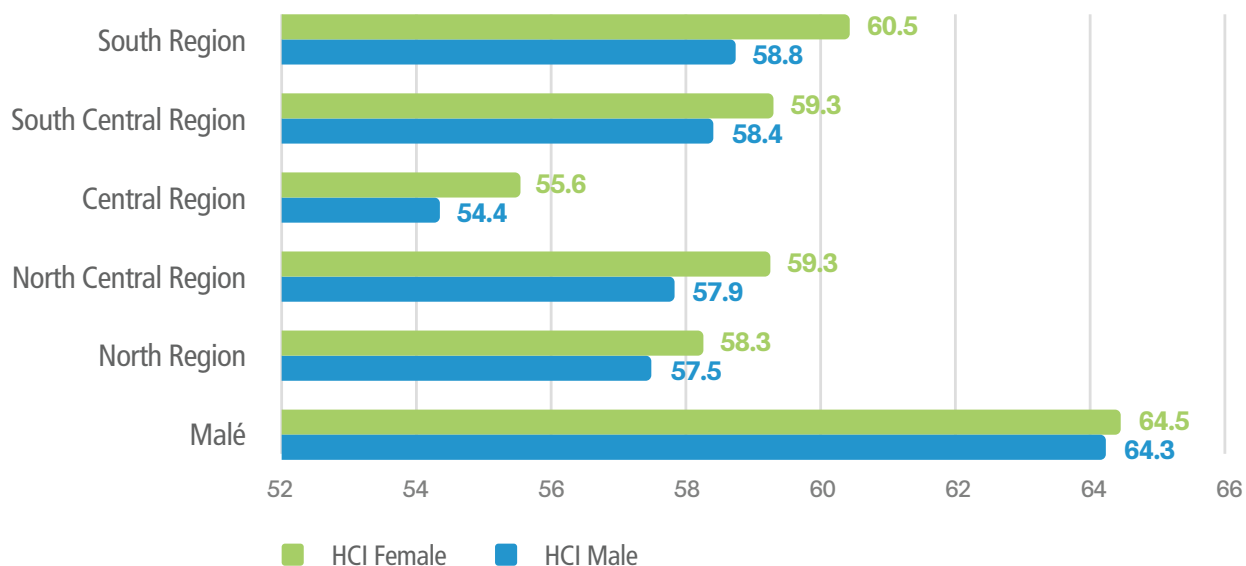
Source: World Bank staff calculations

As with the national trend, and across all regions in the Maldives, females have a slight advantage over males in human capital accumulation. The prominent observation in the Maldives, however, is that although the gender-disaggregated HCI scores in the Malé Region are very close to each other—with a 0.2 percentage point difference to the advantage of females—by contrast, the gender-disaggregated HCI scores in the remaining regions have larger variances that are to the advantage of females, ranging from a low of 0.8 percentage points in

the North Region to a high of 1.7 percentage points in the South Region (figure 2.9). This suggests that males at the subnational level are at a disadvantage in accumulating human capital, with those in the Central Region scoring the lowest HCI nationally, at 54.4. Although females have a slight advantage over males in human capital accumulation in most countries, as predicted by their human capital scores, the relatively large gender gap in human capital accumulation at the regional level warrants further investigation of the underlying drivers.



Figure 2.9: HCIs across gender and regions



Source: World Bank staff calculations

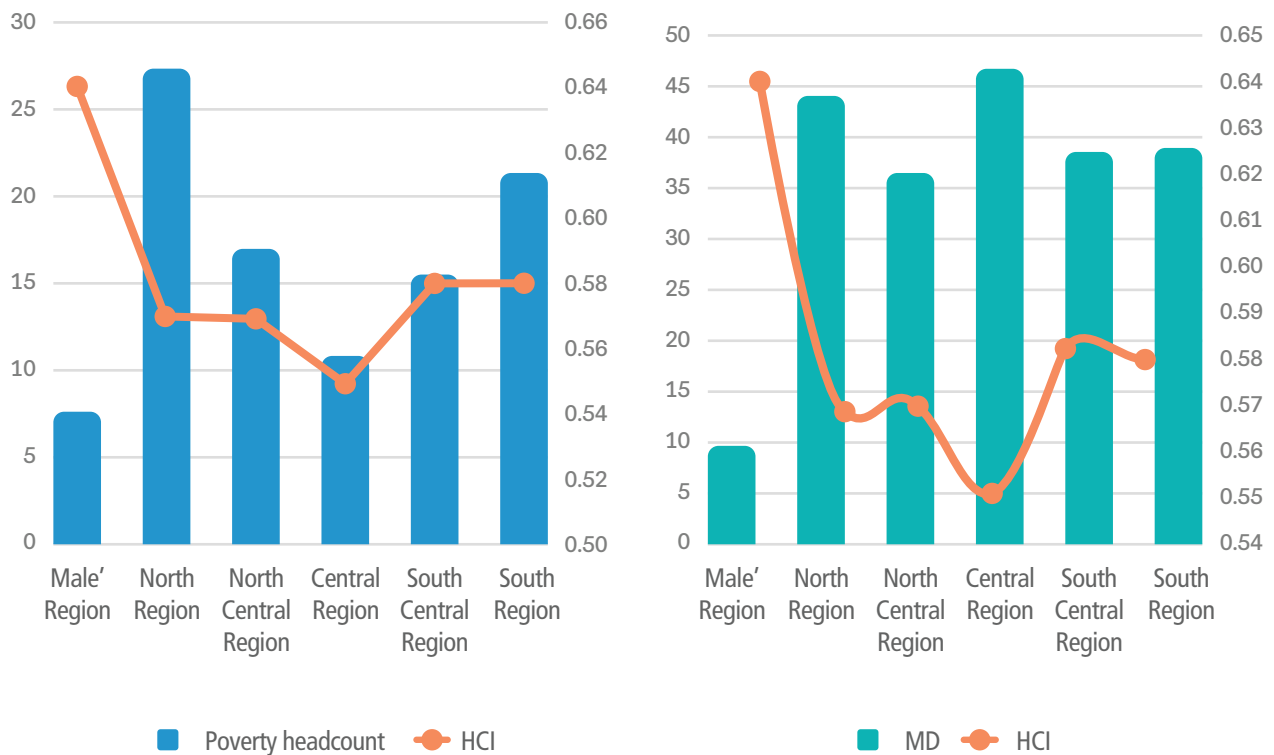
Notes: National stunting rates for males and females, from the 2016–17 Maldives Demographic and Health Survey (DHS), are used for the subnational level because subnational data were not available. Similarly, national under-5 mortality rates for males and females from the UN Inter-agency Group for Child Mortality Estimation (UN IGME) are used because gender-disaggregated subnational rates were not available.

Generally, regional HCI scores around the world show a negative correlation with poverty levels, and Maldives is no exception. More education and better health, as measured by the HCI are, not surprisingly, linked to higher welfare levels. The subnational HCI scores mimic the Maldives poverty map (figure 2.10, left panel). Yet despite low poverty rates in the Maldives, the country remains unequal. The poverty rate, as measured by the international poverty line for UMICs (US\$5.50 PPP per person per day), is 1.7 percent, with the entire poor population concentrated in regions other than the capital Malé (World Bank 2022d). At the national poverty line—71.4 Maldivian rufiyaa (MVR) or US\$4.6 per person per day—the poverty rate is 5.4 percent. About 10 percent of Maldivians in the atolls are poor, compared to less than 1 percent of individuals in Malé (World Bank 2022d).

The regional HCI findings are also aligned with the regional map of Maldives’ multidimensional poverty. According to the Maldives multidimensional poverty (MDP) measurement in 2016/17, 28 percent of the population was multidimensionally poor.¹³ Ten percent of Malé’s population are multidimensionally poor, compared to 40 percent of those in the regions (figure 2.10, right panel). Malé and the Central Region are at opposite ends of the multidimensional poverty headcount rates, with Malé having the lowest multidimensional poverty headcount rate, at 9.6 percent, and the Central Region having the highest, at 46.7 percent.

13 The indicators include health (underweight, obesity, access to health), education and information (years of schooling, access to internet), and living standards (safe drinking water, toilet/sewage, overcrowding).

Figure 2.10: Regional HCIs and regional MDP headcount (left panel), and regional HCIs and regional poverty headcount (right panel)



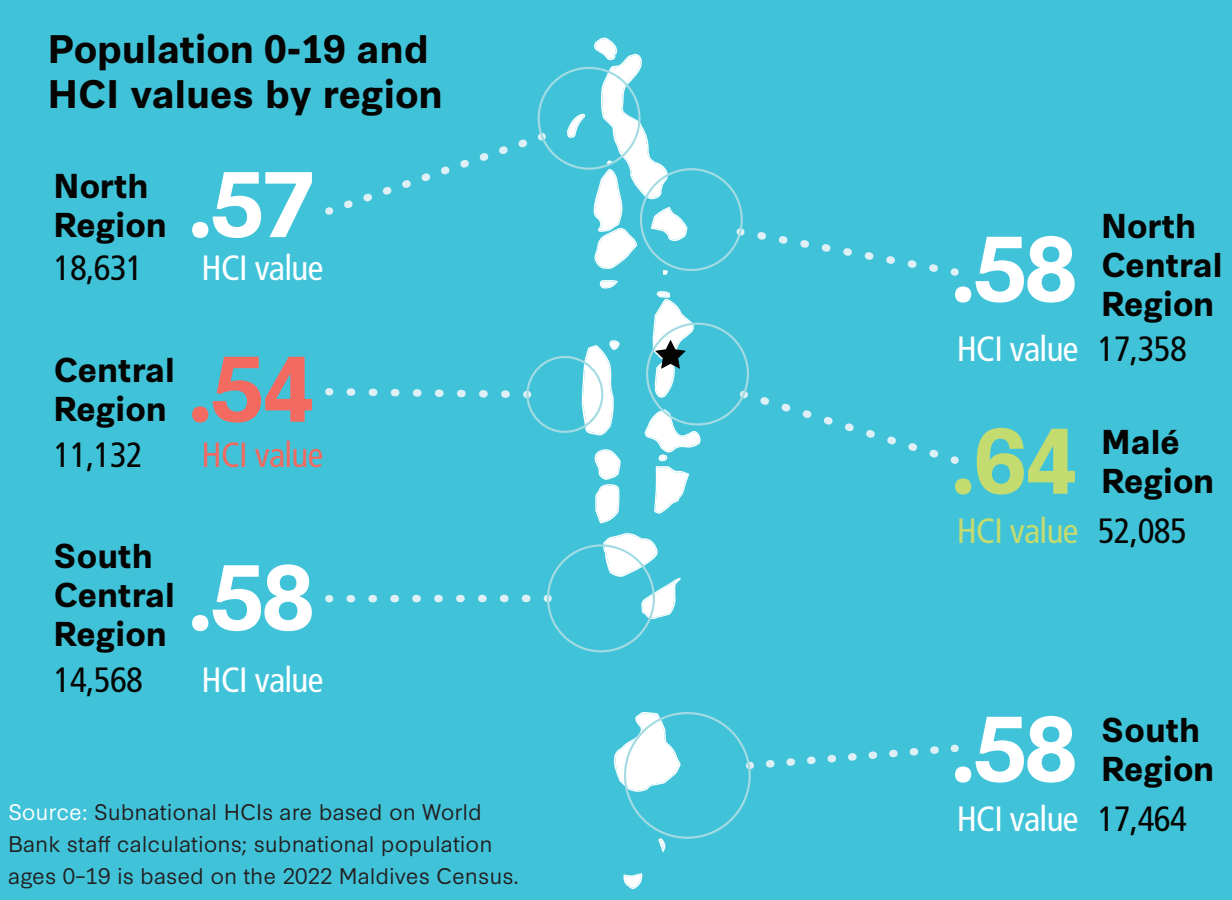
Source: UNICEF (2020) (left panel); World Bank (2022) (right panel)

Considering the population distribution of the Maldives, particularly the 0-19 age group, the regional HCI scores suggest that the majority of children will not realize their full potential, in contrast to what the national HCI score predicts (figure 2.11). The HCI's predictive capacity makes it a powerful tool for assessing the returns of current human capital investments in future productivity and growth. Based on the population distribution of 2022,¹⁴

regional HCIs suggest that around 60 percent of children in the Maldives will not realize their human capital potential and future productive capacity, in contrast to what the national score of 0.596 would predict. As such, the future productive capacity of children born in the North, North-Central, Central, South-Central and South Regions is significantly less than that of children born in Malé, according to the subnational HCIs.

14 According to the provisional results of the 2022 Maldives Census, there are 80,251 individuals in the 0-19 age group in atolls, compared to 52,085 individuals in the same age group in Malé.

Figure 2.11: Regional HCIs in terms of regional distribution of population ages 0–19



2.3. Understanding the regional HCI components

In a post-COVID, fiscally constrained context, identifying the sources of regional inequality in human capital accumulation is vital to prioritizing investments that would change the dynamics of human capital formation and, in turn, the returns on these investments. In 2022, Maldives emerged from the pandemic with a 60 percent increase in its debt burden in comparison to pre-pandemic rates. The general government gross debt as a percentage to GDP was 79 percent in 2019 and increased to 126 percent in 2022 (IMF 2022). With such limited

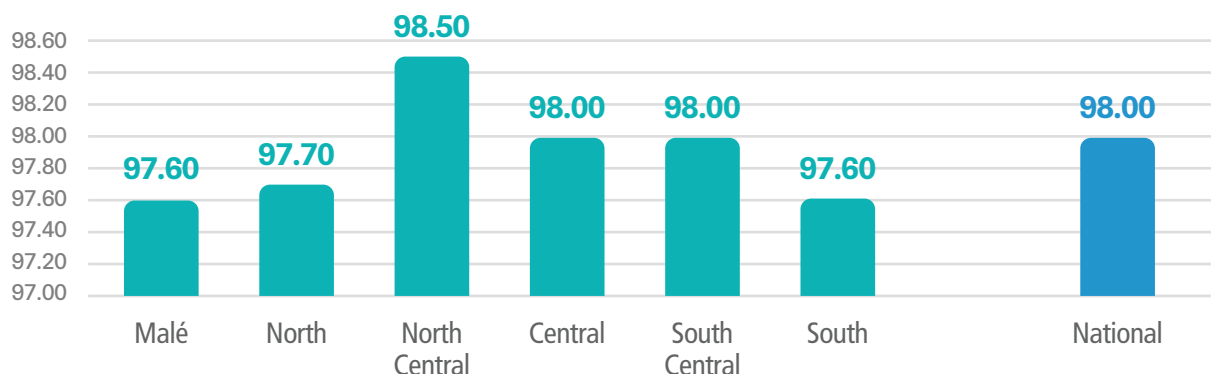
public resources, identifying the drivers of human capital deficits is imperative if human capital investments are to be prioritized.

2.3.1. Survival

Regional rates related to survival to school age reflect small variations across the Maldives, and small differentials to the national rate.¹⁵ While Malé and the South Region have the lowest probability of children surviving to school age (5 years of age)—97.6 percent—the North-Central Region leads the nation with the highest rate at 98.5 (figure 2.12).

15 Maldives’ under-5 mortality declined from 9.5 per 1000 in 2016 to 6 per 1000 in 2021 (UNICEF). However, given that the subnational rates beyond 2016 are not available, the HCI component relating to the probability of survival to age 5 at the subnational level is calculated using the 2016–17 Maldives DHS, and rate differentials to the national rate are calculated using the national rate in 2016–17.

Figure 2.12: Probability of survival to age 5 at the regional level



Source: World Bank staff calculations based on the Maldives DHS 2016–2017 (MOH and ICF 2018)

Note: Even though national-level under-5 mortality rates are updated annually, to be able to assess regional-national differentials, the national under-5 mortality rate for 2016 is used here, based on Maldives DHS 2016/17.

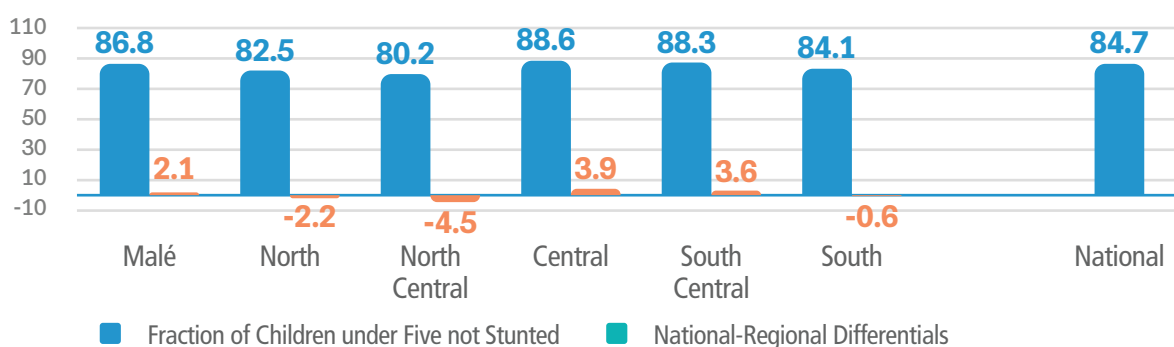
2.3.2. Health

As with the national HCI, although stunting rates are high across all six regions in the Maldives, they reveal significant regional variations.

While most regions in the Maldives have ratios of non-stunted children that are above the national ratio of 84 percent, the North and the North-Central Regions weigh the national performance down (figure 2.13). Based on empirical evidence, stunting levels in these two regions translate into a minimal reduction in future productivity of 1.47 percent and 1.59 percent for children born in the North and the North-Central Regions, respectively, in

comparison to the national average. This could potentially be explained by the concentration of children in these two regions. The North Region has the highest concentration of children ages 0–19 in the country, followed by the North-Central Region (figure 2.14). At the same time, both regions have the highest concentrations of the poor nationally: 27.2 percent and 15.4 percent, respectively, totaling 44.3 percent. Still, more research on the factors contributing to the high rates of stunting among children in these two regions is necessary, especially in terms of children’s feeding practices, intake and diversity of nutrient-rich foods, and access to health.

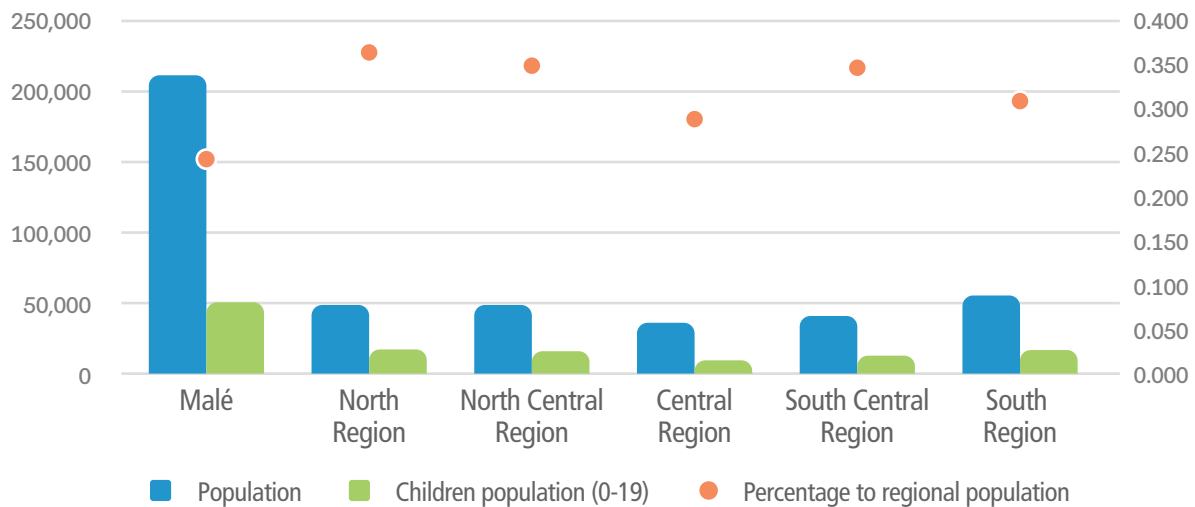
Figure 2.13: Ratio of non-stunted children at the regional level, and national–regional differentials



Source: World Bank staff calculations based on data from the Maldives DHS 2016/17 (MOH and ICF 2018)

Note: Even though more recent national-level stunting rates are available, given that subnational levels were not available, the calculation of national–regional differentials were done using the national stunting rate from the Maldives DHS 2016/17

Figure 2.14: Distribution of children ages 0–19 in the Maldives, by region

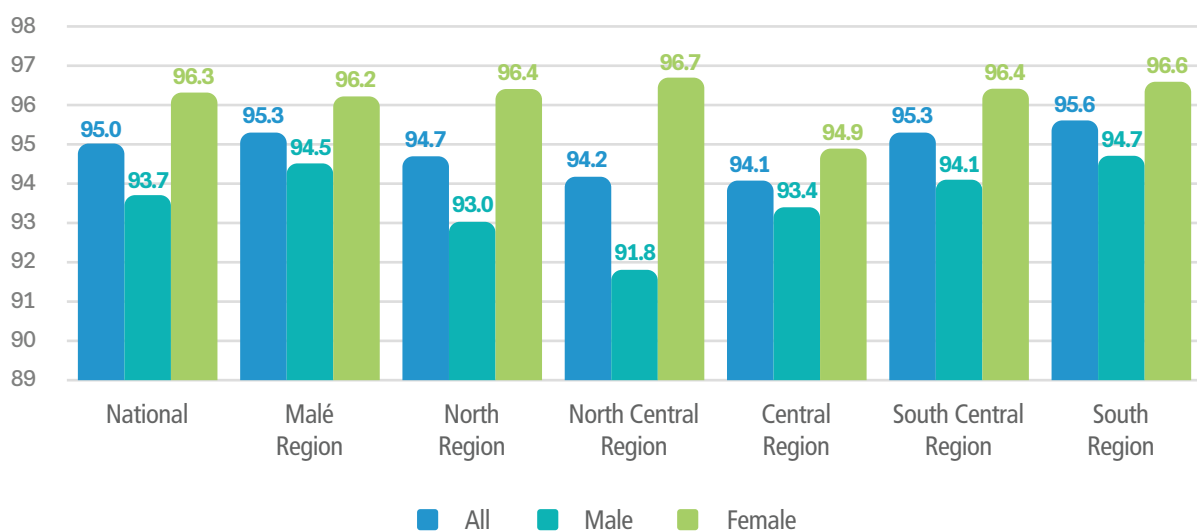


Source: Maldives Census 2022

Under the Health component of the regional HCIs, variations in adult survival rates are minimal, and as such, do not explain the large variances in the subnational HCIs. The variance between the best performer in adult

survival rates (the South-Central Region) and the poorest performer (the Central Region) is 1.5 years (figure 2.15), which accounts for a little under 1 percent improvement in future productivity to the advantage of the South-Central Region.

Figure 2.15: Probability of survival from age 15 to age 60 across gender and regions



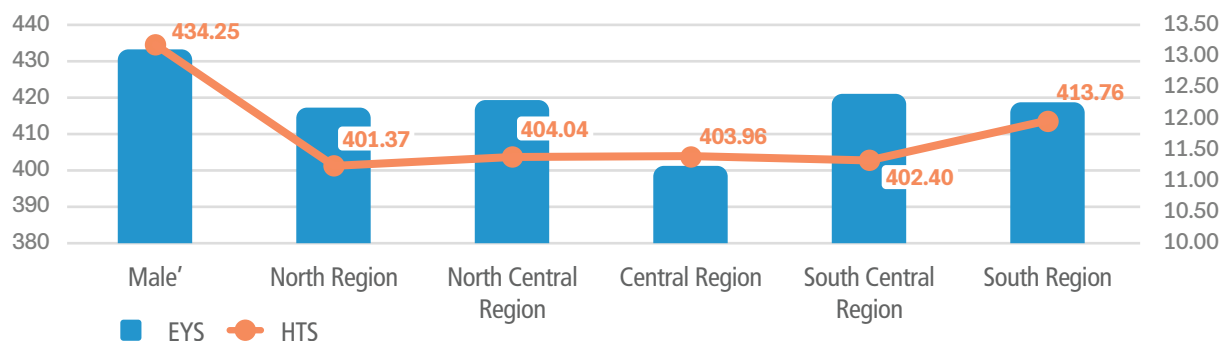
Source: Calculations by the Maldives Department of National Registration

2.3.3. Education

Within the Education component, despite high overall national schooling levels, significant regional disparities exist with respect to years of schooling, with two additional years of schooling between the best performer, Malé (13.1 years), and the poorest performer, the Central Region (11.1 years). Based on empirical literature, an additional year of learning raises earnings by about 8 percent (Blum and Yoong 2020). This means that a child born in Malé today can be expected to generate 16 percent greater earnings as a future productive worker than a one born in the Central Region. All the other four regions have on average one EYS less than Malé (figure 2.16).¹⁶ Except for Malé, the other regions all fall below the national EYS (12.52), with a range of 1.46 of EYS in the Central Region, to 0.23 EYS in the North-Central Region.¹⁷

Similarly, although Maldives' performance in Harmonized Test Scores (HTS) is significantly above that of regional peers, and slightly above same-income-group comparators (UMICs), this impressive performance hides important subnational variations. Malé again leads the nation, and the remaining five regions trail quite far behind. Children in Malé, who have an HTS of 434.25, score on average 32.9 points higher than children in the North Region (with an average score 403.96). Except for Malé (434.25) and the South Region (413.76), the other regions are all well below the national average of 411.9. In short, children in Malé attend more years of schooling and perform better in school compared to their peers in other regions.

Figure 2.16: Expected years of schooling (EYS) and Harmonized Test Scores (HTS) at the subnational level



Source: EYS are calculated by World Bank staff

Note: To calculate EYS, gross enrollment data from the Maldives Ministry of Education for the year 2019 (March) were used; mid-year population projection, based on the 2014 Population and Housing Census. HTS scores are based on TIMSS Mathematics Score Scale as reported by the Ministry of Education based on national mathematics assessment for Grade 4 in 2021 which included TIMSS items.

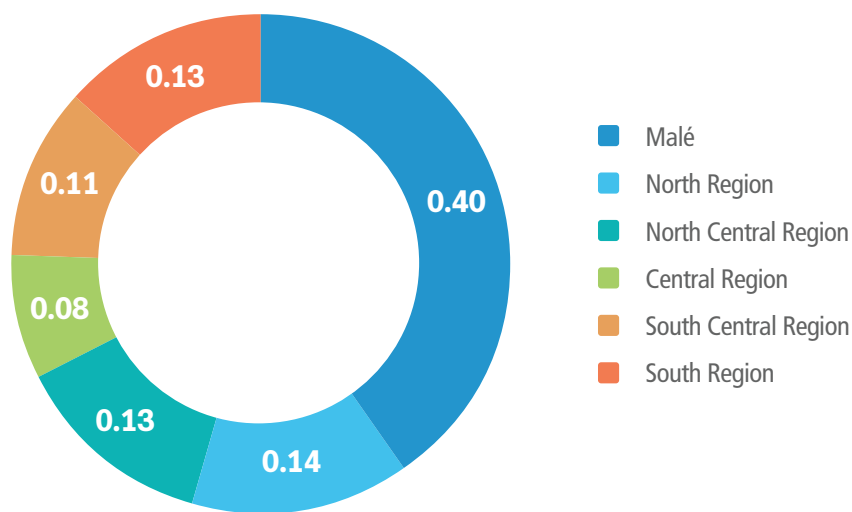
16 Full EYSs are based on 14 years, structured as follows: pre-primary enrollment rates approximate the age-specific enrollment rates for 4- and 5-year-olds; the primary rate approximates for 6- to 11-year-olds; the lower-secondary rate approximates for 12- to 14-year-olds; and the upper-secondary approximates for 15- to 17-year-olds. It is important to note that the structure of education in the Maldives is slightly different. The four education levels are structured as follows: pre-primary covers two years (Lower Kindergarten and Upper Kindergarten) for the 4-5 year old age group; primary education level covers from 1st through 7th grade for the 7-12 year old age group; lower secondary education level spans from 8th grade through 10th grade for the 12-15 year old age group; and, finally, higher secondary education goes from 11th to 12th grades (the 16-17 year old age group).

17 The national EYS calculated using NERs (12.4) is lower than the national EYS calculated using GERs (12.52), which is appropriate for benchmarking across nations. However, to assess Maldives EYS performance at the subnational level, the authors benchmarked regional EYS against national EYS calculated using the GERs, that is, 12.52.

As with the national HCI findings, challenges related to the quality of education are also evident at the subnational level, with both access and quality of learning impacting future productivity and earnings. Adjusting for quality of learning, the gap between Malé and other regions widens even further (see table below). Malé shows the best performance of learning-adjusted years of school (LAYS) with 9.11 LAYS, almost two full LAYS higher than the Central

Region, with 7.15 LAYS. Children born in all other regions in the Maldives will have an average LAYS below the national level of 8.26 (table 2.2). This suggests that, based on the regional distribution of children ages 0–19 (figure 2.17), the future productive capacity of approximately 60 percent of children in the Maldives will be lower by 1.28 percent to 8.9 percent than what the national average would otherwise predict, unless the current trajectory is altered.

Figure 2.17: Regional percentage distribution of children ages 0–19 in the Maldives



Source: Maldives Census 2022

Table 2.2: Regional EYS and LAYS and number of years reduction

Region	EYS	LAYS	Number of school years reduction due to quality of learning
Malé	13.11	9.11	4.00
North Region	12.16	7.81	4.35
North Central Region	12.29	7.94	4.34
Central Region	11.06	7.15	3.91
South Central Region	12.39	7.98	4.41
South Region	12.24	8.10	4.14
National	12.52	8.26	4.26

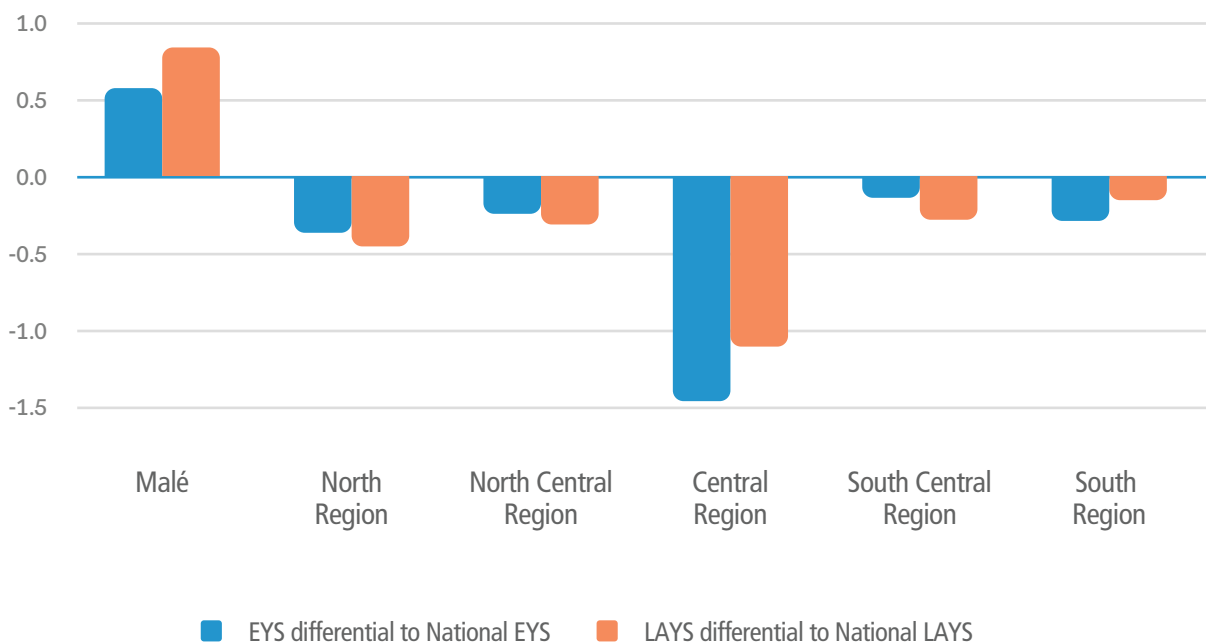
Source: World Bank staff calculations

Note: EYS and LAYS at the subnational level are calculated using gross enrollment ratios (GERs), given that data on age-specific enrollment at the subnational level are not available, hence the variation between the national EYS and LAYS reflected in this table and the EYS and LAYS reflected in section 1 of this chapter which relies on more accurate net enrollment rates (NERs).

A quick comparison between the EYS and LAYS variances at the national and regional levels reveals a worrying reality. Although all regions are already at a human capital formation disadvantage due to national-regional EYS variances, when the EYS are adjusted for quality of learning, the gaps grow even larger

(excluding the Central and South Regions). This suggests that inequality in access to learning is even further exacerbated by differential in access to good-quality learning, putting children who reside in non-Malé regions at a greater disadvantage in their future productive and earning capacity (figure 2.18).

Figure 2.18: Differentials in national–subnational EYS and LAYS



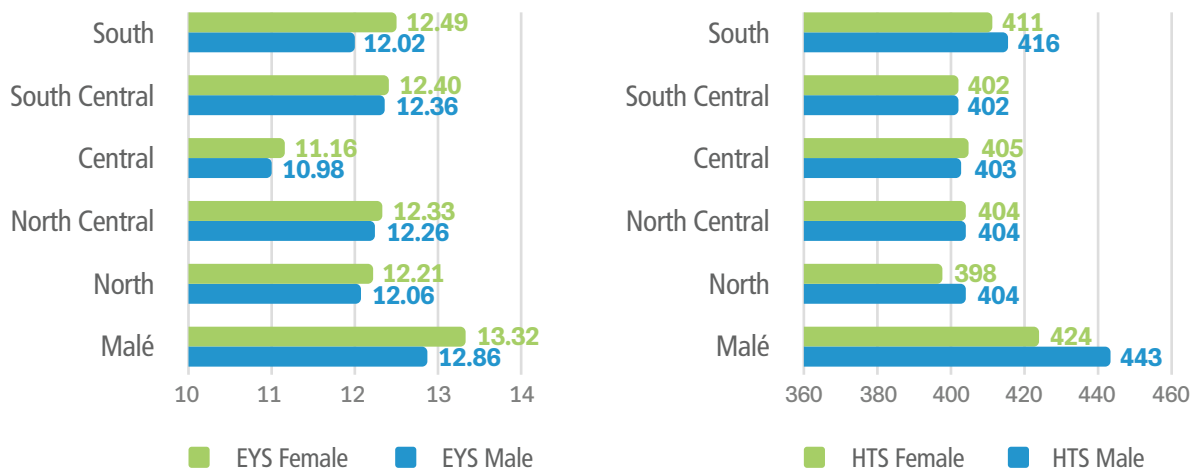
Source: World Bank staff calculation

Note: To calculate regional–national differentials in the EYS and LEYS, national GER for the year 2019 is used similar to the use of regional GERs to calculate EYS at the subnational levels. Therefore, the national benchmark is 12.52, which is slightly higher than that using national NER and results in an EYS of 12.4. The rationale is that whereas national EYS is relevant for the national HCI, which relies on NERs across countries to compare human capital accumulation across nations, the subnational EYS is necessary to the extent that it highlights disparities and differentials to national rates.

In all regions, although females spend slightly more time in school, males perform better in leaning assessments, indicating that they obtain more learning from their education (figure 2.19). Female students in Malé have the highest number of EYS across both

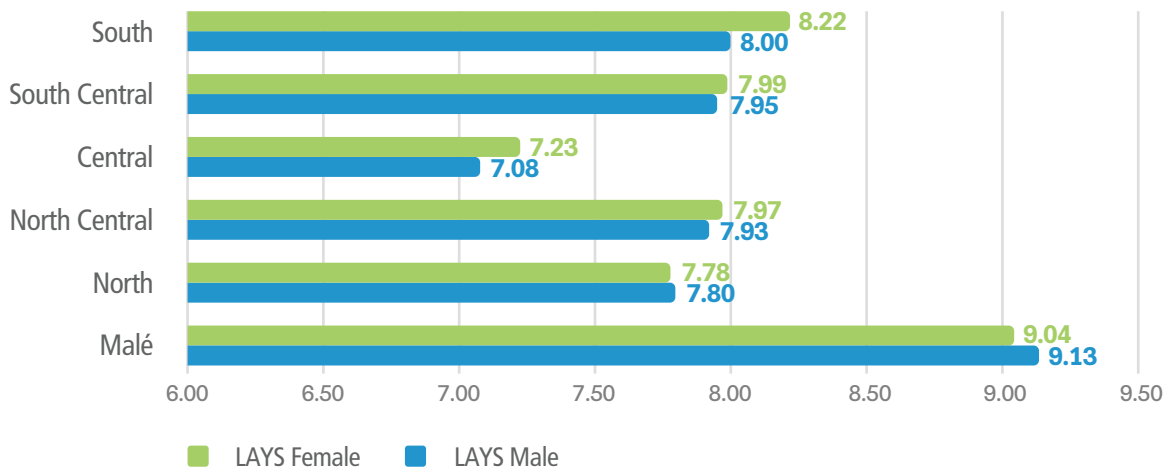
genders and all regions, and male students in Malé have the highest HTS scores also across both genders and all regions. This results in Malé students having the highest number of LAYS and the highest educational contribution to their human capital (figure 2.20).

Figure 2.19: EYS across regions and gender lines (left panel); HTS across regions and gender lines (right panel)



Source: World Bank staff calculations for EYS

Figure 2.20: Subnational learning-adjusted years of school, by gender



Source: World Bank staff calculations for EYS

In conclusion, as with the national HCI findings, education outcomes drive regional HCI disparities. When the contributions of all three HCI components to the regional HCIs are stacked for comparison, survival to age 5 shows little to no variation. The health component, on the other hand, shows minimal variations across regions but a significant gap to achieving full health primarily due to stunting. By contrast,

the education component emerges as the component with not only the least contribution but also the largest variations across the regions (figure 2.21). When small regional inequalities in access to quality learning are compounded in the Maldives, they add up to a significant loss of opportunities for children to realize their full human capital potential, given the health and education conditions predominant in the country.

Figure 2.21: Contributions of the three HCI components to subnational scores (survival, health and education)



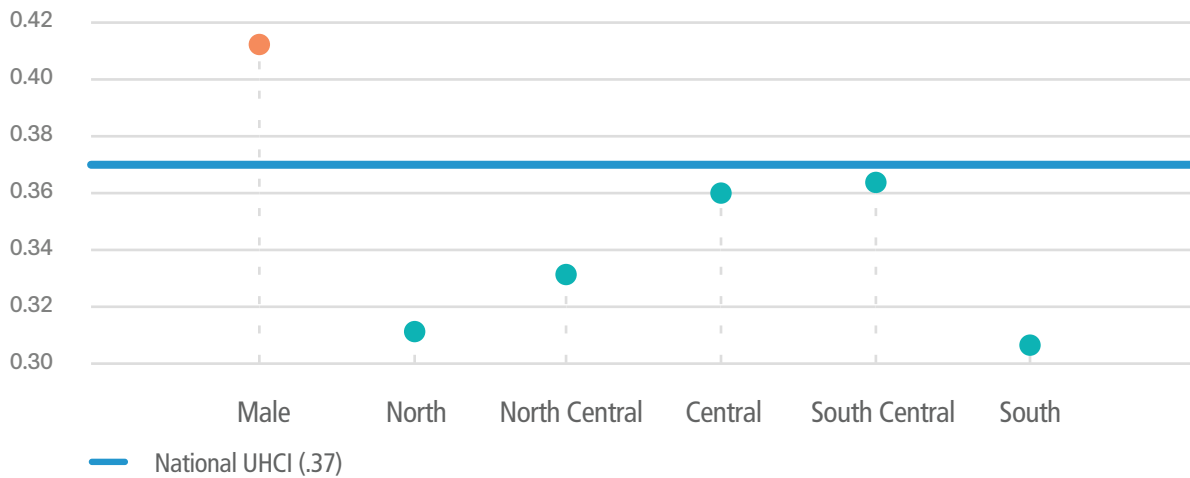
Source: World Bank staff calculations

2.4. Utilization-adjusted HCI at the subnational level

Regional HCIs drop significantly when adjusted for labor utilization, with the general pattern of regional UHCIs mirroring that of regional HCIs. Malé leads the nation, and all other regions fall below the national UHCI average (figure 2.22). The regional UHCIs reflect the regional HCIs, suggesting that poor human capital accumulation leads to poor human capital utilization. A child born in Malé today, with a UHCI of 41 percent, is predicted to be 10 percentage points more productive during working age than a child born in the North or South Regions, with a

UHCI of 31 percent each, given the health, education and employment conditions in his/her respective region. At the same time, the Central Region, which carries the lowest HCI score (4 percentage points below the national average), is a case to note. The region has a UHCI that does not reflect the level of human capital accumulation, as the region’s UHCI is significantly closer to the national UHCI average, which suggests that the South Region has a better rate of human capital utilization.

Figure 2.22: UHCI at the subnational level

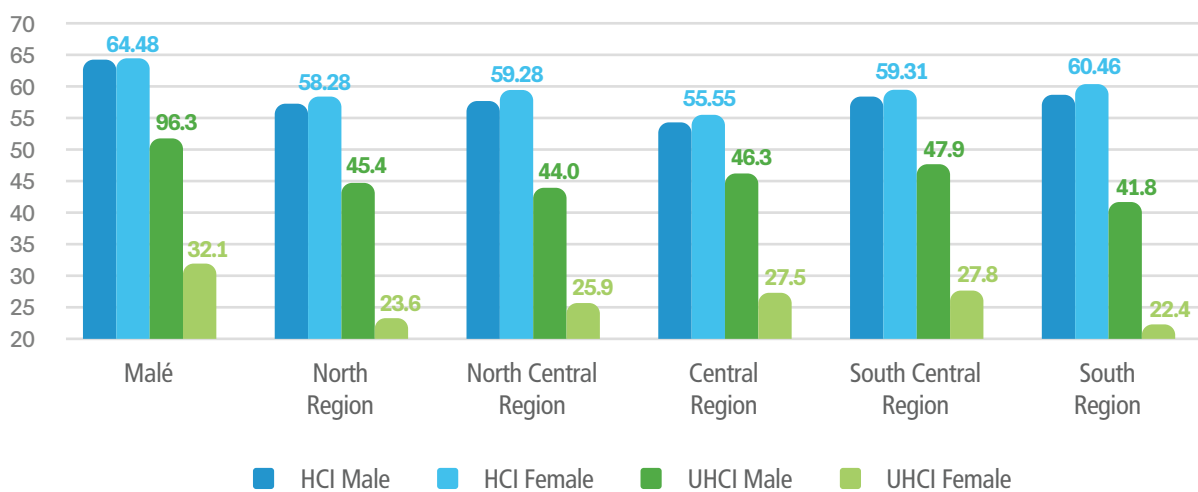


Source: World Bank staff calculations based on Maldives Household Income and Expenditures Survey 2019

Additionally, despite their slightly superior humancapitalscoresinallsixregions,females across the six regions fare considerably poorly in human capital utilization. Similar to the national female UHCI, females’ UHCI in all regions experience a sharp drop when adjusted to labor utilization with an HCI-UHCI differential

that ranges from a troubling 31.51 percentage points in the South-Central Region to an even sharper drop of 38.04 percentage points in the South Region (figure 2.23). Females therefore constitute an opportunity loss of national wealth yet to be utilized in the Maldives.

Figure 2.23: Gender-disaggregated HCIs and UHCIs at the subnational level



Source: World Bank staff calculations



Chapter 3

Challenges and Drivers of Human Capital Accumulation across the Life Cycle

Chapter 3: Key Messages

- Human capital is driven, directly and indirectly, by a host of factors within and beyond health and education, some of them country specific.
- Human capital is also cumulative with a fast and exponential rate of accumulation during the first 5 years of life, making an early deficit highly consequential in terms of future rate of utilization.
- In Maldives, during early childhood, malnutrition in forms other than stunting, such as anemia and wasting, affect human capital accumulation.
- All-time access to healthy nutrient-rich foods, and a lack of knowledge of healthy feeding choices, are probable drivers, among others, of malnutrition among Maldivian children.
- Given the country's high reliance on food imports, the availability and prices of essential food items are affected by climate change impacts, challenges of sea transport, and interruptions in international food supply chains.

- Maldives' social protection system is not sufficiently linked to human capital accumulation measures and incentives, and spending tends to be skewed to old age at the expense of the early childhood and childhood stages.
- Not all Maldivian children start pre-primary education at the appropriate age, so while some get a head start in human capital accumulation, others experience human capital deficits at an early stage.
- During childhood, although Maldives has achieved near universal primary level enrollment, attendance rates do not mirror enrollment levels, and quality of education by international standards continues to hold back the country's education outcomes.
- During adolescent and youth, unequal opportunities to access upper secondary education at the subnational level—let alone high-quality and relevant education—impacts human capital accumulation, which translates into poor labor market prospects for youth.
- The geography of Maldives and the inconvenience and cost of sea travel make it harder for students to seek secondary education on other islands.
- Education spending is skewed toward primary level education and manifests into poor education outcomes at upper secondary level, especially at the regional level.
- Traditional social norms and expectations related to female mobility, freedom, roles, and access to sexual and reproductive health (SRH) services affect the educational path and labor market prospects of girls and women.
- The rise of noncommunicable diseases in Maldives is also increasingly threatening the ability of the working-age population (WAP) to fully reap the returns on their human capital.





The preceding chapters presented the HCI calculations and the ensuing outcomes (both at national and regional levels). Chapter 3 takes a deeper look at the drivers and challenges of building human capital throughout the life cycle (figure 3.1), with a focus on the regional level, and bearing in mind the findings that arose from the HCI analysis.

Human capital accumulation challenges start at a young age, and human capital deficits accrue over time. For example, the health, nutrition, and lifestyle practices of a mother tend to shape the health and wellbeing of the child and, in turn, the child's growth and ability to learn and become a productive adult in the future. These outcomes also correlate

with the geographical location, income level, and education level of the mother and of the household. Early childhood development and education, in turn, form the foundational elements for subsequent stages. This chapter

therefore takes a life cycle approach to better understand the patterns of geographic and gender-based deficits that were revealed in the subnational HCIs analysis in chapter 2.

Figure 3.1: Human capital drivers and challenges across the life cycle

Stage of Life	Challenges	Drivers HD related	Drivers Other GPs
 Early Childhood Conception -5	<ul style="list-style-type: none"> · Uneven decline in child mortality · Uneven decline in stunting and wasting · Persisting malnutrition challenges 	<ul style="list-style-type: none"> · Nutrition (lack of a diversified diet) 	<ul style="list-style-type: none"> · Fisheries and agriculture · Reliance on food imports · Supply/transport of food imports to remote atolls
 Children 6-11	<ul style="list-style-type: none"> · Poor learning outcomes at primary level by national standards with high discrepancies · Low school attendance at primary level · Learning loss post COVID-19 	<ul style="list-style-type: none"> · Inequality in education quality · Quality of curriculum implementation & teacher training · System for education quality assurance · Use of ICT in learning · Appropriate social protection policies/programs (esp. in remote islands) 	<ul style="list-style-type: none"> · Limited physical connectivity · ICT infrastructure in atolls supporting remote learning · Social norms (violence against children)
 Adolescent & Youth 12-18	<ul style="list-style-type: none"> · Low/declining rates of enrollment at higher secondary level · High OOSC, adolescent and youth at risk of exploitation · Poor learning outcomes by national standards · Learning loss post Covid-19 	<ul style="list-style-type: none"> · Access to higher secondary education · High rate of at-risk youth · Special learning needs · Quality of curriculum implementation & teacher training · System for education quality assurance · Education relevance to the LM & lack of career counseling · Appropriate social protection policies/programs 	<ul style="list-style-type: none"> · Difficulty and cost of sea travel for students · Social norms re.employment of boys 16+ · Socio-economic inclusion for youth · Use of ICT in learning · Social norms (violence against children esp. girls)
 Adult 19-up	<ul style="list-style-type: none"> · High levels of NCDs · High NEET rates among youth · High reservation wages among nationals · Growing need for old age care 	<ul style="list-style-type: none"> · Insufficient spending on prevention health care · Behavioral practices (inactivity, smoking, etc.) · Availability/price of essential NCD medication · Relevance of ed. (esp. STEM & TVET) to LM needs · LM policies (few of inefficient ALMPs/PES; limited self-employment/entrepreneurship, etc.) 	<ul style="list-style-type: none"> · Weak macroeconomic policies/Undiversified economy · Social norms · Limited private sector development

Source: World Bank staff creation

3.1 Human capital challenges and drivers during the early childhood stage (conception to 5)

In Maldives, most children are up to par in their development during this stage, but spatial disparities and some minimal negative trends in health and education outcomes can be observed. The early childhood stage is a critical period for human capital development. Physical and cognitive growth is fastest during infancy and the first five years of life, with 90 percent of the brain developing by age five. While most children in Maldives are on par in their development during the early childhood stage, some spatial disparities and negative trends are observed creating gaps in human capital accumulation at a very early stage. For example, in the North Region, stunting levels among children under 5 increased from 15 percent in 2009 to 18 percent in 2016 (MOHF and ICF Macro 2010; MOH and ICF 2018). These challenges are driven by several factors that start during gestation and continue through the life cycle.

Despite considerable progress in health outcomes, malnutrition, particularly in the form of protein-energy malnutrition, anemia, and vitamin A deficiencies in the mother and child, are still serious challenges in the Maldives, with rates that are quite high for children under 5 for UMIC (Maldives Bureau of Statistics, UNICEF Maldives, and OPHI 2020). The fastest and most impactful human capital accumulation starts at conception and continues through gestation and early childhood (World Bank 2022d). In SAR, Maldives ranks second, after India, in the prevalence of anemia among women of reproductive age (FAO, IFAD, UNICEF, WFP and WHO 2021). Fifty-two percent of women of reproductive age (15–59) and 38 percent of children 6–59 months suffered from anemia in 2019, with the two rates on an upward trend in the preceding decade (figure 3.2, left

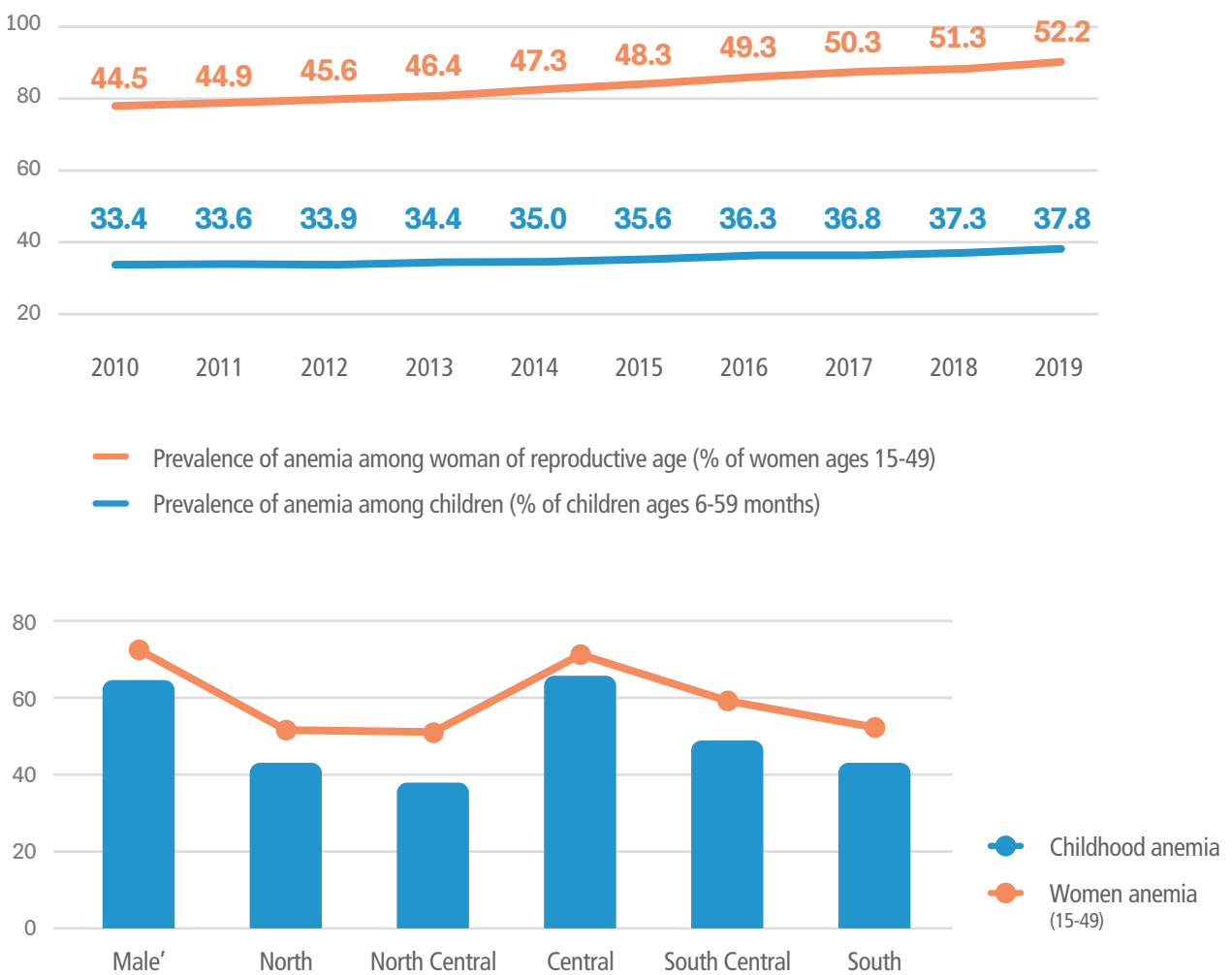


Source: ©Andrea Izzotti/Shutterstock

panel) with the highest rates in Malé and the Central Region (figure 3.2, right panel). *The Global Nutrition Report in 2022* indicated that the country has made no progress toward achieving the target of reducing anemia among women of reproductive age, with 52 percent of women ages 15–49 years affected (Global Nutrition Report 2022). While the most common causes of anemia among women are nutritional deficiencies, particularly iron

deficiency, and deficiencies in folate, vitamins B12 and A, anemia is correlated with increased risks of low birthweight, preterm birth, perinatal mortality, and neonatal mortality (Young 2018). Anemia among children, on the other hand, contributes to child mortality through malnutrition and increased susceptibility to infection, delayed child cognitive and physical development, and reduced visual and auditory functions (Sundararajan and Rabe 2021).

Figure 3.2: Prevalence of anemia among women of reproductive age (15–49) and children (6–59 months) (upper panel); anemia among children under 5 and women of reproductive age, by region (%) (lower panel)



Source: World Bank (n.d.d) (left panel); the Maldives DHS 2016–2017 (right panel)

Anemia and malnutrition among women of reproductive age and children are not necessarily the products of poverty.

Residing in an urban area, being underweight, having undergone female sterilization, being pregnant, and menstruating in the last six weeks are associated with increased odds of moderate to severe anemia in the Maldives (Rahman et al. 2021). The highest incidences of anemia among women of reproductive age and children are recorded in urban settings, that is, in Malé.¹⁸ At the same time, the most recent poverty analysis shows that less than 1 percent of individuals in Malé are poor, in comparison to 10 percent in the atolls; and in population terms, 93 percent of the country's poor live in atolls (World Bank 2022d). Data from the Demographic and Health Survey (2016–2017) also show that the prevalence of anemia generally rises with increasing household wealth suggesting challenges related to knowledge of healthy and appropriate feeding practices. Although not as prevalent as other forms of malnutrition, obesity is largely due to the increased consumption of unhealthy packaged and processed foods, and a limited knowledge of proper nutrition (UNICEF 2023). This suggests that the degree of knowledge and public awareness of good feeding practices and nutrition may be a driver of malnutrition and child development.

Malnutrition in the form of stunting, wasting, underweight, and to a lesser extent obesity, among children under 5 is a public health concern in the Maldives, that threatens human capital accumulation during the early childhood stage. As illustrated from the national HCI

findings, nearly one in five children under 5 in the Maldives is stunted (UNICEF 2023). Additionally, in 2017, almost 15 percent of children under 5 in the country were underweight, a rate significantly high for UMICs, which average 1.8 percent (World Bank n.d.d). Similarly, in 2017, 9.1 percent of children under 5 were wasted in comparison to 1.7 percent in countries of a similar income level (World Bank n.d.d). Finally, the prevalence of overweight children under 5 was 4.9 percent in 2016–17 but, the country is “on course” to prevent the figure from increasing (Global Nutrition Report 2021).

Early initiation and exclusive breastfeeding during infancy, as well as the timely introduction of diversified and nutrient-rich foods, are essential for the development of human capital during early childhood.

In all, 97 percent of children born within the two years leading to the DHS of 2016–2017 were breastfed at some point: 67 percent within 1 hour of birth, and 89 percent within 1 day of birth. However, infants in urban settings, that is, Malé, were less likely than those in other regions to be breast-fed, and infants in the highest wealth quintile fare the worst. Additionally, the feeding practices of only half of children ages 6–23 months met the minimum acceptable dietary standards (MOH and ICF 2018). Although women's and children's diets contain enough protein and carbohydrates because of the consumption of tuna and starchy crops grown in home gardens, they tend to be deficient in iron, fat, and micronutrients, especially vitamin A, which is linked to low fruit consumption (Golder et al. 2001; MoH 2016 as quoted in IFRC 2021).

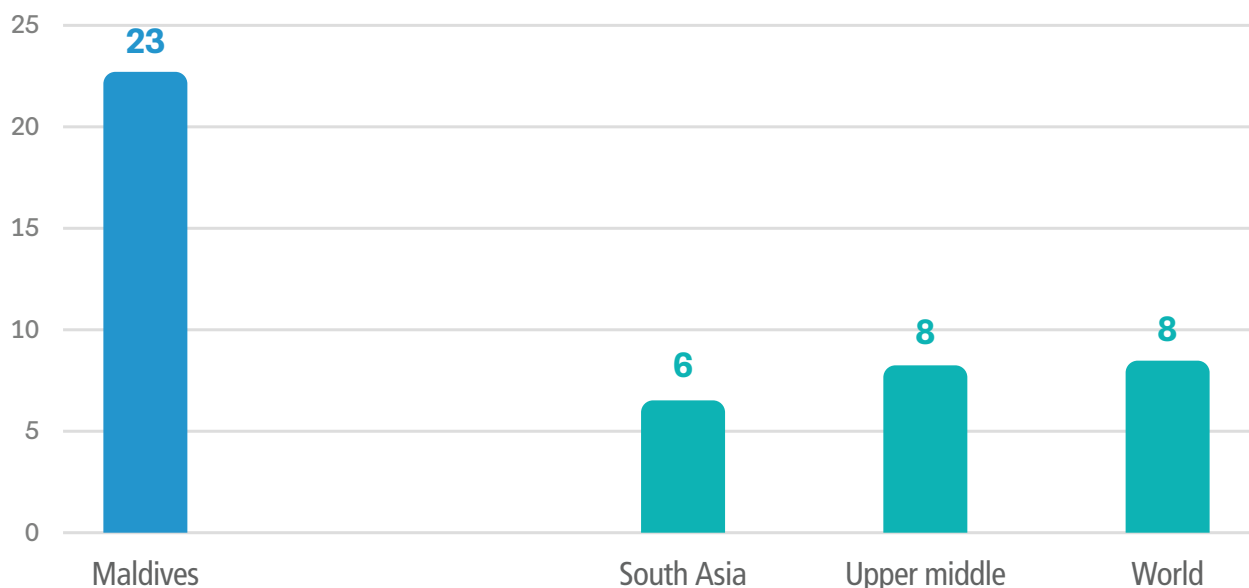
18 Only the Greater Malé region, with 41 percent of the population, is considered urban (World Bank n.d.d).

The availability of essential food items is a challenge in the Maldives in part due to its heavy reliance on food imports, which may affect access to nutrients that are necessary for healthy development and human capital accumulation during childhood. As a small-island state, the Maldives is almost exclusively reliant on food imports and, therefore, vulnerable to disruptions in global food supply chains. Less than 10 percent of the food requirements of Maldives are met through domestic production, the country being self-sufficient only in fish (UNICEF Maldives n.d.). Research suggests that the low availability of a diverse diet and the low consumption of fresh fruits result in inadequate intake of nutrients and is one driver of malnutrition among Maldivian children (Asra et al. 2020; Haq et al. 2020 as quoted in IFRC 2021). According to UNICEF, fewer than 6.5 percent of Maldivians eat enough healthy produce, which results in high

rates of micronutrient deficiencies among children under 5 and women of reproductive age (UNICEF Maldives n.d.).

The Maldives is the largest food importer in South Asia. The country imports essential food items such as meat, eggs, fruits, vegetables, and dairy, which are distributed from the capital (MFDA 2017). To put it in perspective, the Maldives has the highest food imports in South Asia and is significantly above the average food imports as a percentage of total merchandise imports compared to countries of similar income level and the world (figure 3.3). In 2022, and due to the disruption in food supplies worldwide, food inflation in the Maldives rose to its highest level in six years, starting at 1.9 percent at the beginning of the year and reaching 6.6 percent in December 2022 (Trading Economics 2023).

Figure 3.3: Food imports (% of total merchandise imports), 2021



Source: World Bank (n.d.d)

Box 3.2: Agriculture and food production in the Maldives

Agriculture in the Maldives is restricted by the low availability of arable land: less than 15 percent (about 30,000 hectares) of the country's total land area is considered to be arable. Estimated to account for approximately 1.4 percent of GDP, agriculture is a minor sector of the formal economy. About 6,500 farmers on 74 inhabited islands are registered, most of whom are subsistence farmers or smallholders, and 53 percent of whom are women. An additional 1,300 hectares on 78 uninhabited islands have been leased for 21 years to private sector companies for commercial agriculture. Less than 10 percent of the food requirements of Maldives are met through domestic production. The country is self-sufficient only in fish. The food requirements of the tourism sector, especially the upmarket luxury tourist resorts for which Maldives is famous, are therefore a major challenge but also an opportunity for domestic agriculture. However, the potential for rural development is constrained by the shortage of arable land, its broad geographical spread, the competition from other uses for limited fresh water, the low level of value-addition of agricultural and fisheries products, the low availability of inputs, and the high food quality standards demanded by the resorts.

Source: FAO (2018)

Food availability and prices in the Maldives are closely affected by the impacts of climate change and the challenges of sea transport. The sustainable supply of fresh foods, particularly to the more remote islands, is directly affected by transport challenges and costs. This makes it more difficult for people living in remote islands to access fresh and diversified food (Asra et al. 2020). Climate change and over-extraction are already affecting fish stocks and agricultural productivity in the Maldives

(IFRC 2021). In some island communities, for example, access to fresh fruits, vegetables, and legumes throughout the year can be a challenge because of supply chain difficulties and severe weather (UNICEF Maldives n.d.). During the 2021 monsoon season, for example, islands in the North Region (Noonu atoll) faced food shortages because of weather-related transport interruptions between Malé and the other islands (Areeba 2022).

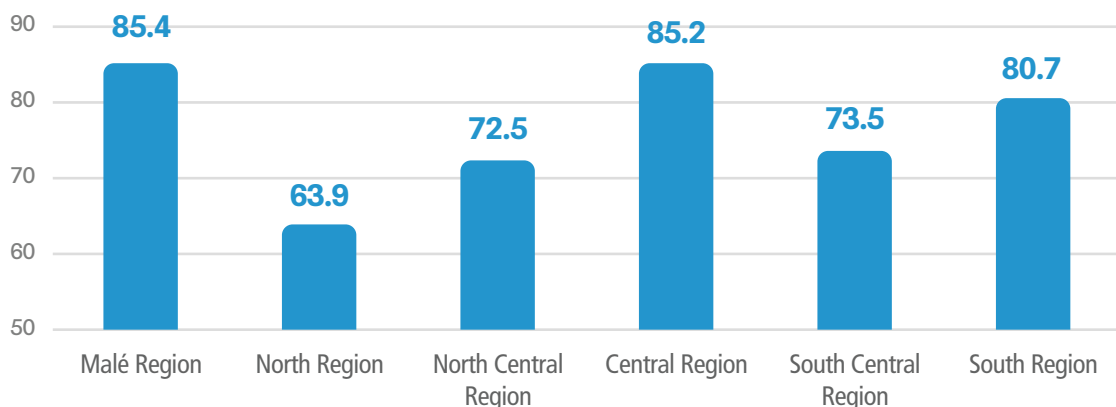
Even though the Maldives social protection system has taken leaps forward in integrating delivery systems, challenges remain with respect to addressing needs across the life cycle and improving coverage.

Although children under 5 constitute at least 5.8 percent of the population and senior citizens (65 years and older) constitute only 4 percent, the latter receive more than 90 percent of social assistance spending, and the remainder goes to small categorically targeted programs and one social assistance to poor families (World Bank n.d.a). Maldives still has no promotion of, and increased access to, fortified complementary foods nor services for improved early-childhood nutrition such as nutrition counseling (Torlesse and Raju 2018). The Maldives can benefit from programs that address the challenges and needs of children in early childhood, particularly programs that address the nutritional status of women of reproductive age and children in terms of both awareness building as well as service and nutrition provision.

Additionally, not all Maldivian children start formal education at the appropriate age, which robs some of them of a head start in human capital accumulation.

During the 2019–20 school year, only 17,060 out of 21,159 children of pre-primary age (3–5) were enrolled, and only 16,405 were enrolled according to their corresponding age (MOE 2020). Although the HCI calculation does not include nursery (age 3) in the “full” 14 years of expected years of schooling, this percentage still means that a significant percentage of children, including pre-primary-aged children, were not enrolled at any level of education and were left at a disadvantage compared to their peers. The risk of early human capital deficits due to delay in attending preprimary education varies from region to region, with the highest risk in the North Region and the lowest in Malé (figure 3.4) (MOH and ICF 2018).

Figure 3.4: Percentage of children ages 36–59 months who attended early childhood development by region



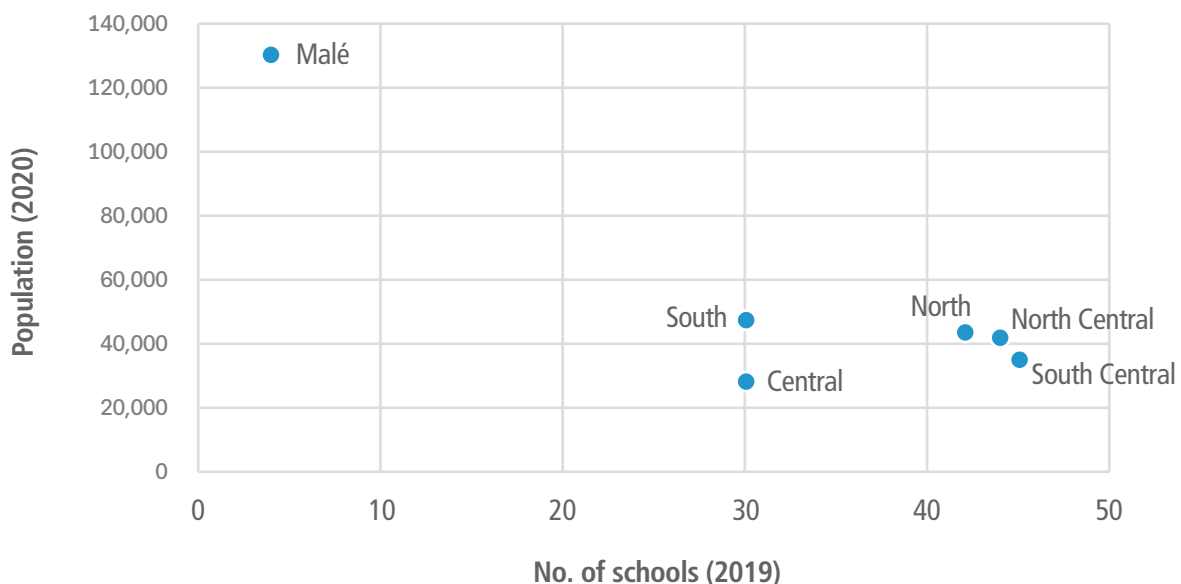
Source: Maldives DHS 2016–17 (MOH and ICF 2018)

Under-5 Maldivian children are developmentally on track. According to the *Early Childhood Development Index*, almost all children ages 36–59 months are on track for their age in their physical development (98 percent) and in the learning domain (95 percent) (MOH and ICF 2018). Eighty-five percent of 3- to 4-year-olds are on track in the literacy–numeracy domain, and 74 percent are on track in the social-emotional domain (MOH and ICF 2018). Taking all four domains together, 92 percent of 3- to 4-year-olds are on track in their development (that is, meeting three of the four developmental domains) (MOH and ICF 2018).

In terms of access to pre-primary education, the Government of Maldives is investing heavily in early childhood education in

remote and low population density regions. The median number of *public* pre-schools is 36, with a range of 4 in Malé, where *private* sector pre-schools are abundant, to 45 in the North-Central Region (figure 3.5). The North Region, which has the lowest ECD attendance rate, has 42 preschools, well above the national median of 36, which suggests that coverage is not a factor in school enrollment, but attendance and demand-side challenges, such awareness of the importance of ECD, may be. At the same time, nationwide, 70 percent of all pre-schools (public, private and community) have only 31–50 enrolled students (MOE 2018). With respect to teacher training, in 2018, 89 percent of teachers at the preprimary level were trained, according to the statistics of the Ministry of Education.

Figure 3.5: Distribution of pre-primary public schools across six regions relative to population size, 2020



Source: Staff calculations based on population projections from UNFPA, *Maldives Population Projections 2014-2054: Assumptions and Results Analysis*, and 2020 Ministry of Education statistics

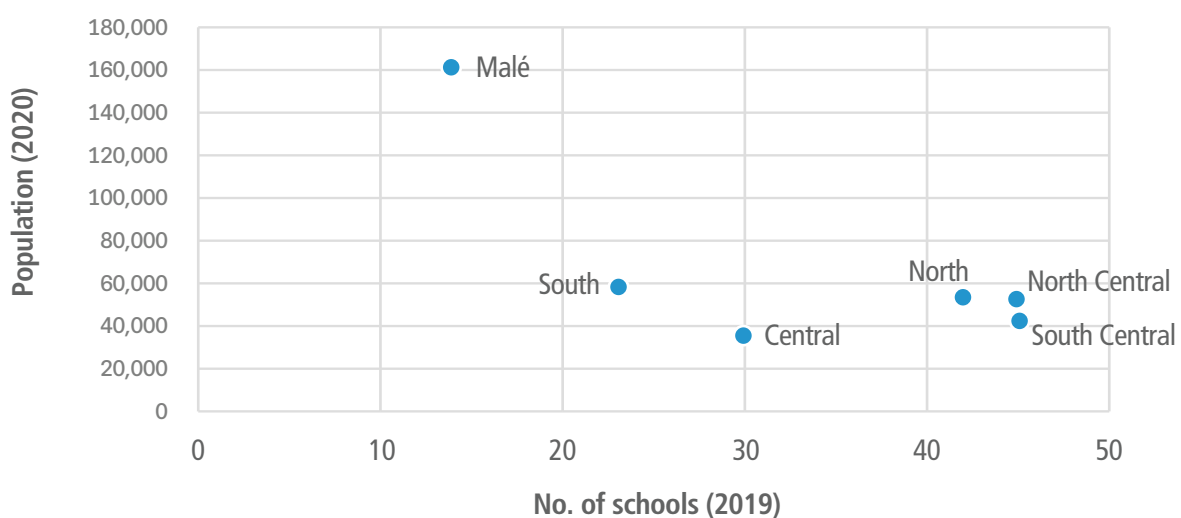
Finally, cultural norms in the Maldives have a bearing on the education of even girls younger than five. Performed almost exclusively before age five (83 percent), female genital mutilation still occurs in the Maldives, albeit with a declining trend (MOH and ICF 2018). Thirteen percent of women ages 15–49 report having been circumcised: 14 percent of women in urban communities and 12 percent in rural communities (MOH and ICF 2018). A girl subjected to female genital mutilation goes through severe initial pain and faces the risk of infection, hemorrhage, and even death (UNFPA 2020). Throughout her life, she may struggle with reproductive tract infections, chronic back pain, painful intercourse and a loss of sexual pleasure, and difficulties in childbirth, among many other risks (UNFPA 2020). She will be more likely to experience psychological illnesses, including post-traumatic stress disorder (UNFPA 2020). The problem persists partly because 32 percent of women believe that female circumcision is required by Islam (MOH and ICF 2018). Additionally, 14 percent of women in the Malé Region, and 12 percent

of women in the South Region, report that they have difficulty getting permission from their husbands to go for female genital mutilation-related treatment (MOH and ICF 2018).

3.2 Human capital challenges and drivers during childhood (ages 6–12)

Children who make it to their fifth birthday in the Maldives have a high chance of enrolling and completing primary education. This stage corresponds to Grades 1 through 7 of primary education (ages 6 to 12). The Maldives has achieved near-universal enrollment in primary education, but a small fraction (about 2 percent of children) is still not enrolled (in 2019) (World Bank n.d.d). The near-universal enrollment rate at the primary level suggests that current primary school coverage is sufficient. The median number of primary schools per region is 36, with a range of 14 in Malé to 45 in the South-Central Region (figure 3.6). This suggests that access to primary education is not a challenge.

Figure 3.6: Demographic distribution of primary schools across six regions



Source: Staff calculations based on Maldives Population Census 2014 and Ministry of Education Statistics 2020

However, primary school attendance and completion rates show a slightly different story from formal enrollment.

Although primary school enrollment rates are extraordinarily high, attendance remains a battle to securing a decent primary school education for all in the country (UNICEF Maldives n.d.). The primary school net attendance ratio (NAR) for children ages 6–12—the percentage of primary-school age children actually attending primary school—was 94 percent in 2017 (93 percent for girls and 94 percent for boys), with regional disparities in NAR ranging from a high of 97 percent in the North Region to a low of 91.9 in Malé, and the rate tends to decrease with increasing household wealth (MOH and ICF 2018). The primary school completion rate, on the other hand, is lower—92 percent in 2019 (with a slight and statistically insignificant deferential to the advantage of females), which is slightly lower than the 95 percent average for UMICs (World Bank n.d.d).

Those who enroll and attend primary education do not learn enough.

Although the Maldives HCI findings show high regional disparities, as reflected in chapter 2, the NALO also reveals poor learning outcomes and, again, high regional disparities. Whereas the completion rate at the primary level is high, NALO results point to less than satisfactory learning achievements for many students in language (Dhivehi and English languages) and in mathematics. This indicates that many of them are completing primary school without a solid foundation in literacy and numeracy skills (World Bank 2021a). Recognizing the importance of learning assessments, the GoM has recently introduced a key initiative for developing and implementing NALO as a standardized assessment administered to children in Grades 4 and 7 in order to assess learning in English language, mathematics, and Dhivehi (World Bank 2021a).

In 2014, a new national curriculum based on best practices in education was introduced, with the objective of improving the quality of learning, but it faces multiple challenges.

For one, islands in the Maldives are scattered across the water, making the improved national school curriculum difficult to implement and monitor (UNICEF 2023). So although the Maldives has made progress in rolling out this new curriculum, serious implementation challenges remain, especially to the promotion of higher-order thinking skills and the implementation of proper classroom-based assessments (World Bank 2021a). Certain elements necessary for this reform are still under way, namely, the quality of curriculum implementation, teacher training, a system for quality assurance, a system for learning assessment, and programs for supporting equitable learning, especially for students with special educational needs (World Bank 2021a).

The quality of learning at the primary education level also seems to have been affected by the restructuring of the education system.

In 2010, with the objective of universalizing primary and lower secondary education, all 212 primary and secondary schools in the Maldives began teaching Grades 1 to 10 and fully implementing the new national curriculum (Shafeeu 2019 as quoted by University of Bristol n.d.). The move, however, seems to have changed the school structure. Together with limited school size, it has necessitated a two-session school system; 7:00am to 12:30pm for lower secondary grades (Grades 6 to 10/12) and 12:45pm to 5:30pm for primary grades (Grades 1 to 5). This two-session schooling system has had extensive repercussions for the quality of school teaching and learning (Shafeeu 2019 as quoted by University of Bristol n.d.). With respect to teachers' capacity, most

teachers in the country were provided with the necessary training to implement the new national curriculum, with the Central region having the highest number of untrained teachers (table 4.1).

At the same time, social protection programs are not properly attuned to ensuring human capital formation among school-age children.

The Maldives social protection system does not address the needs and risks associated with school-age children, such as malnutrition. Programs are, however, conditional on school attendance. The Maldives can benefit from programs such as conditional cash transfers with accompanying measures linked to nutrition and healthy eating habits, and from school feeding programs that target stubborn nutritional challenges such as anemia and certain vitamin deficiencies.

Despite the GoM's exemplary efforts to preserve the capacity to learn during the COVID-19 pandemic, some learning loss was inevitable.

The government resorted to a number of measures to ensure the continuation of remote learning, including broadcasting classes through TV and the internet, resumption of learning when schools reopened with phased reopening, compression of the school curriculum, creation of a digital repository of learning materials and lessons, capacity building at the school level, the training of all teachers in online/blended methods, and improved connectivity (UNICEF and UNESCO 2021). Schools were closed for a solid period of 3.5 months, followed by a phased reopening with intermittent in-person learning based on the number of cases. Although no Maldives-specific data are available on learning loss in the country, research in other countries suggests that a month of school closures led to a month of learning lost (Schady et al. 2023). This means that children across the

Maldives and across all education levels lost at least 4 months of learning. Schools in the Maldives were also not well prepared to teach and support learners remotely; teachers, management, students, and parents/caregivers all had to adapt without notice to an entirely different mode of delivery (UNICEF and UNESCO 2021). As such, and especially given the learning-quality challenges that the country faced before the pandemic, additional efforts are needed to reverse learning losses and to improve schools' preparedness for remote learning under any scenario. This includes addressing ICT shortcomings, from ensuring that schools are equipped with ICT tools and technology, to improving connectivity, to developing teachers' and students' ICT skills.

3.3 Human capital challenges and drivers during the adolescence and youth stage (13–18)

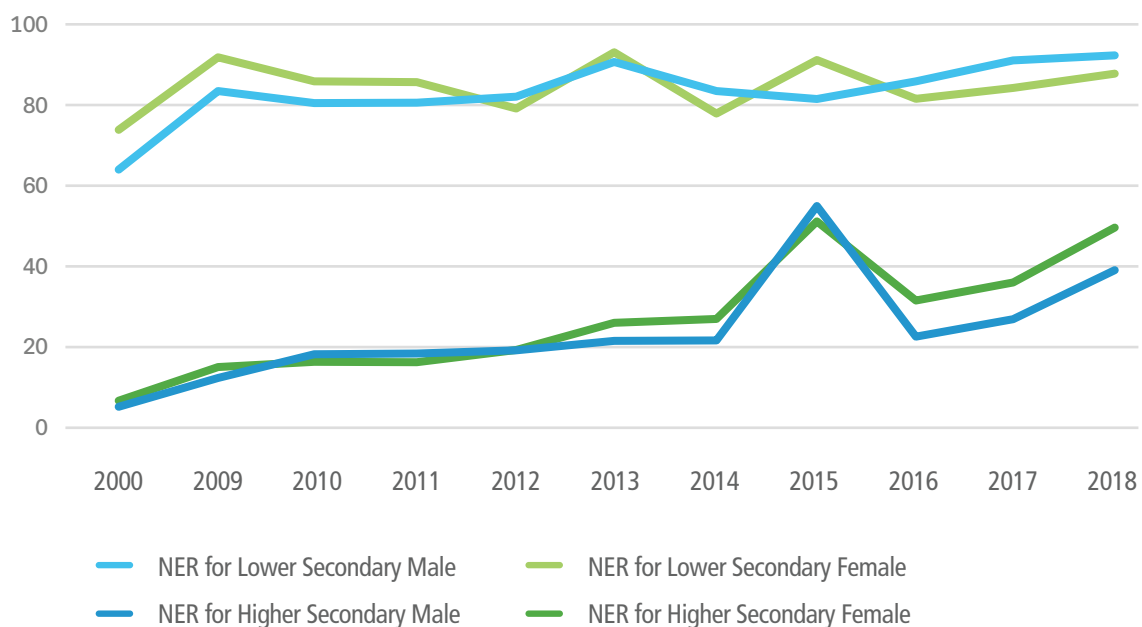
Many adolescents and youth in the Maldives experience significant human capital opportunity losses because of poor education outcomes.

This age group corresponds to lower secondary education (ages 13–15 attending Grades 8–10), followed by two years of upper secondary education (ages 16–18 attending Grades 11–12). Low school enrollment for both females and males during this stage results in three-quarters of Maldivians ages 15 and above having achieved only O-levels (equivalent to lower secondary education) or below, practically disrupting human capital accumulation through formal learning (World Bank 2021c). Most Maldivians complete their lower secondary education, but fewer than half go on to upper secondary education, with female NER slightly higher than males' (figure 3.7). This reduction in enrollment at upper secondary level is a grave concern.

Possible reasons are the inability to pass the required necessary exams for admission into Grade 11, lack of interest in pursuing further education, as well as wanting to leave school (MOE and Global Partnership for Education 2019). Additionally, the number of students out of school in the 16–18 year age category remains undetermined, but recent statistics

show that more students are being retained in school because of the alternative education pathways that have been introduced since 2015, mainly through expanding technical and vocational education and training options (MOE and Global Partnership for Education 2019).

Figure 3.7: Trends in net enrollment rates (NERs) in lower and upper secondary education



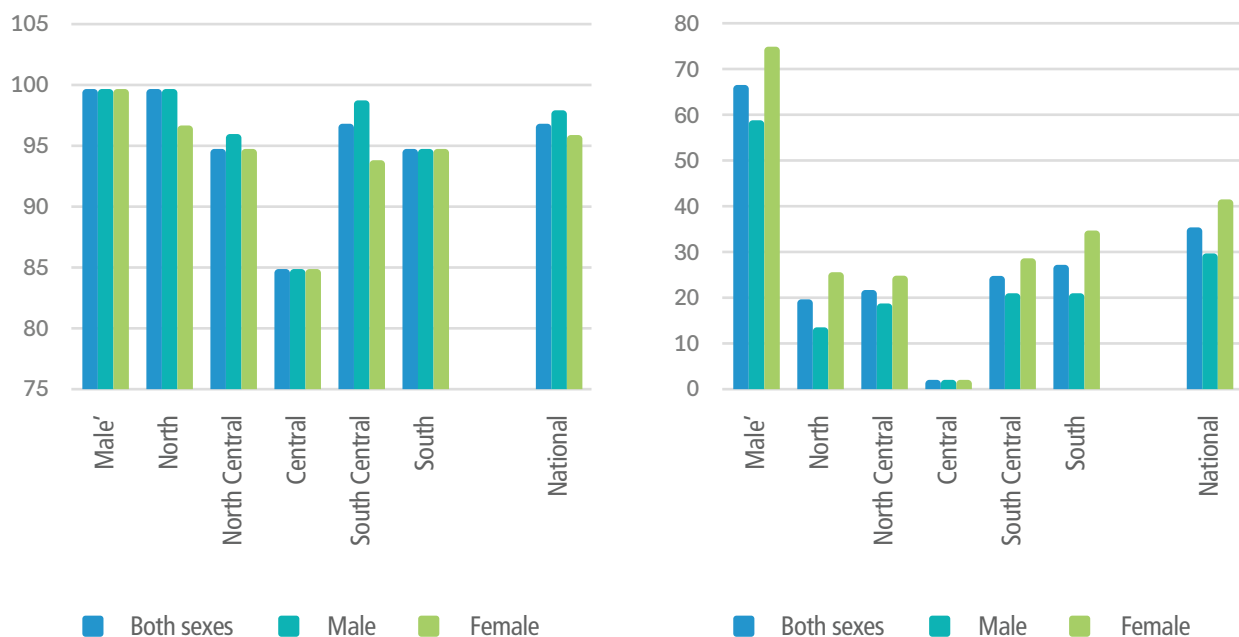
Source: Ministry of Education Statistics (2018)

At the regional level, students do not enjoy the same access to secondary education.

The Maldives has improved its enrollment rates in lower secondary education at the national level, but that composite picture hides regional disparities reflecting access

challenges (figure 4.8). Gross enrollment rates at the upper secondary level reflect dim prospects for Maldivian adolescents, with rates as low as 2 percent in the Central Region.

Figure 3.8: Subnational gross enrollment ratios (GERs) at the lower secondary education (left panel) and upper secondary education levels (right panel)



Source: World Bank staff calculation based on Ministry of Education statistics for 2019 and Maldives population census projections (2014) for the year 2019

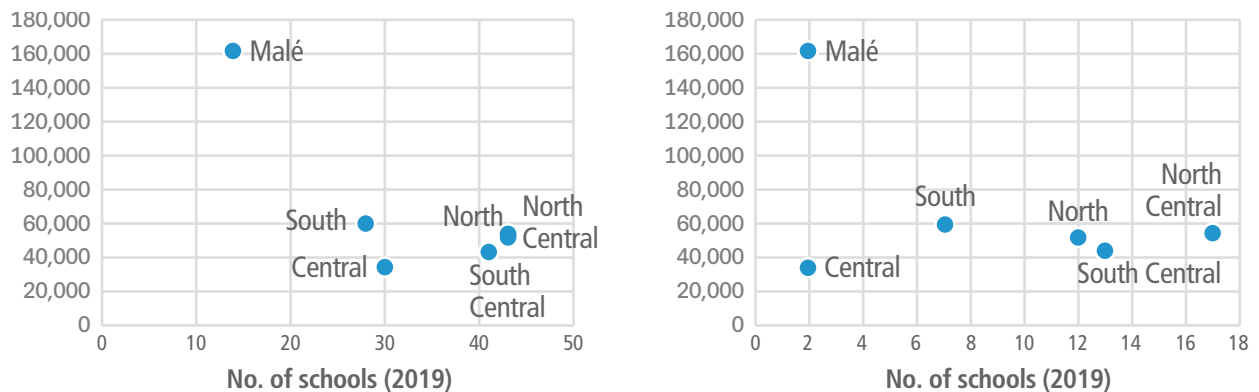
School coverage at the upper secondary level drops dramatically in comparison to primary and lower secondary levels.

Whereas the median number of lower secondary schools per region is 36, with a high of 43 schools in each of the North and North-Central Regions to a low of 14 schools in Malé, the median number of upper secondary schools per region is only 15, with a high of 17 in the North Region to a low of only 2 public schools in each of the Central and Malé Regions, which are the regions with the smallest and highest population sizes, respectively (figure 3.9). This practically makes it impossible for adolescents in these two regions to continue their education unless they migrate to another island, or enroll in distance learning (MOE and Global Partnership for Education 2019).

The geography of the Maldives and the inconvenience and cost of sea travel make it harder for students to seek secondary education on other islands.

Access to education is exacerbated by transport challenges and limited education opportunities available outside the Greater Malé area (World Bank 2021c). Almost half of the inhabited islands in the Maldives do not have proper marina facilities. Ferry services to the atolls are costly and irregular; even though several ferries are operated by either island communities, private parties, or the Maldives Transport and Contracting Company, the scheduled ferry services network in the Maldives is still very limited. Large distances, lack of economies of scale and limited economic activity on remote atolls result in high transport costs. Inter-island transport facilities are limited (FAO 2018).

Figure 3.9: Distribution of lower secondary (left panel) and upper secondary (right panel) schools across



Source: World Bank staff calculations based on Maldives Population Census 2014 and Ministry of Education Statistics (2018)

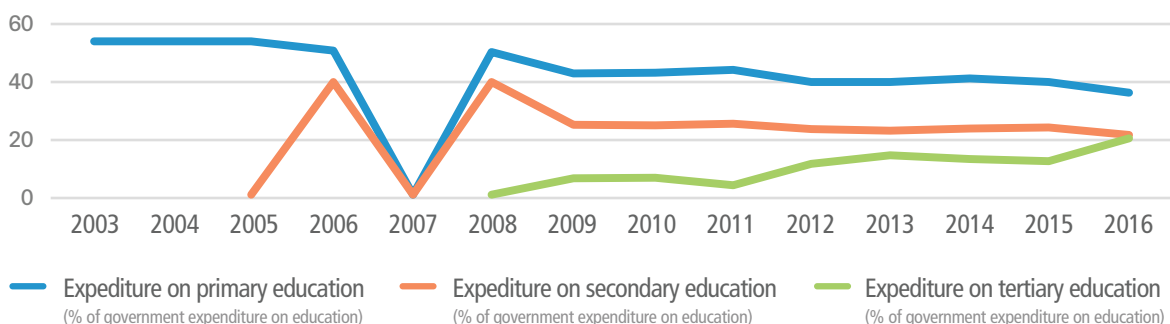
Male adolescents are also lured by the easy income that can sometimes be made from illegal activities. Gang activities often provide young men with some income, particularly those engaged in buying and selling drugs, where earnings can be significantly higher than earnings in the formal sector (El-Horr and Pande 2016). In Malé, almost 95 percent of adolescents, in conflict with the law, are out of school (UNICEF Maldives n.d.). The prevalence of drug use in Malé and the atolls was 6.64 percent and 2.02 percent, respectively, according to a survey conducted in 2011-12, and drug use was most prevalent in the 15-24

age group for both males (36 percent) and females (34 percent) (UNODC 2013).

With respect to spending on education, primary schooling constitutes the lion's share, and upper-secondary the lowest percentage.

Although government expenditures on upper secondary school have picked up during the past 15 years, it is still only 21.6 percent of the total government expenditures on education, compared to 36.4 percent on primary education (figure 3.10) at a time when UMICs spend an average of 31 percent of total government expenditures on education (World Bank n.d.d).

Figure 3.10: Education expenditure by levels as a percentage of total government education expenditure



Source: World Development Indicators



For females, social norms related to female mobility and access to SRH services affect their educational path and future productivity.

Data show that in 2019 and 2020, 95 adolescent pregnancies were reported as out of wedlock, which is high by regional standards, especially given the laws preventing child marriage (UNFPA 2020). Adolescent pregnancies put girls at risk of dropping out of school and suffering diminished employment prospects (UNFPA 2020). Prevailing structural and sociocultural barriers to access SRH information and services, and females' experience of gender-based violence, still pose challenges to women attaining their full potential in the labor market and in the public space. In 2016, 17 percent of women ages 15–49 who participated in the Maldives DHS 2016–17 reported they had experienced physical violence, and 11 percent reported

that they had experienced sexual violence. Additionally, only 37 percent of married women ages 15–49 had their requests for family planning satisfied (MOH and ICF 2018).

The COVID-19 pandemic shed fresh light on the role ICT technologies could play in education and in closing the learning gap in the country.

Although several initiatives on digital skills are reflected in the Maldives Strategic Action Plan (SAP) 2019–2023 and the Maldives Education Sector Plan 2019–2023, little is known about where implementation stands because statistics on digital skills proficiency are not available (World Bank 2021d). The limited availability of relevant data makes it difficult to provide a comprehensive assessment of the level of digital literacy and skills in the Maldives. Even though internet penetration is higher than in many countries, and mobile networks

and internet services reach every island, technological infrastructure and access to the internet are not even across the country (box 3.3) (World Bank 2023b). Access to learning during the COVID-19 pandemic, for example, was reduced, especially for

those with limited resources. To mitigate this challenge, an allowance for data charges was provided to parents and teachers to support communication, but this made only a small contribution toward the actual costs (World Bank 2023b).

Box 3.3: Digital infrastructure and skills in the Maldives

Over 60 percent of the Maldivian population now uses the internet, from 10 percent in 2006. Although the proportion of internet users per 100 in Maldives is greater than the South Asian and UMIC averages, challenges remain across gender, age groups, education level, and geography. At present, there are still large gaps in digital technology adoption across groups, based on location and level of education. For instance, while 83 percent of households in Malé have access to fixed broadband services, only 51 percent of households in the atolls do. Fixed broadband connection rates in Malé, moreover, are twice as fast. Those who tend to lack internet connection include people in the atolls, women, older adults, and the less educated.

Despite its wide geographic dispersion, the Maldives has widespread network coverage. In 2020, 100 percent of the population had 3G and 4G telephone coverage, and 31 percent had 5G coverage by the end of 2020.

Maldives needs to address some cross-cutting bottlenecks to further develop its digital economy. In particular, the government should consider taking action to (i) ensure that the digital economy is inclusive for all, regardless of age, geography, gender, or sociodemographic status, through proper access to digital tools and services, (ii) put in place a coordinated institutional strategy for digitizing public services across agencies and levels of government, and (iii) broadly develop digital capacities that go beyond basic digital literacy and include digital innovation and entrepreneurship skills, so that businesses and individuals alike can reap the benefits of the digital economy.

Source: World Bank (2021b)

Enrollment and completion aside, the quality and relevance of education is another challenge facing adolescents.

Though lower secondary education is offered in all island schools, in many of them students can study only the arts (UNICEF Maldives n.d.). Lower secondary education has also been weakened by the 2010 restructuring that was undertaken to offer Grades 1-10 in all existing primary schools, which increased access to lower secondary education, as the majority of public schools began teaching Grades 1 to 10 but had adverse effects on the quality of lower secondary education (Shafeeu 2019 as quoted by University of Bristol n.d.).

Given the importance of tourism to the Maldives economy, technical and vocational education (TVET) and training is essential to better align local labor supply with demand. Yet the sector suffers from

several shortcomings, especially in terms of the quality and relevance of content. There have been some recent efforts to address this gap, with the establishment of a network of job centers and several rounds of reskilling and upskilling programs offered by the Ministry of Economic Development and Ministry of Higher Education. The training programs have been designed based on market needs and focus primarily on diving, ICT, and accounting. These TVET programs could benefit from a decentralized that addresses local needs for accessibility and greater inclusiveness while also catering to local needs and demands, thereby building employment skills and establishing a stronger partnership with local industries and businesses (UNICEF and UNESCO 2021). A system for standards and quality control is also needed, for example, because some centers offer ad hoc courses (UNICEF and UNESCO 2021).



Source: ©Anna Jedynak/Shutterstock

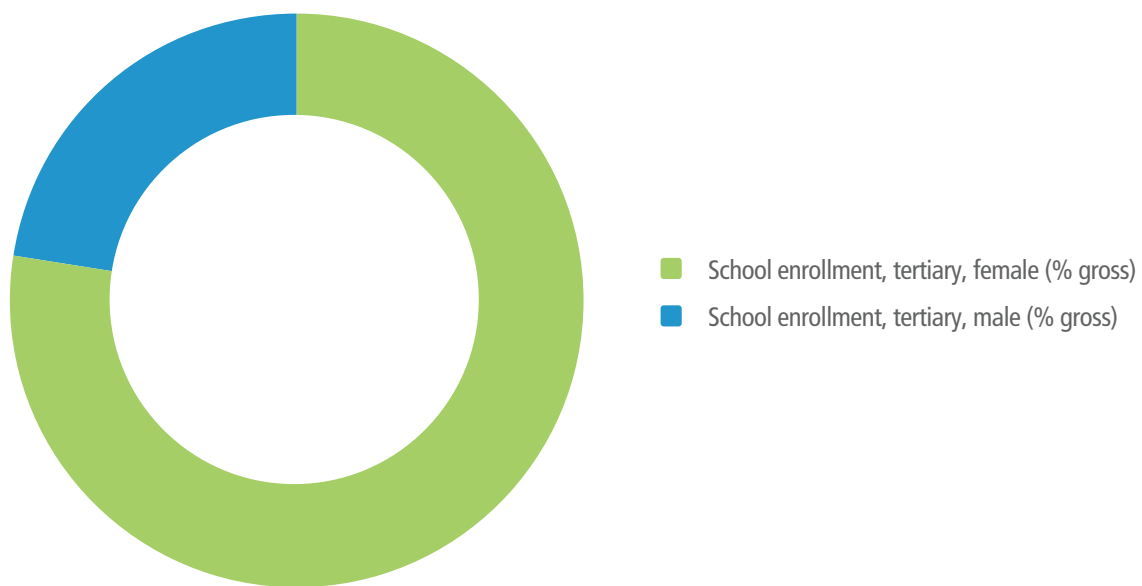
3.4 Adulthood stage (19 and older) and implications of the demographic transition

The previous sections highlighted the need to build human capital for use in the labor market. Nevertheless, as the analysis in chapter 2 (specifically, the UHCI results) illustrates, inequalities in building human capital translate into poor labor market prospects for many Maldivians. Malé leads the nation with a UHCI of 0.41, all other regions fall below the national average of 0.37.

Only a small percentage of Maldivian youth who complete secondary education enroll and complete tertiary education.²⁶ In 2019, the gross

enrollment ratio (GER) in tertiary education was 34 percent, with a GER of 67 percent for females and only 18 percent for males (figure 3.11) (World Bank n.d.d). Although this rate is high compared to the average GER in tertiary education in South Asia of 26 percent (2020), it is significantly low for UMICs, which average 58 percent (2020) (World Bank n.d.d). Limited access to post-secondary schooling outside of Malé because of the centralization of universities and colleges in the capital seems to be the main reason for the Maldives' low enrollment ratio in tertiary education.

Figure 3.11: Gross enrollment rates in tertiary education



Source: World Development Indicators

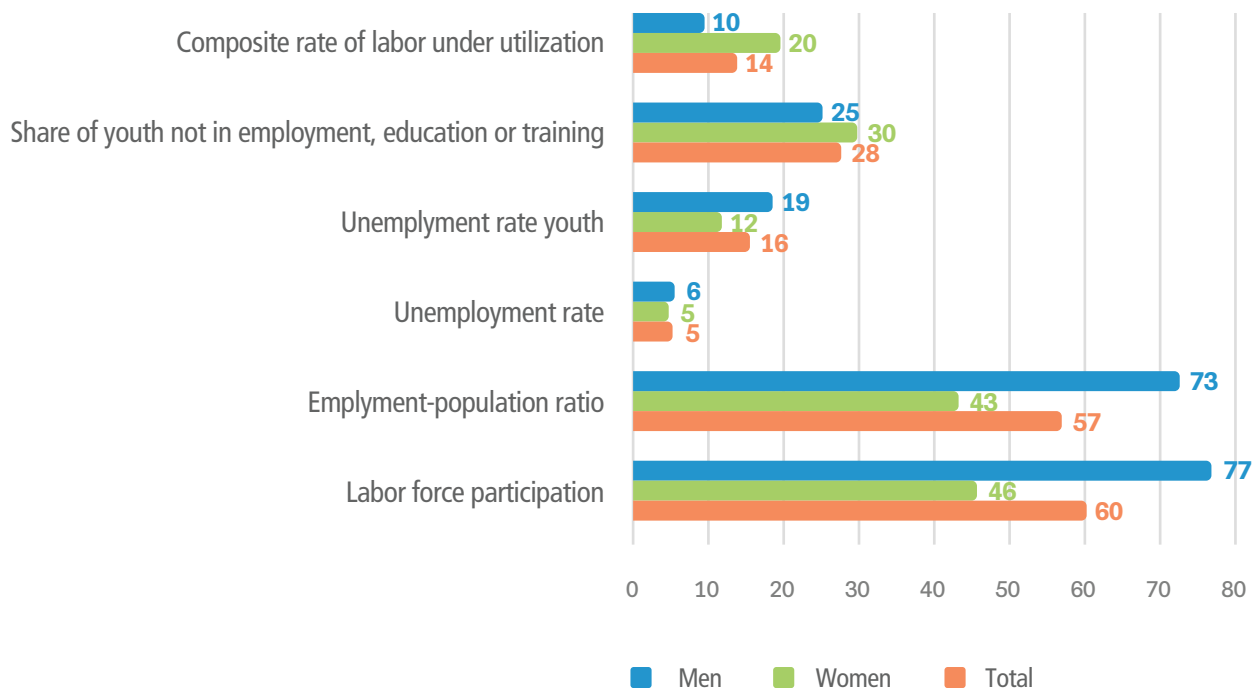
Maldivian youth who attempt to put their human capital to use by entering the labor market face mounting challenges. With a young and expanding workforce, creating enough jobs for the youth remains a priority for reaching the goal of fostering inclusion,

especially given the youths' vulnerability to high-risk behaviors. Half of the jobs in the tourism sector do not go to the local population. For Maldivian youth seeking to enter the labor market after finishing lower or upper secondary education or tertiary

education, the school-to-work transition is not an easy affair, and many must wait for opportunities to present moving in and out of economic activity in the meantime. They face strong competition from foreign labor at both the high and low ends of the job skills distribution, a saturated public sector, and low job creation in the private sector (World Bank 2017). As a result, one in four Maldivian youth is neither in employment, in education, nor in training (NEET), with rates higher among females (figure 3.12). The most common reasons male youth give for unemployment are

the lack of economic opportunities on their island of residence, and the lack of suitable employment that matches their education or training. Young females mostly mention family reasons, with 50 percent reporting household chores and childcare (World Bank 2017). Finally, although studying abroad is an option for some youth, some research suggests that girls have fewer opportunities than boys in acquiring tertiary education abroad primarily because of social norms (Chitrakar 2009 as quoted in El-Horr and Pande 2016).

Figure 3.12: Main labor market indicators in the Maldives, 2019



Source: ILOSTAT (n.d.)

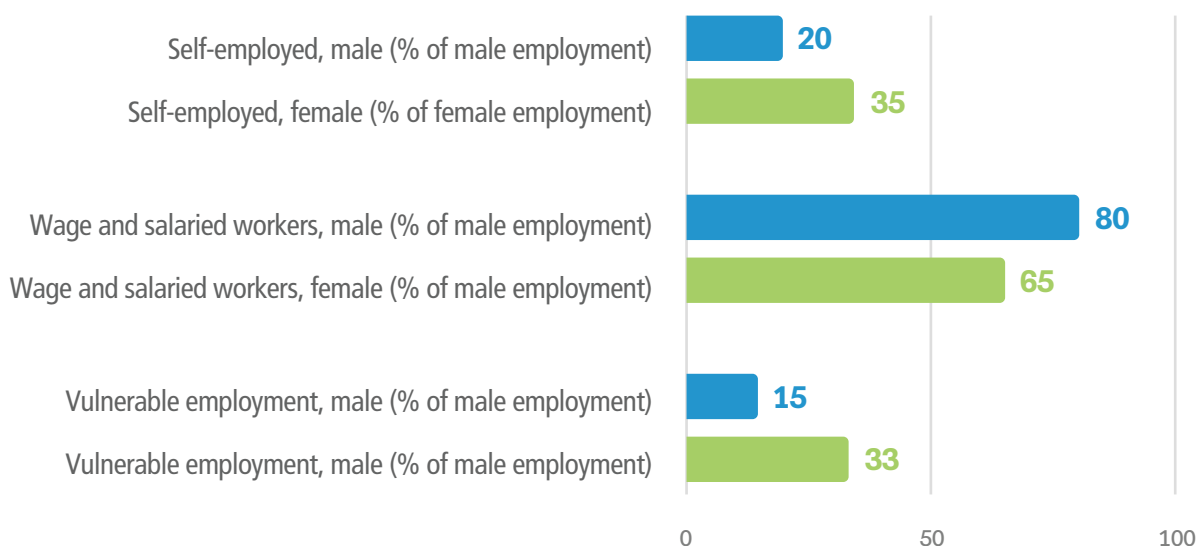
Females in the Maldives face even greater labor market challenges. Even though Maldivian females accumulate slightly more human capital than males, as evidenced in national and subnational HCIs, they fare poorer than males in labor market utilization (as discussed in chapter 2, under UHCI

calculations). Women, for example, tend to be more in vulnerable employment. More women in the informal sector only means that there are more women in vulnerable employment than men, that is, without job-security, protection and benefits (figure 3.13). The number of women in vulnerable

employment has increased as more women were pushed into the informal sector during the COVID-19 pandemic. A rapid assessment of the impact of the pandemic on the informal sector in the Maldives found that the prevalence of informal sector employment was higher among women (59 percent) than men (41 percent) across all age groups (UNDP 2022). At the same time, fewer wage-earning women means greater vulnerability to shocks, with 71 percent of informal sector workers reporting they had higher earnings before the pandemic (UNDP 2022). According to the World Bank’s most recent poverty assessment

of the Maldives (2022), involvement in primary activities such as fisheries and agriculture, or in secondary activities such as manufacturing and construction, or in any type of self-employment, is associated with a higher incidence of poverty (World Bank 2022d). The assessment also found that workers in informal employment are twice as likely to be impoverished than those in formal employment (World Bank 2022d). These are sobering statistics given the increasing number of female-headed households: 35 percent in 2009 and 44 percent in 2017 (World Bank 2022d).

Figure 3.13: Employment along gender lines (modeled ILO estimates), 2019



Source: World Bank databank based on modeled International Labour Organization estimates

Maldivian females are not all equally reaping the benefits of the country’s growth drivers. Despite being recognized as the most emancipated women in South Asia, there are far fewer women in the tourism sector than men. The greatest numbers of women work in the education, then trade,

then services, and then public administration sector, respectively, which are not growth drivers (World Bank 2017). In 2014, about 30 percent of all employed male youth worked in tourism, compared to only 5 percent of young women (World Bank 2017).

Job opportunities and choices for women are severely limited by the restrictions imposed by the familial division of labor and by religious norms. According to the 2014 Maldivian Population and Housing census, domestic chores are identified as one of the primary reasons for the high unemployment rate among women, which speaks to the gendered division of labor and the unwillingness to transform the status quo. Research conducted in 2016 shows a reduction in Maldivian women's occupational mobility compared to the past, despite booms in economic activities related to guesthouse tourism, which do not require physical movement to resort islands (Lama 2018). Most females are engaged in low-paying jobs such as cooking, washing clothes, or making thatched roofs for resorts, restricting their physical mobility within the confines of their homes. This means that the type of engagement women have with the tourism industry constricts their mobility and reinforces their confinement to the household (Lama 2018). Gender-based violence, on the other hand, ranges from emotional abuse and controlling behavior to unsolicited sex or physical or sexual violence, with grave and long-term effects on women. In a 2016 nation-wide survey on violence against women, almost 20 percent of respondents indicated that they have experienced either physical or sexual intimate partner violence (Fulu 2016). These findings are in line with statistics from the 2016/17 Maldives DHS, with the highest incidence in the Central Region.

Although tourism continues to be the main engine of economic growth, the sector offers limited employment for the local population. At a time when the country is experiencing the biggest bulge of its working-age population (WAP), the tourism sector offers few employment opportunities for a young and expanding demographic, with high reservation wages. This is despite anecdotal evidence pointing to challenges in the education system, which does not seem

to be providing young Maldivians with skills that are in demand in the labor market (World Bank 2017). With the high-end tourism sector following an enclave-based model that is reliant on FDI and foreign labor, forward and backward links between tourism and the local economy are limited (World Bank 2017).

The Maldives is undergoing a dramatic demographic transformation, with the population expected to age rapidly over the next three decades. According to population projections by the Maldives National Bureau of Statistics, about 7 percent of the resident Maldivian population will be 65 or older in 2030, and this share is projected to reach 14 percent by 2050 (National Bureau of Statistics 2018). The country has comparatively low adolescent fertility rates and little disparity in terms of sex ratio at birth. The ratio of working-age individuals to dependents in Maldives reached its expected peak at 2.9 in 2020 and is projected to decline in the coming years to 1.7 in 2050.

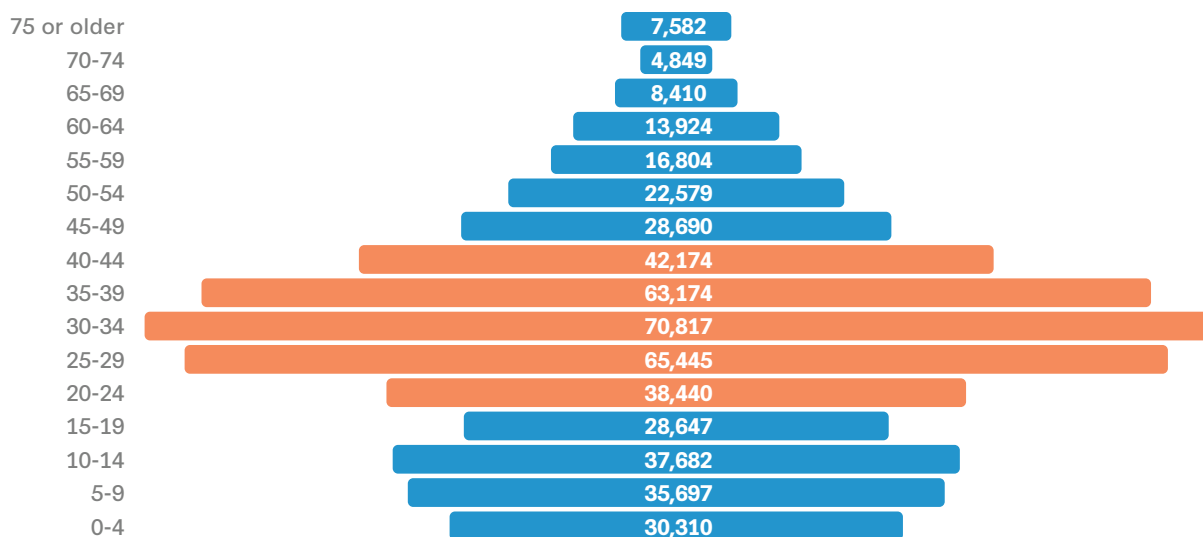
The steep increase in the aging population means more expenditure on old-age protection services, including health and social care support. The social protection system currently provides a generous non-contributory pension to the elderly, but this program is not sustainable and, as beneficiaries increase in number, its fiscal burden will increase. With the increase in life expectancy and lower fertility rates, and the pattern of internal rural-urban migration, the country can benefit from re-skilling programs that help seniors remain economically and physically active and reduce their dependency, in addition to revisiting the benefit level of the existing social pension program in a manner that improves its sustainability.

At the same time, the rise of noncommunicable diseases in the Maldives increasingly threatens the ability of the WAP to fully reap the returns on their human capital. In 2019, 85

percent of deaths were from noncommunicable diseases, compared to an average of 65 percent in South Asia (World Bank n.d.d). Chronic noncommunicable diseases (NCDs) have become the major cause of morbidity and mortality in the Maldives, triggered by changes in nutritional habits that have dramatically increased the prevalence of excess weight and hypertension (Cazzaniga et al. 2022). The 2021 *Global Nutrition Report* shows limited progress toward achieving diet-related NCD targets, and no progress toward achieving the target for obesity, with an estimated 11.4 percent of adult women and 5.8 percent of adult men living with obesity. The prevalence of obesity in Maldivian women is higher than the regional average of 8.7 percent, but the prevalence in Maldivian men is lower than the regional average of 6.0 percent. Diabetes affects 10.7 percent of adult women and 11.1 percent of adult men (World Bank n.d.d). Around 21 percent of men and 27

percent of women have high blood pressure. The high prevalence of obesity, diabetes, and hypertension is related to lifestyle-based risk factors. In 2020, 35.6 percent of men in the Maldives were smokers. On average, Maldivians eat vegetables only three times in a week, significantly lower than nutrition guideline recommendations. To combat the growing NCD burden, the government has launched various health-promoting lifestyle programs, targeting tobacco, sugary drinks, nutrition, and physical exercise. In 2022, the GoM launched the National Multi-Sectoral Action Plan to control NCDs in collaboration with the World Health Organization and the Maldives National University. The aging demographic trend will also result in increased demands on the healthcare system due to the expected increasing prevalence of NCDs as the population ages, adding more strain to an already burdened and inefficient health sector.

Figure 3.14: Maldives population structure by 5-year age group, 2022

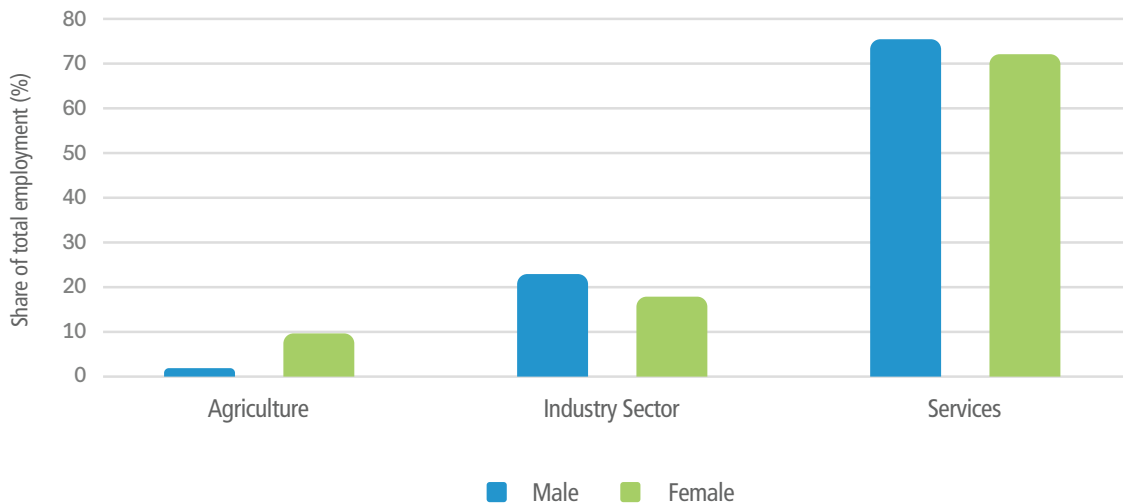


Source: Maldives Population and Housing Census 2022 Provisional Results

The demographic shift will, undoubtedly, also put substantial strain on the Maldivian labor market. Although the construction and tourism sectors have been the main drivers of economic growth, both sectors typically rely on foreign workers. The rapid growth of high-end tourism services has outpaced the capacity of the Maldivian labor market to provide the internationally competitive technical, vocational, and soft skills required

by the employers. Policies that support job creation and private-sector development (with better skills matching) will become even more important as the old age dependency ratios change, and the children of today will have to shoulder the burden of caring for a vast elderly demographic. In this respect, the emergence of a buoyant guesthouse segment is a promising step.

Figure 3.15: Male and female employment by economic sector, 2019 (modeled ILO estimates)



Source: World Bank (n.d.d)



Chapter 4

Overview of the Education, Health, and Social Protection Sectors

Addressing some of the remaining education, health and labor market challenges Maldives is facing demands effective and efficient delivery of services, which in turn requires a renewed attention to strengthening human development systems and social sector spending. This chapter provides an overview of the education, health, and social protection sectors in Maldives. It will delve into the drivers and challenges of building human capital throughout the life cycle upon the foundation of functioning, efficient delivery systems and social sector spending.

4.1 The importance of service delivery for human capital accumulation and utilization

Achieving good education and health outcomes requires effective and efficient delivery of services particularly to the poor and vulnerable population who have limited means to complement the services received through individual investments. In Maldives, geographical disparities in outcomes reflect even greater challenges in service delivery.

In the education sector, as in health and social protection, there is no one-size-fits-all solution. However, certain characteristics enable and promote education trajectories that ensure student learning. Although school enrollment is a necessary condition for generating learning, it is not a sufficient one. Quality of learning is essential, and an effective education system measures, monitors and reforms learning through the design and regular implementation of standardized evaluations. Test results are needed to guide policy design and evaluate its effectiveness, align incentives among the different stakeholders, implement improvement plans at the school level, and hold education providers accountable. All the inputs of an effective education system, from technology to the national curriculum, must be linked and aligned with student learning. Moreover, effective education systems should also have elements specifically designed to address the participation and learning constraints faced by girls and women, including tailored curricula, teacher training, links with the social protection system, and better links with trainings (including TVET) and the skills the job market demands.

In the health area, an effective healthcare system should ensure accessible, affordable, high-quality, and safe services, as well as a network of healthcare facilities that guarantee access.

A well-functioning healthcare system responds in a balanced way to a population's needs and expectations by (i) improving the health status of individuals, families and communities; (ii) defending the population against what threatens its health; (iii) protecting people against the financial consequences of ill health; (iv) providing equitable access to people-centered care; and (v) making it possible for people to participate in decisions affecting their health and the healthcare system. Keeping healthcare systems on track requires a strong sense of direction and coherent investment in the system's various building blocks: governance, human resources, financing, technology and information systems, and service delivery.

In social protection, robust and resilient delivery systems are critical to ensure all poor and vulnerable have access to timely and quality services.

Robust social protection systems assist individuals to manage risks and volatility, protect them from poverty and inequality, and help them to access economic opportunities. Social protection systems enable the effective and efficient delivery of programs across social assistance, social insurance and labor markets. In Maldives, having an adaptive social protection system is particularly important given the country's high exposure to shocks. Indeed, an adaptive social protection system can rapidly provide assistance to affected populations in the aftermath of a shock, which is critical to protect and restore human capital.

4.2 Overview of the education sector

The Maldives has a well-established general education system that aims to deliver 14 years of free education.

Children in the Maldives benefit from universal access to primary and lower secondary education—and participation in lower secondary education is well above predicted levels for the country's per capita income. Net enrollment at the primary and lower secondary levels is near-universal. This is particularly remarkable at the lower secondary level, where participation rates were much lower just a decade ago. In 2009, for example, the NER at the lower secondary level was 84 percent (MOE 2020). Moreover, these levels are above those predicted for the country's income level and those of most small-island states, including states with much higher per capita incomes (World Bank 2021a).

In contrast, enrollment drops sharply at the higher secondary level, putting the Maldives behind most of its economic peers and all other SIDS; with significant gender disparities (albeit favoring females) in higher secondary access.

Net enrollment in higher secondary education drops sharply to 44.5 percent (MOE 2019). This is well below the average for UMICs—at about 82 percent (UNESCO 2020). This rate is also lower than predicted for the country's level of per capita income, and well below that of all SIDS, including some that are substantially poorer such as Belize, Cabo Verde, Dominica, and St. Lucia (World Bank 2021). As in many other countries, a gender gap emerges in favor of females at higher levels of the education system, where the NER for females stands at 50 percent, in contrast to an NER of 39 percent for males (MOE 2019).

The quality of education is another key challenge for the Maldives, as evidenced by uneven progress on the most recent national assessment of learning outcomes (NALO), as well as the national and subnational HCI findings. The Maldives has implemented a standardized assessment of learning outcomes for Dhivehi (the national language), English, and mathematics, administered at the end of two key stages—Grades 4 and 7—in the national curriculum framework. A review of the results over time indicates a downward trend in performance in mathematics for both Grade 4 and 7, with a decline of approximately 5 percentage points in Grade 4 mathematics, from 57.50 to 51.1 percent, and a decline of 3 percentage points in Grade 7 mathematics, from 44.6 to 41.1 (NALO 2021). In Dhivehi, there is a downward trend at the Grade 4 level (from 62.2 in 2015 to 52.75 percent in 2021) and a slight upward trend at the Grade 7 level (from 56.76 in 2015 to 58.11 in 2021) (NALO 2021). There is a promising upward trend in English performance for both Grade 4 (from 52.9 in 2015 to 57.54 in 2021) and Grade 7 (from 51.10 in 2015 to 60.91 in 2021) (NALO 2021), possibly reflecting the much greater consumption of English-language material on the internet by young students and their greater participation in English-language conversations on social media, these days starting from a very young age. Still, as the latest NALO results indicate, there is no clear improvement in education quality over time and, if anything, the trend (other than in English) seems to be downward.

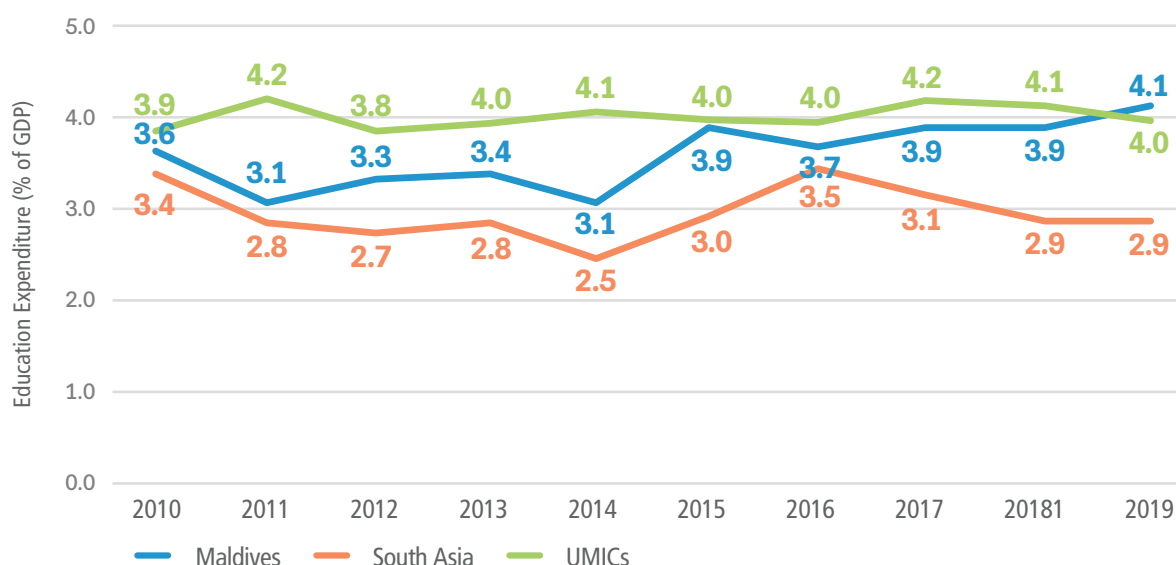
Enrollment rates in higher education have steadily increased over time but still fall below international levels. An increase in demand for higher education has led to a steady increase in the gross enrollment ratio (GER) in higher education, from 6 percent in 2001 to 10 percent in 2005, and to 21 percent in 2011. The latest data show that

the GER in tertiary education is approximately 34 percent (World Bank 2023a). These levels exceed the South Asia average (26 percent) but is low compared to the average for middle-income countries (38 percent), for UMICs (approximately 54 percent), and for high-income countries (80 percent) (World Bank 2023a). In line with global trends, there is also a significant gender difference in enrollment, with females enrolling at much higher rates than males (67 percent females vs. 18 percent males) (World Bank 2023a). The relatively low enrollment rate in higher education has been attributed to the dual challenge of limited access to higher (tertiary) education opportunities and low enrollment in higher secondary education.

4.2.1. Financing

In the past, the Maldives invested significant public resources in education, but over time, the level of investment has declined and plateaued. In the early 2000s, Maldives' average public expenditure on education was 18.4 percent of the government budget, or over 5 percent of GDP. However, in the 2017–2019 period, spending averaged 4 percent of GDP (World Bank 2019). Today, even though the GoM's expenditure on education still exceeds that of its regional counterparts, the Maldives lags other UMICs and SIDS in education spending as a proportion of GDP. As a percentage of the government's budget, the country spends about 11.9 percent on education (World Bank 2023c). Again, this surpasses the average spending in the SAR (which stands at 10.6 percent) but falls short of the level of other UMICs (at 15 percent) (World Bank 2023c). International norms suggest a range of 4–6 percent of GDP and 15–20 percent of the government's budget as a benchmark for sound education spending. The Maldives falls short of both these benchmarks.

Figure 4.1: Expenditure on education (as a percentage of GDP)



Source: Authors, based on World Bank 2023.

4.2.2. Institutions

General Education

There are roughly 348 schools, catering to nearly 89,500 children (and most of them offer different stages of schooling.

Approximately 82 percent of students attend 213 government schools (National Bureau of Statistics 2020). The other 18 percent attend either community, public-private partnership, or private schools. General education comprises four stages: pre-primary (nursery, lower kindergarten, upper kindergarten, ages 3-5); primary (Grades 1-7, ages 6-12); lower secondary (Grades 8-10, ages 13-15); and higher secondary education (Grades 11-12, ages 16-17).

Pre-primary education is offered through a network of government, community, and private schools. Before 2016, pre-primary education was the responsibility of island

councils and were offered primarily through community and private schools.¹⁹ With the implementation of the 2012 Preschool Administrative Act, which provisioned access to two years of free pre-primary education to children ages 4 and 5, responsibility of pre-primary education was placed under the Ministry of Education with an objective to ensure more effective and systematic management and support (MOE 2019). This led to a reduction of central government support to community schools administered by the island councils, and integration of pre-primary classes into the existing government primary and secondary schools on all the islands except Malé.

Access to pre-primary education is ensured on all inhabited islands, and nearly all children enter Grade 1 with a pre-primary education background. In 2018, there were 20,411 children ages 3-5 years enrolled in pre-primary education, of whom 47 percent were enrolled in government schools, 35 percent in private

¹⁹ Under the Decentralization Act (2010), responsibility for pre-school service delivery was placed on the councils.

schools, and 18 percent in community schools. Of the new entrants to Grade 1, 99.6 percent of children had attended pre-primary.

Although access has been maintained over time, the provision of adequately trained pre-school teachers in government schools in the outer atolls needs to be improved. In 2018, there were 1,339 pre-school teachers spread across 325 schools. About 11 percent of them were untrained, all of whom were in the outer atolls. The overall student-teacher ratio (STR) in pre-school education is 15:1, which, although low by international standards, is unevenly spread across the country. For example, among government schools, the STR is much higher (18:1), compared to just 13:1 for private and community schools. Similarly, private and community schools on average have more than double the number of teachers compared to government schools (MOE 2018).

The Maldives' ability to recruit and retain qualified local teachers has been a significant constraint on its efforts to improve education quality. The quality of teachers is perhaps the most crucial variable in the education quality equation. Recruiting and retaining qualified teachers has proven to be a long-standing challenge for the Maldives—particularly in the more geographically remote islands (World Bank 2011). The GoM, however, has made a concerted effort to ensure that there are adequately trained teachers in the education system. As a result, the number of untrained teachers has dropped from 23 percent in 2002 to 6 percent in 2018 (MOE 2019). Still, a shortage of qualified teachers has meant that the Maldives has long relied on expatriate teachers. Although the reliance on them has lessened over time, expatriate teachers still make up about 20 percent of the teacher cadre in government schools and an even greater share at the secondary school level: approximately 43 percent of teachers at the lower secondary level, and 46 percent at the higher secondary level, are foreigners (World Bank 2021).

Technical Education and Vocational Training (TVET) and Higher Education

The TVET system in the Maldives is at a developmental stage, combining various approaches ranging from standalone institutional provision to the integration of technical and vocational education streams in the secondary school system. TVET is widely recognized as an important tool for productivity enhancement; and there is a well-established correlation in several countries between the proportion of TVET students at the post-secondary level (tertiary) and per capita income (Pavlova 2014). The GoM recognizes this and has made some progress in developing its TVET system with a multi-pronged approach. Institution-based public provision of TVET is delivered through the Maldives Polytechnic (MP), which is under the purview of the Ministry of Higher Education. The MP is committed to providing free training and skills development to all qualified citizens regardless of age, sex or social status. There are also several private institutional providers. TVET is also integrated into the secondary education system, through the Business and Technology Education Council (BTEC) program, introduced in 2014 (MOE 2019). BTEC is an international qualification offered in schools as an alternative to the more academically oriented International General Certificate of Secondary Education (IGCSE) and General Certificate of Education (GCE) Ordinary Level courses, and the GCE Advanced Level course. BTEC is offered as a stream subject when students join Grade 9 after completing Key Stage 3 (Grade 8). As of 2019, there were 179 schools offering BTEC O-Level and 44 schools offering BTEC A-Level programs (MOE 2019). Another school-based TVET program is Dhasvaaru, a government initiative aimed at providing an alternative path for vulnerable students to augment their possibility of employment or further studies after school. Dhasvaaru is offered to students in their final year of secondary school (MOE 2019).



Source: @pisaphotography/Shutterstock

Although the government has made progress in expanding TVET, access to and equity in its provision remain a significant challenge. Overall enrollment in TVET has risen substantially because of the mainstreaming of TVET programs into the secondary school system. Still, there are clear disparities in access to TVET between Malé and other atolls—student enrollment rates in TVET are about the same in Malé as in all the other atolls combined, even though 62 percent of the population live in the atolls with significant gender disparities in access to TVET, along with low enrollment and high dropout rates of females (MOE 2019). Increasing the participation of women

in TVET programs would be an important step in decreasing the gender gap in labor force participation.

The quality and relevance of TVET is also constrained by the government’s capacity to enforce standards and properly regulate the sector. Although the Maldives has a standards and regulatory framework in place for TVET provision, the capacity of the Maldives National Skills Development Authority (MNSDA), the main agency responsible for regulating the TVET, is limited.²⁰ Improvement in the quality of TVET requires, among other things, a systematic process of developing and maintaining occupational standards

20 The TVET authority (TVETA), established in 2011 under the Ministry of Education, was reconstituted as MNSDA under the Higher Education and Training Act in 2021.

and related assessment and certification processes to ensure the quality of training and assessment and to strengthen links with industries to align the training with evolving market needs. Additionally, there are a wide number of TVET providers in addition to the government, creating another set of challenges for enforcing existing standards (MOE 2019). Weak targeting and adaptation of TVET programs to local needs is another serious quality challenge. As the Maldives looks to develop its human capital, addressing the equity gaps, increasing access and improving the relevance and quality of TVET programs will be an important element of its human capital development strategy.

Diversification and relevance are also serious challenges for the higher education system. The Maldives has a considerable number of students who go abroad for higher education. The reasons for this are varied, but perceptions of quality appear to play a significant role (World Bank 2011). A limited number of domestic degree-granting programs, along with a limited choice of study options, also play a role. As discussed, the government has attempted to address some of these supply-side constraints by establishing two degree-granting universities. Still, diversification (that is, expanding the range of higher education programs) remains an issue. For instance, although there are many programs offered in Business, Administration and Law, there are comparatively few in Agriculture, Fisheries, or Veterinary science—even though fishing is a major source of income (MOE 2019). Higher education courses need to be designed and developed in diverse areas that will help students develop the skills and competencies required for an increasingly knowledge-driven local and global economy.

4.2.3. Strategies and programs

Recognizing the important role education plays in developing human capital, the GoM has undertaken a series of reforms and policy measures aimed at improving both access to, and the quality of, the education system. The “No Child Left Behind” policy framework, launched in 2013, articulates the government’s commitment to 14 years of free education, starting with pre-primary education at age 4 (MOE 2019). With this initiative, the government has affirmed the importance of leveling the playing field from the early years by integrating pre-primary education into the free public education system, thereby increasing access to pre-primary education for all children. Before this, pre-primary education was delivered largely through private and/or community schools (MOE 2019). Other initiatives under this umbrella include those aimed at improving the country’s TVET system and programs that offer some form of education to children with special needs. To further promote equity, the MOE has also launched a multi-grade teaching strategy to address the challenge of low student enrollment and small student populations in schools in remote atolls that have a wide grade and age range. This strategy deploys additional investments in classroom setups, in ICT, and in targeted in-service teacher training for approximately 41 schools (MOE 2019).

In 2015, the Maldives launched a comprehensive national curriculum framework reform as well as the NALO, both aimed at improving the quality of education, but challenges remain in the effective implementation of the new curriculum. The new curriculum framework is a sweeping reform designed to revamp the curriculum for all grades, and to improve expected learning outcomes, key skills, and core competencies (MOE 2019). The reforms

were aimed at increasing the curricular focus on developing higher-order cognitive skills in line with global best practices. Teaching and learning materials, teacher training programs, and pedagogical approaches were also overhauled as part of the reform (MOE 2019). At the same time, the country launched its first NALO with the aim of providing feedback on the quality of learning outcomes for Grades 4 and 7 in English, Mathematics, and Dhivehi. The NALO has been administered in 2015, 2016, 2017 and 2021. The lack of improvement in learning outcomes, as suggested by the recent 2021 NALO results, indicates that the new curriculum is yet to produce the expected improvement in learning outcomes. To further support quality enhancement, a Quality Assurance Department was established in 2015 in order (i) “to understand the findings and recommendations of the external school reviews and the NALO results, (ii) to develop or reorient appropriate policies and actions to improve education service delivery at the classroom level aiming toward improved and equitable learning outcomes” (MOE 2019). Although Maldives has introduced a TIMSS module in its national assessment program, it has not yet participated in any international assessments, which will be an important next step in benchmarking the quality of its education system against that of other countries.²¹

Maldives has also established a National Qualifications Framework (MNQF) to synchronize education qualifications in a unified structure, facilitate internal quality assurance, and provide a framework for linking education and training more closely to the labor market, but the utility of the framework is constrained by gaps in the regulatory infrastructure. The MNQF

was launched in 2001 by the Maldives Qualifications Authority and has been refined multiple times since then. It is designed to bring all recognized qualifications into a single unified structure, with procedures to support and facilitate the development of a quality assurance mechanism for postsecondary education and to provide a framework to help employers easily recognize the qualifications offered in the Maldives and abroad. NQFs are generally designed with the aim of raising skill levels and improving the relationship between education, training, and work (Allais 2017). However, even though the MNQF has been developed, other supportive aspects of the higher education regulatory framework, such as the human resource capacity of the MQA to manage the MNQF, also need to be developed further (MOE 2019).

The creation of new alternative paths to higher secondary and higher education has increased participation levels, but high dropout and low completion rates at higher levels continue to be an issue for human capital development. There are two major public examinations in the education system. At the end of lower secondary education, students sit the GCE Ordinary Level examinations, the IGCSE, or the Senior Secondary Certificate (SSC) examinations. Then at the end of the two-year higher secondary education stage, they sit the GCE Advanced Level examinations, or the Higher Secondary Certificate (HSC) examinations, to qualify for entry into higher education. The government requires five or more O-Level passes (a pass is a minimum of a C grade) for entry into the higher secondary level. Students who complete lower secondary education but are not inclined or able to complete traditional higher secondary

21 The 2021 NALO included Grade 4 TIMSS Math items.



education can join vocational streams such as BTEC. Essentially, a student who participates in the BTEC program and achieves a Level 4 has completed the equivalent of a higher secondary education diploma and is positioned to qualify for entry into higher education. As an alternative path to entry, students who are at least 18 and have a minimum of one year of work experience are eligible to enroll in higher education programs (MOE 2019). These alternate streams have facilitated increased participation in higher secondary and higher education, but low completion and graduation rates from the upper secondary level and from higher education are still compromising human capital development in the country. Further analysis of this issue

and proper intervention are necessary if the country is to fulfill its human capital development goals.

Maldives is seeking to modernize and develop its higher education system in the face of rising demand, but quality-controlled expansion poses a major challenge for the system. Demand for higher education has been rising, evidenced by a steady increase in enrollment rates over time. Moreover, as the economy modernizes, employers are also increasingly seeking more sophisticated skills that require higher education. The country's higher education system consists of three types of institutions: Tier I: Universities (government-funded), Tier II: Degree-Granting Colleges/Institutions (few

government-based, mostly private sector-based), and Tier III: Training Institutions (offering short-term programs, some in the government sector but the majority in the private sector) (MOE 2019). To increase the public share of growth in higher education, the GoM established the Maldives National University, and the Islamic University of the Maldives through legislation in 2011 and 2015, respectively. Additional demand has led to a sharp rise in the number of higher education providers, and as a result, besides the above-mentioned institutions, there are more than 200 private institutions offering courses up to diploma level in various fields throughout the country. This, however, has created a fragmented and dispersed sector in need of greater, more uniform regulation.

4.2.4. Efficiency of the education system and transition to the labor market

The Maldives has several mechanisms to monitor and improve the education system that have proven useful for promoting efficiency at its lower levels. Maldives Education Management System (MEMIS) is the primary tool the Maldives uses for monitoring and reporting all education-related data. Launched in 2017, it allows the Ministry of Education to collect and analyze data from schools, teachers and students in real time. It provides schools with a complete data management system that enhances the efficiency of school and central-level management (MOE 2019). To ensure that all children of school age are enrolled in schools, MEMIS is updated with records from the Department of National Registration. MEMIS is also used to monitor and track services for children with special needs. However, the utilization of MEMIS is still at a developmental stage—mainly

because of gaps in human resource capacity and training to deploy the system (MOE 2019). In 2016, the Maldives also implemented an attendance policy—leading to a reduction in school absenteeism by 30 percent in the first two months of its introduction. The policy has also helped communities to track out-of-school children (MOE 2019). The MOE also conducts a risk assessment for Grade 1 students as an early-warning measure to identify students at risk of failing in school and to provide early intervention. As of 2019, approximately 6,616 students have been assessed as being at risk; 92 percent of them have received support and have been moved to the zero-risk category (MOE 2019). High primary and lower secondary completion rates, and the reduction in the number of out-of-school children (OOSC), indicate that the system’s efficiency is clearly strong at lower levels.

Still, the sharp drop in the higher secondary NER, and low enrollment, retention, and completion rates both at the higher secondary and tertiary levels, signal that the system is less efficient at higher levels—and that it poses a serious challenge for human capital development. As previously discussed, the NER drops sharply at the higher secondary level, from essentially 100 percent at the primary and secondary levels to 44.5 percent at the higher secondary level. In 2018, the NER at the upper secondary level was 44.5 percent (50.4 percent for girls, 38.9 percent for boys). These upper secondary enrollment rates are below those of small-island nations and other countries in the region that have lower per capita income than the Maldives. Moreover, there is a large gap in the number of students who pass the O-levels and those who go on to sit for the A-level examinations. Additionally, students who exit the system at the secondary level or at the higher education level are among

the youngest in the workforce—indicating a serious loss in terms of human capital development (MOE 2019).

The mechanisms for establishing effective links between industry and training are weak, at best. No systematic training needs assessment is conducted to align courses and priorities in the higher education sector with the needs of the labor market in a way that ultimately facilitates a demand-driven higher education system (MOE 2019). Not only is there an absence of any systematic, large-scale assessment of training needs, but other mechanisms such as Employment Sector Councils (ESCs) need to be further strengthened and sustained. Reestablished in 2021 under the aegis of MSNDA, the six ESCs—Tourism, Fisheries and Agriculture, Transport, Social, ICT and Construction—are expected to identify the skill requirements within their relevant sectors. Mechanisms to support close links between industry and training need to be developed and strengthened to ensure that the higher education and post-secondary training systems are adequately equipping students for the labor market.

The large number of expatriates employed in prominent sectors such a tourism points to the challenge the Maldives faces in producing human capital with the skills and competencies to meet the demands of its growing economy and compete in the global economy. In 2018, the government produced a skills shortage list, identifying over 300 areas that had insufficient numbers of skilled locals. As of 2019, the unemployment rate stood at approximately 3 percent and an additional 6 percent are in the potential labor force (Maldives Bureau of Statistics 2019). In other words, in all, approximately 9 percent of the labor force is underutilized. At the same time, the Maldives has more than

170,000 expatriates in its labor force—mainly in tourism, banking, finance, construction, trade and shipping, and education (MOE 2020). This speaks to the shortage of Maldivians with the skills to fill available jobs. This mismatch would seem to suggest that employers in these key sectors are looking for “soft skills” that young labor market entrants lack in the Maldives (World Bank 2014). Two decades ago, manufacturing provided the most employment opportunities for Maldivians. Now, tourism has taken over as the highest source of employment opportunities. But more than half the workforce in this sector are expatriates (Thashkeel 2018), suggesting that the education and training systems are unable to produce workers with the necessary skills to satisfy employment needs.

4.3 Overview of the health sector

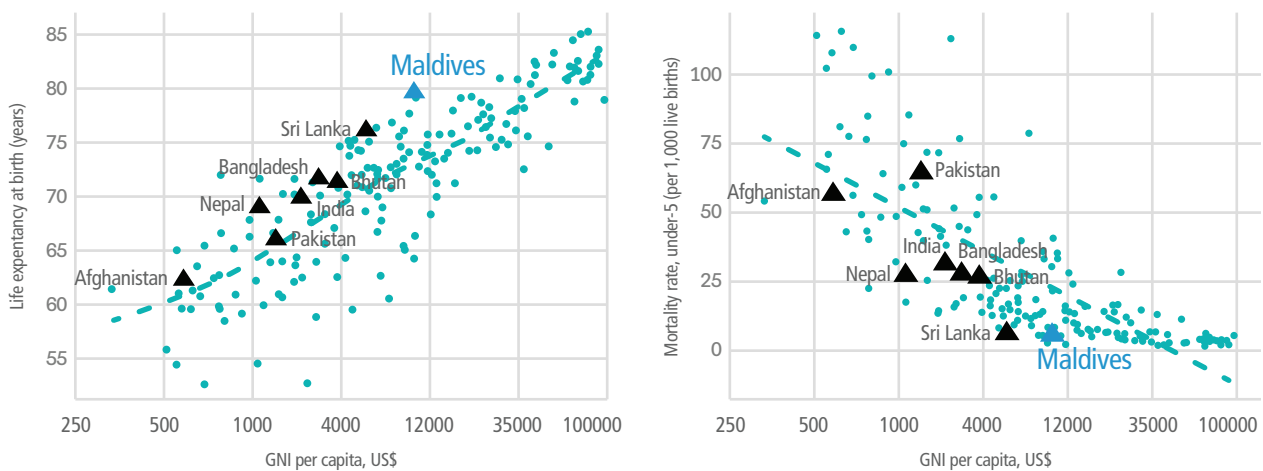
The Maldivian health system has far outperformed nearly all its South Asian neighbors in health outcomes. Maldives is also the only South Asian country to have achieved all of its health-related Millennium Development Goals (MDGs) and mortality-based Sustainable Development Goals (SDGs) ahead of time (World Bank 2022g).

With over half a million people, the Maldives has made impressive progress in improving its health sector indicators over the past several decades. Infant mortality rates declined by more than 90 percent between 1990 and 2021, from 63 to 5 per 1000 live births, respectively. The country has also significantly reduced maternal mortality, with rates halving between 2000 and 2017, from 125 to 53 per 100,000 live births. Additionally, immunization coverage and institutional births are close to 100 percent, indicating that the country provides adequate access to essential healthcare services. The incidence of tuberculosis is low, with only 38 cases per

100,000 people in 2021, and stunting among children under 5 is at 14.2 percent as of 2020, a decrease from 19 percent in 2009. In 2020, expected life expectancy at birth reached 80 years, and the under-5 mortality rate was 6.4 per 1,000 births, both figures outperforming most regional peer countries and global comparator countries with similar

levels of economic development (figure 4.3). As in other UMICs, the key health challenge is noncommunicable diseases (NCDs), which account for 80 percent of all deaths and 73 percent of the burden of disease as measured in disability-adjusted life years (or DALYs).

Figure 4.2: Life expectancy at birth and the under-5 mortality rate (global comparisons), 2020

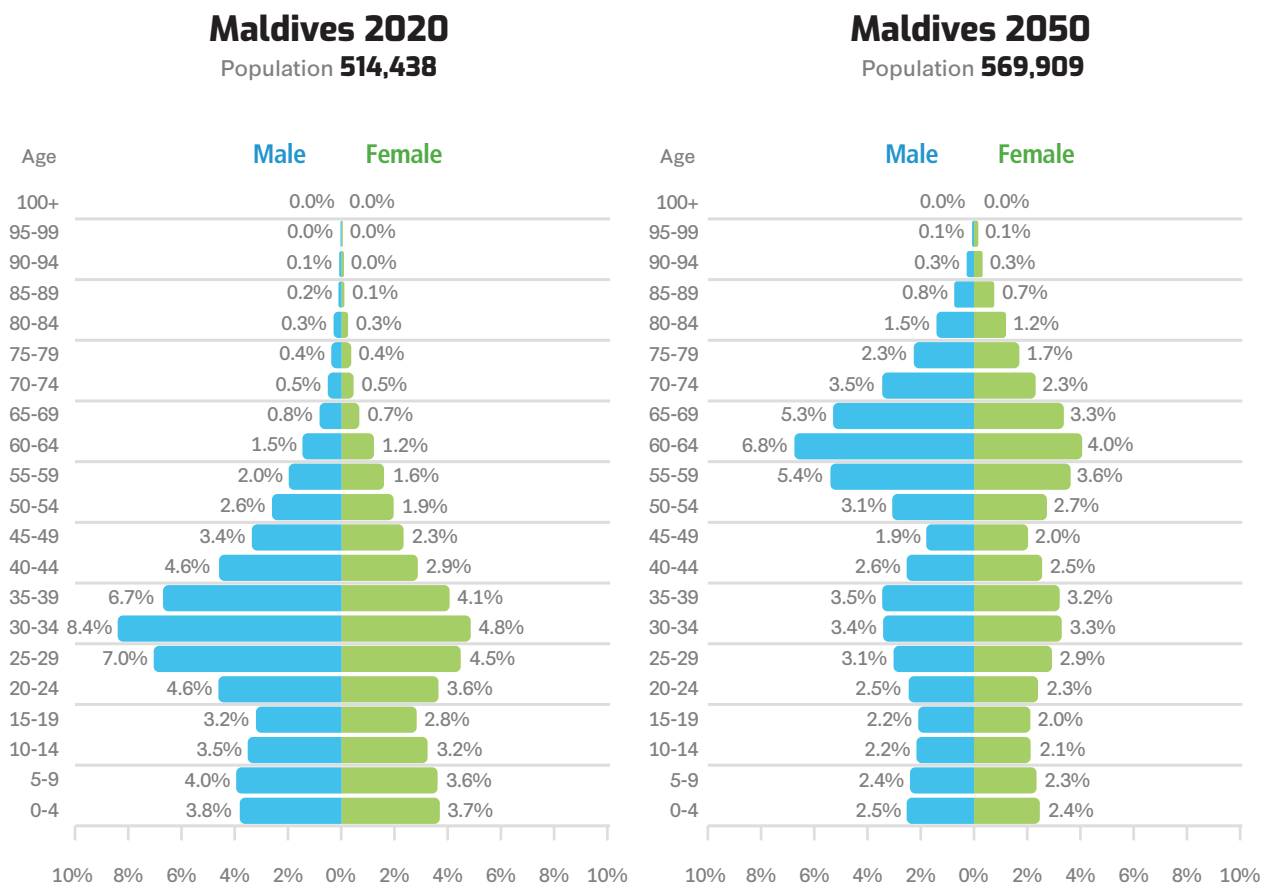


Source: Global Health Expenditure Database (n.d.)

With a high life expectancy and yet relatively young population, Maldives is in the midst of a demographic shift, and the population as a whole is expected to age over the next three decades. In 2020, the population pyramid had a broad bulge of young adults, indicating a high proportion of younger individuals and a low proportion of the elderly (figure 4.3). However, projections indicate that, by 2050, the pyramid is expected to become more rectangular, reflecting an aging population structure. This trend

points to the need for Maldives to address its ongoing demographic transition, which is expected to result in increased demand for healthcare because of the expected growing prevalence of NCDs in an aging population. Compounded with increasingly unhealthy lifestyle choices such as smoking, consumption of sugary drinks and processed foods, and low intake of vegetables and fruits, Maldives' demographic transition will further exacerbate its NCD burden.

Figure 4.3: Projected changes in Maldives' population pyramid between 2020 and 2050



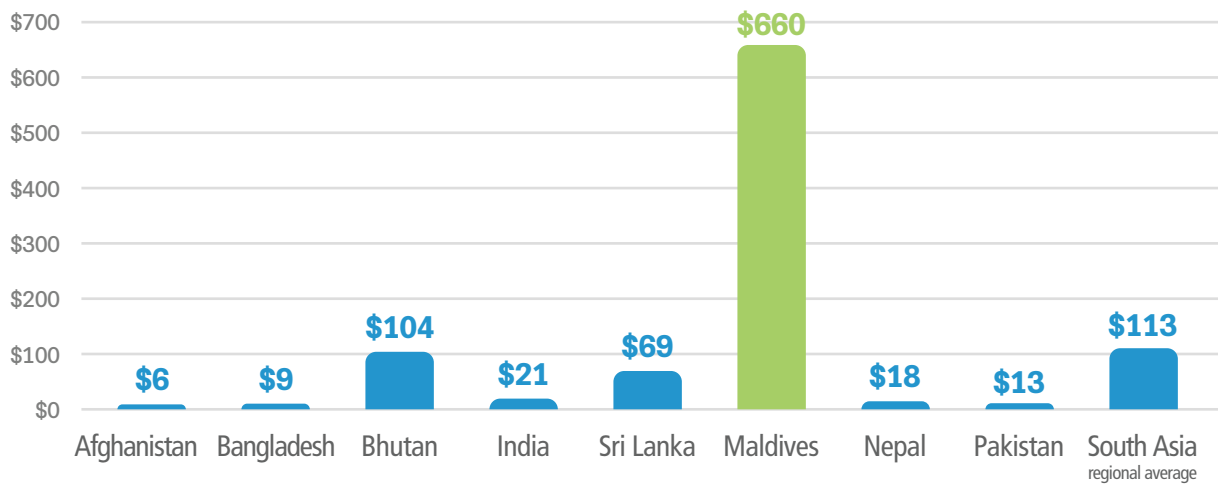
Source: PopulationPyramid.net (n.d.)

4.3.1 Health financing

Per capita spending on healthcare in Maldives far outstrips and, indeed, dwarfs average per capita expenditure in other South Asian countries (figure 4.4). Although this does reflect the government's high commitment to health, the high costs are also driven by the country's unique geography and healthcare delivery system. Island countries with small, dispersed populations typically have higher costs of health service delivery and face challenges in balancing adequate access

to services and economies of scale. In addition, the healthcare system has high transport costs and relies heavily on a revolving door of foreign health workers with high turnover. (In 2019, 64 percent of medical doctors and 42 percent of nurses in the country were expatriates.) This highlights the need for Maldives to invest in developing its domestic healthcare workforce to reduce its dependence on foreign professionals and to create a more sustainable healthcare system.

Figure 4.4: Regional comparison of per capita government health expenditures, 2020

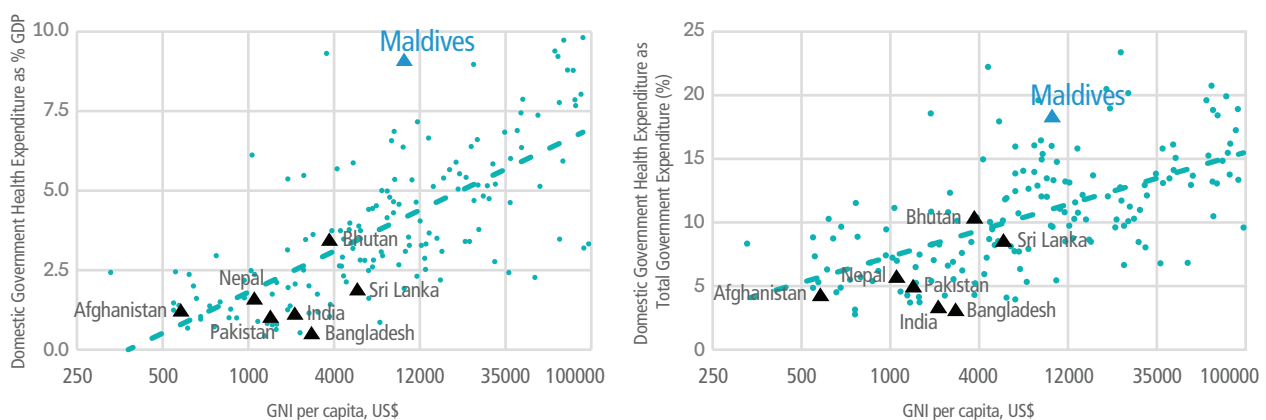


Source: Global Health Expenditure Database (n.d.)

The health sector is currently a major spender of the government’s fiscal budget, and so the sustainability of health spending needs to be closely monitored. In 2019, if the Aasandha health insurance program is included, the government spent approximately 20 percent of its budget, equivalent to 7 percent of GDP, on healthcare. In 2020, this rose to an estimated 9.07 percent of GDP because of the pandemic

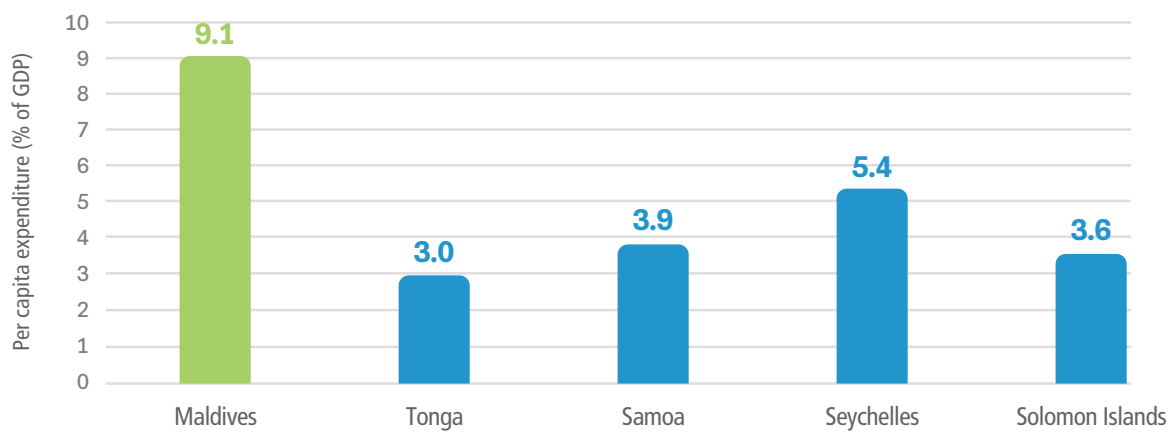
and the decline in GDP due to the contraction of the tourism sector. This proportion is notably higher than that of other South Asian nations, and higher than even the average for high-income economies, which allocate 14 percent of their budget and 5.5 percent of GDP, to healthcare (figure 4.5). Compared even to other small island countries, Maldives’ health spending is high from every perspective (figure 4.6).

Figure 4.5: Domestic government health expenditure as a share of GDP and of total government expenditure



Source: WHO Global Health Expenditure Database (2020)

Figure 4.6: Regional comparison of government health expenditures as a share of GDP, 2020



Source: Global Health Expenditure Database (n.d.)

The Aasandha health insurance program has been instrumental in protecting households from unforeseen health-related financial burdens. A national (non-contributory) health insurance scheme, Aasandha has evolved into a universal healthcare program available to all Maldivians. Citizens, including those overseas, can get immediate treatment at empaneled hospitals in the Maldives, Sri Lanka, or India provided they obtain pre-authorization from a 24-hour helpdesk. Data from the Household Income and Expenditure Survey (HIES) show a marked decrease in out-of-pocket (OOP) health costs in the Maldives, from 9 percent of total household expenditure in 2009 to 2.2 percent in 2019. This decline can be attributed to the implementation of the Aasandha program, which provides coverage for expenses that were previously not covered. The largest decrease in OOP costs occurred among lower-income households, resulting in a more balanced distribution of public health spending across the various income groups by 2019. The occurrence of catastrophic OOP costs, an SDG indicator (SDG 3.8.2), also showed a decline of at least 50 percent in all income quintiles between 2016 and 2019.

Improvements in domestic healthcare capacity in Maldives have yielded positive outcomes for efficiency and equity. Recent analysis of HIES data reveals a significant decline in OOP spending on overseas care between 2016 and 2019. The percentage of households with at least one overseas outpatient visit in 30 days almost halved, from 6.2 percent in 2016 to 3.3 percent in 2019, while domestic outpatient visits increased from 48 percent in 2016 to 55 percent in 2019. This shift from overseas to domestic care-seeking can be attributed to factors such as increased local healthcare capacity—the number of general practitioners rose from 97 in 2016 to 254 in 2019—and the expanding coverage of Aasandha, which has improved access to local high-end private healthcare. This trend has positive implications for both efficiency (since overseas care is more expensive to reimburse) and equity (since overseas care is less accessible to poorer households) in health spending.

It has been observed that government agencies' expenditures have exceeded their budgeted allocations, as demonstrated by a consistently high budget execution rate well over 100 percent. The trend of overspending has been particularly pronounced at the Indira Gandhi Memorial Hospital (IGMH) and the

National Social Protection Agency (NSPA). For example, IGMH overspent by 213 percent in 2014 and 237 percent in 2016, while NSPA overspent by 211 percent in 2017. The Public Expenditure and Financial Accountability (PEFA) performance assessment report revealed that, in both 2018 and 2019, the actual expenditure on healthcare exceeded the allocated health expenditure budget. The absence of financial discipline and stringent accountability in these organizations could significantly impact the country's overall health expenditure.

The government is expected to increase its investment in the healthcare sector, with a plan to allocate more funds to capital investments.

This includes raising the proportion of Public Sector Investment Program (PSIP) funds from 11 percent to 15 percent for 2022–2024, resulting in an annual budget of US\$76 million (1.16 billion MVR). The additional funds will be directed toward constructing new hospital facilities on 13 islands and the continued development of cancer and tertiary hospitals in Gan, the southernmost island of Addu Atoll. As a result, there will likely be an increase in health spending in the medium term because the new facilities will require additional staff and the purchase of medical equipment and consumables. These investments will contribute significantly to improving healthcare accessibility for Maldives residents, particularly those in remote areas.

In 2020 and 2021, the government allocated significant fiscal resources to tackling the pandemic and strengthening the country's pandemic response capacity and future preparedness. In 2020, the Maldives spent US\$188 million, or 5 percent of annual GDP, on its COVID-19 policy response, higher than most South Asian countries. Of this amount, roughly half was directed toward health and social spending, with the remainder going toward economic support for households and firms. Most of the health and social spending was allocated to procuring medical supplies and expanding the capacity

of the healthcare system. The Maldives spent US\$74 million acquiring medical consumables, test kits, and personal protective equipment in 2021. An additional US\$25 million was used to purchase diagnostic and medical equipment, construct medical and quarantine facilities, and build intensive care units (ICUs) in eight atolls and a 300-bed ICU facility in Hulhumalé, in the south of North Malé Atoll. The government also disbursed US\$17 million to over 13,000 medical and frontline workers, with most of these expenses incurred by the Ministry of Health and the National Disaster Management Authority.

4.3.2 Institutions and health service delivery system

The Maldivian healthcare delivery system is largely public sector-driven. Several private healthcare providers support and supplement the public healthcare system with diagnostic and curative services and medicines. There are also several healthcare nongovernmental organizations (NGOs). Most health services are concentrated in the Greater Malé Region. Government policy aims to establish at least one public health facility, such as a hospital or a health center, on each inhabited island, and tertiary services at selected urban locations. The government uses a grading system to decide each facility's service level, employing criteria such as the location, number of beds, patient load, and services rendered. The facilities are organized in a three-tier system: primary care through health centers at the island level (Grades 1, 2, 3, and 4), secondary care delivered via atoll and regional hospitals (Grades 1, 2, 3, and 4), and tertiary care available at four tertiary hospitals, the Indira Gandhi Memorial Hospital (IGMH) being the country's main referral health facility. The three other tertiary-level hospitals are ADK Hospital and Tree Top Hospital in Greater Malé, and Addu Equatorial Hospital in the south of the Maldives. There are also six regional and 14 atoll hospitals in strategic locations around the country, which serve as the first referral points for each inhabited island.

The national healthcare service delivery system is supported by the government’s universal health insurance scheme, Aasandha. The tax-funded scheme provides essential healthcare services to all Maldivian citizens, including outpatient services, inpatient care, medications, consumables, emergency evacuations, and costs associated with accessing healthcare abroad when services are not available locally. However, the dispersed population, high prices of medicines, and shortage of locally trained healthcare staff—in 2019, 64 percent of medical doctors and 42 percent of nurses were expatriates—contribute to the high cost of service delivery. Moreover, the generous service coverage under Aasandha, and the scheme’s limited cost management features, pose further challenges to the long-term sustainability of the country’s current healthcare financing system.

Improving healthcare delivery, particularly in the atolls, is critical to reducing Maldives’ spatial disparities. The government has largely protected households against high out-of-pocket expenses, but there is a need for more comprehensive health sector reforms to address inefficiencies and strengthen healthcare services in the community health centers and in the atoll hospitals. The pandemic underscored the importance of investing in emergency preparedness to respond promptly and efficiently to health crises, particularly given the tourism sector’s high vulnerability. By strengthening existing health services and introducing new services such as telemedicine, the country will be better equipped to respond quickly to health emergencies, thereby sustaining the competitiveness of its high-end tourism industry.

4.3.3 Efficiency in health spending

The Maldives faces several challenges in achieving efficiency in the healthcare sector. Key factors affecting the efficient delivery of services include the rising costs associated with

the Aasandha health insurance program, the high cost of pharmaceuticals, and challenges in hospital management. In addition, Maldives has a hospital-centric healthcare system, with less focus on prevention and primary care. To create a more efficient and more cost-effective health system, there needs to be a shift toward strengthening prevention, health promotion, and early disease detection and management in the primary care settings.

Although the Aasandha program has helped to reduce household out-of-pocket health expenditure and to shield households from catastrophic health-related spending, it has also led to budgetary pressures on the government. Compared to many social health insurance programs globally, Aasandha has more generous service coverage: it reimburses inpatient and outpatient medical costs and pharmaceutical costs in public and private health facilities, as well as transport costs and overseas treatment costs, on a fee-for-service basis. Despite the ongoing efforts to contain Aasandha expenditures and make it more efficient, the program has limited tools for strategic purchasing and expenditure containment. The escalation in costs has been primarily driven by the rising expenses of outpatient care and medication, rather than an increase in the number of beneficiaries. From 2014 to 2019, the Aasandha scheme sustained a compound growth rate of 18 percent per year in expenditures. Over the same period, the number of beneficiaries increased by only about 3 percent per year. High drug prices—on average 15 to 75 times higher than international benchmarks—are largely attributable to the absence of robust procurement and purchasing methods, according to a 2018 World Bank comparative study (“Maldives Health Sector Expenditure Review,” 2018 internal document cited in World Bank (2022e)). Between 2017 and 2019, spending on drugs and medical consumables rose by 24 percent annually on average. The government’s plan to impose a maximum ceiling on Aasandha’s reimbursements of pharmaceutical drug retail costs is a commendable measure that would

likely effectively reduce fiscal pressure on the government, but its implementation has been delayed since April 2022. To achieve cost savings, the government is also exploring the possibility of bulk procurement of major drugs.

4.3.4 Health strategy and policies

Maldives' health sector is currently guided by the National Health Master Plan, 2015–2026. The plan, which supports several of the SDGs, focuses on the quality of healthcare and the ease of access for all. It further mandates the strengthening

of the regulatory frameworks, which led to the enactment of the Health Services Act and the Health Care Profession Act. The Health Services Act (29/2015) directly addresses the framework for healthcare services. It uses a quality-of-care framework to assess and improve health facilities to ensure universal health coverage. The Health Care Profession Act (13/2015) provides guidelines on working in the healthcare profession in the Maldives, determines the mandate and executive powers of councils responsible for the monitoring and implementing of the profession, and defines the guidelines and standards they are subject to.

4.4 Overview of the social protection sector

Box 4.1: Why social protection matters for human capital

Social protection comprises a variety of policy tools—from cash transfers to the poor and people with disabilities, to social care services for vulnerable populations, from employment and labor market programs to unemployment insurance and old-age pensions. Although not explicitly included in the calculation of the HCI, social protection plays a major role in helping households build and protect human capital. This occurs through both (i) programs that protect the poor and the vulnerable (through cash transfers and social care services) and (ii) programs that support human capital formation.

For instance, while cash transfers to the poor and the vulnerable can ensure basic income security, social care services, on the other hand, can offer households parental advice on childbearing and child raising, stimulate the use of health and education services, provide information on nutrition, and nudge parents to use cash transfers to invest in their children's future.

Well-designed cash transfer programs provide vulnerable households and people with disabilities with financial stability; but also support better early childhood and nutrition practices, greater use of health and education services, and reduced reliance on child labor. Many social assistance programs also add accompanying measures to direct transfers that can enhance human capital formation, such as providing premiums to children who regularly attend school. Unemployment benefits can be linked to participation in skills development programs that equip jobseekers with newer or higher-quality skills, in the best case leading to new, more productive, and better-paying job matches.

When social protection is provided in response to economic shocks or natural disasters, it can also protect consumption and mitigate the need for households to engage in negative coping strategies that may affect their wellbeing, undermine their children's future, or degrade their human capital. Many cash transfer programs have flexible rules that can be modified to quickly respond to crises; and for middle-class households, unemployment insurance protects household consumption and human capital during crises by smoothing income during times of job loss.

Social protection programs also support employment and youths' transition into the labor market, making it more likely that investments in human capital will be fully used. Social protection and employment programs promote the creation of more and better jobs, and help vulnerable populations women, youth, marginalized groups, the poor, and older citizens access jobs. Job-finding services include profiling, intermediation services, and skill enhancement training programs.

Lastly, social protection is a core pillar of social policy, tying in education and health. It protects people from falling into poverty and destitution, helps them cope with adverse idiosyncratic or systemic shocks, smoothens consumption over their lifetime, promotes human capital accumulation, and facilitates access to jobs. Not surprisingly, as with education and health systems, social protection systems vary by context. Yet, an effective system should be (i) adequate, aligning the level and generosity of support with the of need; (ii) effective, (iii) equitable and (iv) financially sustainable.

The social protection sector in the Maldives comprises a menu of social assistance programs (mostly categorically targeted conditional transfers), a very generous pension scheme, food programs, and universal health insurance. Social spending on transfers, subsidies, and insurance is an important element of Maldivian policy. In 2021, the allocation for social protection exceeded 7 percent of GDP. Although the country's health insurance and old-age income support programs are comprehensive and provide significant benefits to citizens, it has left little fiscal space for direct cash transfers (safety nets), which in 2018 amounted to only 0.3 percent of GDP. The country is transitioning away from reliance on price subsidies for electricity, food and fuel, which are inefficient and costly and expose the budget directly to external price shocks.

Defining exactly which programs are social protection programs is not straightforward. The National Social Protection Framework, launched in January 2023, defines social protection somewhat narrowly to cover social assistance and social insurance that ensure basic income security across the life cycle and protect against sickness, injury, and unemployment. It does not include labor market programs and social care services that are typically part of social protection. Universal subsidies for fuel, electricity, water, food, and transport are also excluded from this new definition of social protection. What follows, below, describes a broader array of programs what is covered in the definition in the National Social Protection Framework.

4.4.1 Financing social protection expenditures

In 2021, Maldives allocated 7.72 percent of its GDP to social protection—a very high figure in international terms—concentrated on just a few programs: social pensions, subsidies, and a health insurance program. Social assistance, including expenditure on subsidies, accounts for 4.77 percent of GDP, of which 0.63 of a percentage point represents additional expenditures incurred in

response to the COVID-19 pandemic. A large part of the social assistance spending—1.88 percent of GDP—is on social pensions, including allowances for groups other than the elderly, such as single women and persons with disability. Another 2.95 percent is earmarked for social insurance, mainly comprising the health insurance program Aasandha, the Maldives Retirement Pension Scheme (MRPS), and the Other Pensions program. Labor market programs are nascent in Maldives.

Table 4.1: Expenditures in 2021

Programme	Budget 2021 MVR million	% of category	% of social protection	% of budget	% of GDP
Single parent	60.00	1.89	1.17	0.17	0.09
Foster parent	2.85	0.09	0.06	0.01	0.00
Disability allowance	250.00	7.89	4.88	0.72	0.38
Food Assistance	0.25	0.01	0.00	0.00	0.00
Medical welfare	110.00	3.47	2.15	0.32	0.17
Basic pension	937.40	29.60	18.28	2.69	1.41
Electricity subsidy	427.70	13.50	8.34	1.23	0.64
Water subsidy	21.00	0.66	0.41	0.06	0.03
Food subsidy	365.35	11.54	7.13	1.05	0.55
Fuel subsidy	366.40	11.57	7.15	1.05	0.55
Pre-school grants	21.00	0.66	0.41	0.06	0.03
Therapeutic devices	33.00	1.04	0.64	0.09	0.05
Flexible welfare	3.00	0.09	0.06	0.01	0.00
School breakfast	148.10	4.68	2.89	0.43	0.22
COVID support	421.00	13.29	8.21	1.21	0.63
Social assistance total	3,167.05	100.00	61.77	9.10	4.77
No COVID	2,746.05	100.00	58.35	7.89	4.14
Aasandha	1,313.50	67.02	25.62	3.78	1.98
MRPS	251.00	12.81	4.90	0.72	0.38
Other pensions	395.40	20.17	7.71	1.14	0.60
Social insurance total	1,959.90	100.00	41.65	5.63	2.95
Unemployment	-	0.00	0.00	-	0.00
Labour market total	-	0.00	0.00	-	0.00
Overall total	5,126.95		100.00	14.74	7.72
No COVID	4,705.95		100.00	13.53	7.09

Source: Government of Maldives (2023)

Job centers add a third important institutional pillar to social protection. The job centers, which are being rolled out under the Ministry of Economic Development, are responsible for delivering employment services and verifying eligibility for the proposed unemployment benefits scheme.

Child protection services are the responsibility of the Ministry of Gender, Family and Social Services (MoGFSS). The main service delivery points are the Family and Childrens Service Centers, located in every atoll. Schools and health centers are obligated to report cases of child abuse to social workers. The MoGFSS also runs a child helpline (1412) and an online reporting app. Services for those with a disability are shared between the MoGFSS, NSPA, and the Disability Council. There is no single agency tasked with overseeing all social protection policies and programs.

4.4.3 Government strategy and approach

Social protection in the Maldives has a comparatively strong legislative and strategic policy basis. It is governed by various laws, including the Pensions Act and the 2014 Social Protection Act. The Social Protection Act lays out the overall vision and framework for the delivery of social protection programs. The Act aims to

- Offer citizens social protection assistance to overcome poverty shocks and difficult conditions
- Reduce the gap between the rich and the poor
- Give all citizens equal access to the country's resources
- Provide assistance to citizens who do not have the means to meet their basic needs

The Act identifies specific groups of citizens considered to be in need of assistance. These include single parents looking after children on their own, those who do have no one to look after them (the “destitute”), psychiatric patients, children and the caretakers of children who do not receive support from their parents (foster children), owners of small- or medium-size businesses operating in various industrial sectors that may require assistance due to a difficult incident; and students.

The Pensions Act governs both contributory and non-contributory pensions. A new bill proposes to introduce an unemployment benefits scheme to strengthen social security for workers, which would be a new milestone.

The National Social Protection Framework, launched in January 2023, states the objective of social protection in Maldives to be to protect everyone from life cycle shocks, including those suffering specific shocks or distress. It envisions a three-tier social protection system: 1) social assistance comprising access to healthcare and income security across the life cycle, 2) mandatory social insurance comprising pensions, unemployment benefits support for sickness, maternity, and so on, and 3) voluntary social insurance, which provides additional benefits for those who choose to contribute.

4.4.4 Programs and services

The four main social assistance programs administered by the NSPA are:

- i. The Single Parent Allowance: a targeted conditional cash transfer program of 1,000 MVR (US\$65) per child (below 18 years of age)
- ii. The Foster Parent Allowance: a monthly allowance of 1,000 MVR per foster child (below 18) and 500 MVR (US\$32.50) for a guardian or foster parent

- iii. The Disability Allowance
- iv. The Food Subsidy Program: a targeted conditional cash transfer program (40 MVR per person and a maximum of 240 MVR (US\$15.60) per household).

Both the Single Parent Allowance and the Foster Parent Allowance are conditional on school attendance and on children receiving required vaccinations and attending regular health checkups. The health conditionality is checked only at the time of application (by looking at vaccination cards) and is followed up only every two years. Overall, school attendance condition is not closely monitored nor enforced. The disability allowance is not targeted while the others are based jointly on an income test (per capita income of less than 45 MVR /day) and a proxy means test score. NSPA also has plans to introduce programs for the destitute and mentally ill, but these have not yet been instituted. In principle, NSPA could introduce additional benefits for students and small business owners, but at present has no plans to do so.

The social assistance programs have the most generous benefits in the South Asia region. Monthly transfers range between 1,000 MVR (US\$65) per child per month for the foster/single parent allowance, and 5,000 MVR (US\$325) per month for old-age pensioners.

Nevertheless, the cash transfer programs are narrowly targeted, covering only 3.9 percent of the total population. For instance, in 2022, the Single Parent Allowance and Foster Parent Allowance covered only 1.6 percent of the population. In terms of the coverage of the poor, they covered 4.2 percent of those in the poorest quintile of the income scale, and 2.5 percent in the second-poorest quintile. The disability allowance reaches 1.98 percent of the total population: 7.3 percent of the poorest 20 percent, followed by 4.3 percent of the second-poorest 20 percent. The food assistance program reached only

0.09 percent of the population. The most recent COVID-19 response, an income support program transfer, covered only 22,941 individuals.

Pensions

The Maldives has an excellent pension system comprising a social pension, a top-up pension, and a well-integrated public and private sector contributory system, the MRPS, managed by the MPAO. The social pensions, which dominate social protection expenditure in Maldives, are among the largest in the South Asia region. The Old-Age Pension Scheme guarantees all citizens 65 and above a minimum monthly income of 5,000 MVR (US\$325), comprising a 2,300 MVR (US\$150)/month Basic Pension, and a 2,700 MVR (US\$176)/month top-up called the Senior Citizens Allowance. The old-age pension, categorically targeted by design, is the least progressive of benefits: only 43 percent of pensioners come from the bottom 40 percent of the distribution (**SPJ SAR BOOK**). Both payments are pensions-tested, meaning that they are conditional on other pensions being below 5,000 MVR (US\$325) but do not consider other household income. The MRPS defines the contributory pension scheme for all civil servants and formal private sector workers (roughly 40 percent of the population). In addition to the MRPS, the Maldives provides *Other pension* benefits to public service retirees, in effect creating a provision of “double pensions.” The persistence of “double pensions” for some government agencies that provided full benefits under the scheme in place before the 2009 reform and, in addition, provide full benefits under the scheme established in 2009, raises equity concerns.

The national (non-contributory) health insurance scheme, Aasandha—discussed in subsections 4.4.1 Health financing and 4.4.2 Institutions and health service delivery system—has evolved into a universal healthcare program available to all Maldivians. Citizens, including those overseas, can receive

immediate treatment at empaneled hospitals in the Maldives, Sri Lanka, or India provided they obtain pre-authorization, available from a 24-hour helpdesk. Although this falls under the health sector, given its universal nature, it is also included in the Public Expenditure Review (PER) under social protection. Expenditures on the universal health insurance scheme have consistently risen. There is a case for revisiting and rationalizing the program from both a targeting perspective and a program operations perspective. Savings from a streamlined Aasandha program could be redirected to broaden the coverage of safety net programs. Measures to improve people's access to the disability certification process would also help improve safety net coverage.

Subsidies

There is a wide array of subsidies in place (including on electricity, water, food, and fuel) that form a major component of public expenditure in the country. The Social Protection Act envisions many forms of assistance to be provided through subsidies. The subsidy bill as a percent of GDP almost

doubled from 3 percent of GDP in 2019 to 5.7 percent in 2022, mainly due to a sharp rise in fuel subsidies, adding further pressure to an already high public debt ceiling (see figure 4.7 below for more detail on subsidy costs).

Electricity and fuel subsidies increased from 18 percent in 2019 to 60 percent in 2022. Within this mix, the share of electricity remained about the same, at 18 percent of the total subsidies, while that of fuel increased from 0 percent to 43 percent. The category called “fuel subsidy” was introduced as a line item for the first time in 2021. Fuel subsidies are basically the difference between the landing cost of fuel and the cost at which this fuel is sold to electricity utility companies. The diesel component of the subsidy is large while the subsidy on gasoline at the pump is relatively small. On electricity, there is a two-stage subsidy: fuel is offered at reduced cost to the utility company, and a tariff-subsidy is offered to the end user. The tariffs follow an “increasing block tariff” price structure, though there are significant regional variations. During COVID-19, there was an additional subsidy offered on tariffs to end users.

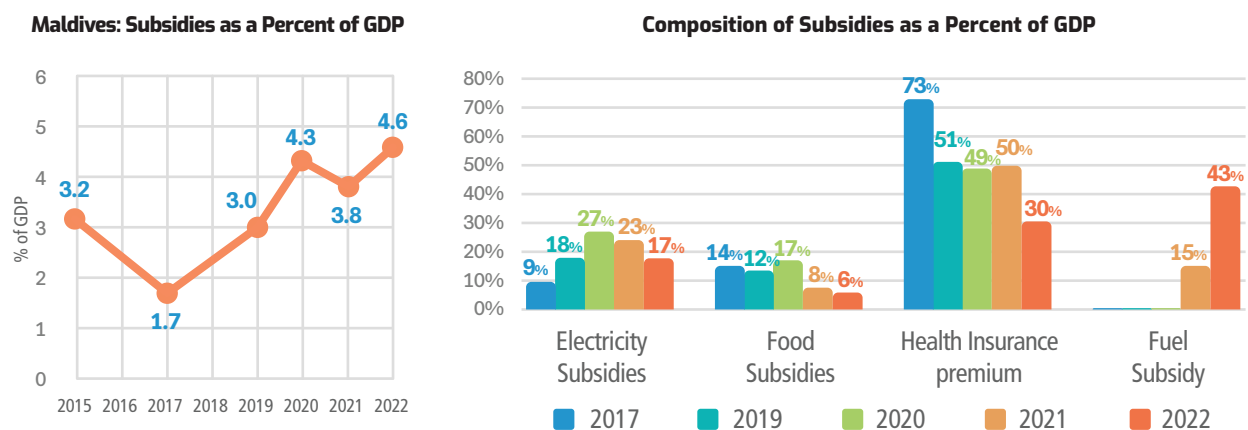


Food in the Maldives has historically been subsidized implicitly by directing the state-owned State Trading Organization (STO) to sell basic food items through its retail stores below cost. When the government increased the scheduled retail price of rice in 2016, roughly halving the food subsidy bill, NSPA introduced a *food subsidy cash transfer* as compensation to poor households for the impact of this price increase.

Lastly, housing subsidies exist but are difficult to measure. There is currently no specific line item giving the quantum of

housing subsidies. The implicit subsidies work through rents recovered by the government. The houses are built by the Housing Development Corporation in the Ministry of National Planning, Housing and Infrastructure through loans (mainly from China and India) and rented below the market price. The subsidy component is the difference between the market value and the rents paid, as well as the cost of defaults on rental payments. The default rate, which is also in the nature of an embedded subsidy, in Maldives is close to 35%, which makes the rent-to-own program in Maldives inefficient.

Figure 4.7: Maldives: Subsidy structure



Source: Ministry of Finance Maldives (2022)

Note: The total subsidy bill in 2017 was 1.263 billion MVR (US\$82 million). Subsidies rose to 5.779 billion MVR (US\$375 million) in 2021 and to 5.449 billion MVR (US\$353 million) in 2022. The fuel subsidy, as a percentage of total subsidies, reached 43 percent in 2022. The subsidies for the health insurance premium were expected to fall from 73 percent in 2017 to 30 percent in 2022 and are expected to remain at about that level in percentage terms in 2023. In 2017, the health insurance premium subsidies were 728 million MVR (US\$47.3 million) and rose to 1.638 billion MVR (US\$106 million) in 2022.

Subsidies currently are provided through budgetary support to state-owned enterprises. The support is vulnerable to price shocks driven by international market dynamics. The current structure of support does not incentivize

efficiencies in procurement. Hence the cost of subsidies exceeds their benefit, and these programs could be replaced by better-targeted cash transfers or utility credits.

Labor market programs

Maldives is also investing further to expand active labor market programs. This includes establishing a network of job centers that provide counseling, employer–job seeker job matching, and referrals to reskilling and upskilling opportunities. The government is also introducing an unemployment benefit scheme that will provide up to three months of conditional unemployment benefits but mandate beneficiaries to enroll in labor market programs and actively apply to jobs. The unemployment insurance will be a contributory scheme managed by the MPAO. The scheme therefore links the labor market information system to the MRPS.

Care Services

Care services such as Child Protection Services and gender-based violence (GBV) support and prevention programs are not well integrated with other social protection schemes in the Maldives. With regard to child protection, the government operates two institutions for children: one at Hulhumale and one at Vilimale. Most of the children are victims of abuse and neglect, and a few are orphans. Where possible, the children are either returned to their families or placed into foster care. The Family and Childrens Service Centre continually monitors reintegrated children for one year after their return. The foster system operates based on a multi-stakeholder panel comprised of a doctor, a lawyer from the Attorney General’s Office, NGO representatives, and ministry officials. Social workers follow a monitoring plan to regularly check on fostered children. Carers are entitled to financial assistance from NSPA as described above.

GBV is a major issue for a significant portion of women in the Maldives. According to the Demographic and Health Survey 2016–

2017, 12.6 percent of Maldivian women have experienced intimate-partner violence and 1 in 4 has experienced some form of GBV during her life. Although the government runs several programs for the prevention of GBV and to support GBV survivors, these programs have not been integrated into the social protection system. Moreover, there are conflicts at the policy and institutional levels as well as overlaps in roles and responsibilities in service provision. The conflicts create challenges in monitoring coordination among the half a dozen or so government agencies that share responsibility for this function—namely, the Ministry of Gender, Family and Social Services (MGFSS), the Family Protection Authority (FPA), the Human Rights Commission of Maldives (HRCM), the National Integrity Commission (NIC), the Children’s Ombudsperson’s Office (OCO), the Department of Juvenile Justice, and the Family and Child Protection wing of the police. Bridging institutional partnerships between NSPA and these agencies could help streamline administration and resolve these fragmentation issues.

4.4.5 Efficiencies in the social protection system

The Maldives has a fairly advanced social protection delivery system in place that enables adaptive and scalable responses. The Maldives has expanded the array of social protection programs that cover risks across the life cycle, and made improvements in developing integrated delivery systems that support these programs. Elements of the delivery system include the establishment of a social registry for the delivery of multiple programs, a digital ID system, unified beneficiary information systems, and electronic payment of benefits. The NSPA houses a digitized beneficiary registry system called the Social Protection Information System (SPIS) that can

be accessed from the island councils. In 2020 the Maldives utilized these established aspects of its social protection delivery system to swiftly introduce a new emergency income support allowance program for workers who had lost their incomes because of COVID-19 (more information in Chapter 5).¹

One challenge to effective scalability is the overly narrow coverage of the poorest.

Current safety nets cover people in all the income quintiles, not just the poorest, making it imperative that targeting be improved to focus on including the poorest and excluding those in higher income brackets. Households in the poorest quintile that do not specifically belong to any of the groups targeted by the current categorical programs—although still covered by health insurance and old-age income support programs—are largely excluded from cash-based safety net support. Based on the available data, the benefit impact is much greater for those in the poorest income quintiles, and significantly less for those in higher-income quintiles.



Chapter 5

Shocks that Threaten Human Capital in the Maldives

Chapter 5: Key Messages

Impact of COVID-19

- The pandemic severely impacted the economy and exposed its vulnerabilities and sustainability challenges, emphasizing the need for better crisis response and planning.
- Overreliance on tourism as virtually the island's sole source of economic activity led to major economic shocks.
- Multiple sectors—from construction, fisheries, and transport to food manufacturing and electricity—were impacted, with tourism and fisheries sustaining job losses and reduced worker salaries.
- School closures and differential access to remote learning widened the education gap between public and private schools, affecting already disadvantaged children, especially girls.
- The economy recovered significantly in 2021, driven by a rebound in tourism.

Impact of climate shocks

- Climate-related shocks undermine hard-won development gains and human capital accumulation.
- In the Maldives, climate change threatens livelihoods, health, education, and specific vulnerable groups.
- Food security is vulnerable to extreme weather events because of limited storage facilities and disruptions in transport.
- Education is affected by school infrastructure damage, limited access, and increased drop-out rates.
- Health risks include heat-related illnesses, undernutrition, infectious diseases, and air pollution.
- Livelihood sectors, such as tourism and fisheries, are highly vulnerable to climate impacts.
- At-risk populations—including migrants, women, persons with disabilities, the poor, and children—face systemic barriers and heightened risks due to climate change.

Government response to date

- The Strategic Action Plan 2019–2023 promotes climate resilience, sustainable agriculture, resilient infrastructure, the protection of natural resources, and climate-sensitive social protection.
- The Climate Change Policy Framework focuses on low-emissions development, ecosystem adaptation, food production safety, sustainable economic development, and fulfilling international commitments.
- National disaster risk reduction policies—like the Community-Based Disaster Risk Management Framework and the National Disaster Management Plan—incorporate community-based climate change adaptation.
- Adaptations include desalination water plants, elevated water storage systems, sea walls, artificial islands, improved waste management, water harvesting, and deep-sea tuna harvests, as well as data collection, community engagement, progress monitoring, and adequate finance and capacity.

5.1 The impact of COVID-19 pandemic and lessons learned

The COVID-19 pandemic dealt a massive blow to the Maldivian economy, exposed its vulnerabilities to external shocks, and highlighted grave sustainability challenges.

Even though rapid containment measures and effective treatment led to a relatively low number of deaths,²² the World Bank and Asian Development Bank named Maldives as one of the worst-hit countries economically in South Asia (UNDP and MED 2020). The concurrent economic shocks of the massive reduction in global tourism and business travel in 2020 and 2021, the global recession, and the war in the Ukraine illustrated the risks of national overreliance on a single economic activity such as tourism. Additionally, the tourism industry and urban centers such as Malé rely heavily on imported oil for electricity and on imported food because of low agricultural production. COVID-19 highlighted the lack of resilience in the context of volatilities in international commodities markets. Limited sectoral diversification, and overreliance on imports, are therefore two prime challenges for the Maldives.

Unsurprisingly, the lack of economic diversification and the massive blow sustained by the tourism sector resulted in a ripple effect across the different economic sectors (MED 2021). The distribution of applicants in the Income Support Allowance Program revealed that although the pandemic significantly affected the tourism sector in particular—almost 61 percent of workers in that sector either lost their jobs or went on reduced salaries—several other key sectors were impacted. This is evident in the number of beneficiaries

supported by the Income Support Allowance Program. A Rapid Assessment of the Impact of COVID-19 on Livelihoods by the UNDP in May 2020 reported that, as a result of COVID-19, 67,000 employees of resorts (22,000 local employees and 45,000 foreigners) were affected by either redundancy, retention but with no-pay leave, or retention with reduced pay (UNDP and MED 2020).

The construction, fisheries, transport, food manufacturing, and electricity sectors were not spared.

The COVID-19 restrictions resulted in a halt in construction activities across the country. To limit the spread of the virus, the government's efforts focused on the repatriation or relocation of thousands of foreign workers. The fisheries sector, a major employer of men outside the capital of Malé, took a considerable hit as a result of border closures and the drop in tourism. This was reflected in the 4,262 fisheries sector workers (32 percent of the entire sector) who applied to the Income Support Allowance program (MED 2021). Similarly, the transport industry faced a complete disruption—with internal movement restrictions, inter-island travel bans, and especially the border closure. Air travel faced the biggest impact as almost all flights were halted, with only a few operated for emergency responses and to supply of goods to remote islands. The inter-island travel ban suspended sea transport services entirely, and internal movement restrictions, combined with the contagious nature of the virus, meant that land transport was also minimal. In food manufacturing, the export disruption led to many workers being laid off; approximately 20 percent of all applicants to the income support allowance program were from this sector. Lastly, the electricity sector took a major hit: already considered among the most costly

22 As of October 12, 2023, there have been 186,694 confirmed cases of COVID-19 in the Maldives—36 percent of the population—but a relatively low number of mortalities—316. WHO, "Global Data—Maldives Situation," <https://covid19.who.int/region/searo/country/my>.

and inefficient energy sectors in the region, government's subsidies (reaching 1 percent of GDP in 2019) imposed further fiscal pressure on the sector's limited public resources (Blum and Yoong 2020).

The decreased household earnings of workers engaged in tourism-related jobs (one-third of adult males and a quarter of females worked within the sector) and the dependence of lower-income households on the disrupted fisheries sector due to weak demand raised concern that poverty rates might increase in 2020, especially for households already close to the poverty line. However, all sectors except for construction showed a significant rebound, particularly in the second quarter of 2021. The poverty rate, which rose sharply to 11 percent in 2020, fell back to 4 percent in 2021 (Blum and Yoong 2020).

5.2 COVID-19 and human development

Globally, COVID-19 had a devastating impact on human capital. It strained human development sectors and exacerbated their challenges. It brought to the fore systemic issues that had been present but had not seemed prominent, revealing significant vulnerabilities within the education, social protection, and health sectors. In doing so, it highlighted the importance for effective rapid response, crisis management planning, and building solid delivery systems both for normal times and in anticipation of crises.

In Maldives, the consequences were substantial. Children's learning was disrupted, food insecurity grew because of supply chain disruptions, and hospitals were overwhelmed,

not to mention the loss of income and livelihoods. Because of Maldives' geography as an archipelago of more than 185 small, inhabited islands with low population pockets dispersed over 90,000 sq. km of land and sea, delivery of services was time-consuming and costly during the pandemic. As a result, some households in remote parts were left out (World Bank 2022c). The brunt of the impact was felt most palpably by already marginalized groups such as women, children, the elderly, the poor, and persons with disabilities (UN Maldives 2020a).

The provision of healthcare during the pandemic highlighted inequalities between urban centers and the more remote islands, resulting in reduced access to key services.

As the pandemic overburdened the hospitals throughout the country, essential services and ongoing public health programs were compromised. The small size of the islands and their geographical dispersion, as well as reduced staffing due to the pandemic, led to high service delivery costs and limited financial resources, resulting in the prioritization of COVID-related services over others (UN Maldives 2020b).

School closures and differential access to good-quality remote learning resources may have a negative long-term impact on children's learning and psychological and emotional development.

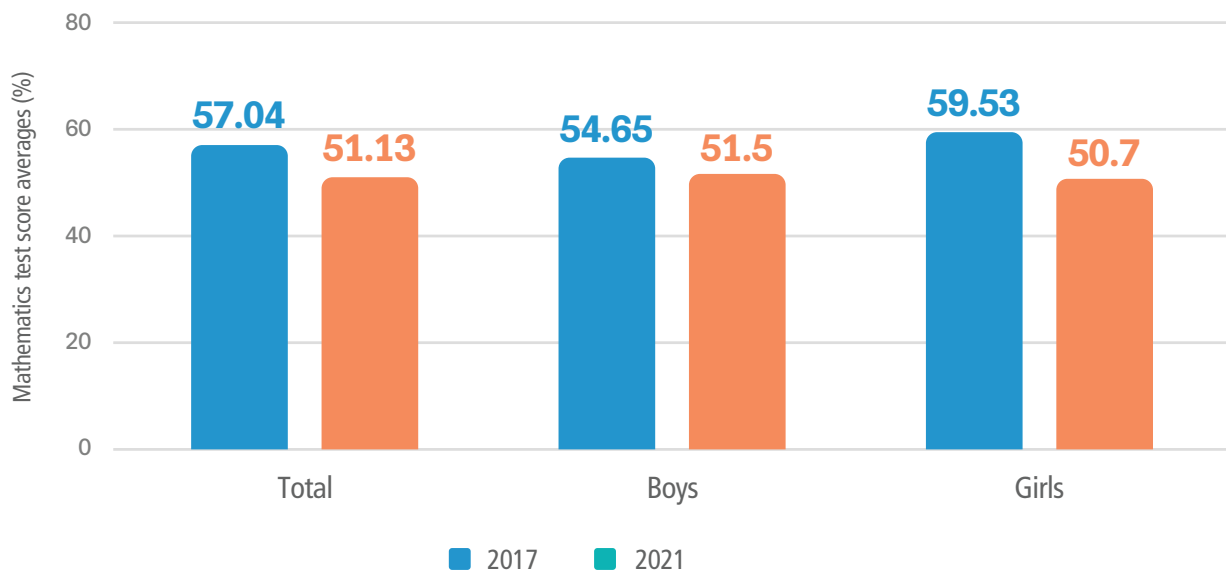
School-based learning completely ceased on March 9, 2020 and gradually restarted as islands were declared COVID-free between July and October 2020. During this time, schools shifted to remote means via the internet, phone, and social media.²³ Online classes were not systematically provided to all public school students, and only 72 percent of them reported having access to broadband internet at home in order

23 In Maldives, 82 percent of students attend public schools, 12 percent private schools, and 6 percent attend community schools.

to access the classes. By contrast, all private school students were offered online learning options (UN Maldives 2020b). Differences in access to remote-learning options may further widen the gap between public and private education (UN Maldives 2020b). In addition, the curriculum was condensed, daily hours were reduced, and the school week shortened to four days to allow teachers one day for planning. As a result, effective study time was lost due to school closures and reduced class hours. The most disadvantaged children, such as those with disabilities, were the most at risk of being left out of remote-learning options and without access to classes tailored to their specific needs (UNICEF and UNESCO 2021).

Girls were also at risk of missing out on online education opportunities while staying at home because many of them were expected to take on additional domestic and care work duties since they were physically not in school. This experience also highlighted the public sector’s limited use and knowledge of innovation and technology and the need to develop distance-learning modalities in case of future school closures (UN Maldives 2020b). There is already evidence of the impact of COVID-19 on children’s education, with the standardized Grade 4 NALO test on Mathematics demonstrating an immediate drop, especially for girls (see figure 5.1).

Figure 5.1: Gender trends in Grade 4 NALO Mathematics test scores, 2017 to 2021



Source: NALO (2017 and 2021)

Several social assistance initiatives were launched to mitigate the economic impacts of COVID-19, after strict containment measures were put in place. Although the Maldives social protection system has a range of health and education benefits, the programs were not designed to be scalable. The delivery

systems, nevertheless, were robust enough to enable new assistance programs to be introduced swiftly, including the COVID-19 Income Support Allowance, which provided a safety net of US\$325 for up to 10 months to households that either were unemployed, were on leave with no pay, had their salary reduced,

or were self-employed or freelance and had their earnings reduced due to COVID-19. Ministry of the Economy data from April to June 2020 indicate that it received 17,005 applications from 9,000 unique individuals for the Income Support program. Of those, 22 percent reported a deduction in their salary, 21

percent reported they were on unpaid leave, and almost 15 percent said they had been terminated from their jobs. Among them, 19.4 percent were self-employed, and 22 percent of the approved applications were submitted by women (UNDP and MED 2020).

Box 5.2: The COVID-19 Income Support Allowance Scheme

Reprioritizing public expenditures was the primary measure taken by the government during the COVID-19 pandemic, with a focus on health and relief interventions for households and businesses. The Ministry of Finance announced an Income Support Relief Package of US\$65 million (2.9 percent of GDP) to households, comprising expenditure cuts in non-essential areas and financial support for the fisheries and tourism sectors. The government deferred student, housing, and SME loans for six months while additionally providing a 40 percent discount on utility bills in April and May 2020. To free up resources and finance priority healthcare and social welfare services, all public sector employees earning more than US\$1,290 a month were subject to a 20–35 percent reduction in their earnings. As part of the relief package, the **Income Support Allowance** scheme aimed to provide approximately US\$500 per month to workers and freelancers who have been furloughed, retrenched, or had suffered pay cuts owing to the pandemic. The government also increased spending on the Aasandha health insurance scheme, exempted medical products from import duties, and ramped up COVID-19 testing significantly in the Greater Malé region.

Source: FAO (2018)

Nevertheless, with the opening of borders and loosening of travel restrictions, in 2021 the Maldives' economy recovered significantly led by the rebound in tourism, with estimates showing that poverty rates are expected to fall back to pre-pandemic

levels by late 2023. Reflecting the resurgence and heightened activity within the tourism sector, recent estimates point to 35.1 percent year-on-year growth in the first quarter of 2022, compared to 11.8 percent in the first quarter of 2021. This growth contributed significantly to

the overall economic expansion, constituting half of the total economic growth. Moreover, this growth in tourism also propelled the Real GDP to expand by 19.3 percent year-on-year within that same period.

The first eight months of 2022 marked a 42.9 percent y-o-y increase in tourist arrivals. Hotel and resort occupancy rates grew by 60.5 percent compared to 51 percent in 2021, with the average stay rising from 6.3 nights (pre-pandemic) to 8.1 nights during that period. The transport and communications sector, benefiting from the increase in visitors, grew by 23.6 percent in 2022 Q1, and the construction sector recovered from the 32.1 percent contraction in 2021 Q1 and grew by 22.3 percent (y-o-y) in 2022 Q1, mainly due to the continuation of PSIP projects in transport, infrastructure, and housing (Maldives Monetary Authority 2022). Real GDP is projected to grow by 10.2 percent in 2023 due to the improved capacity of the tourism sector, completion of the Velana International Airport expansion project, return of Chinese tourists, and continued capital expenditure, along with election-related spending. Although there is some upside potential for increasing arrivals from traditional tourism markets such as China and Western Europe, and new markets such as Saudi Arabia, tourism could still be adversely impacted by a persistent reduction in Russian and Ukrainian tourists (World Bank 2022a).

5.3 Climate shocks impacting human capital gains in maldives

Climate-related shocks are becoming more frequent, more intense, and less predictable, undermining hard-won development gains, poverty reduction efforts, and the accumulation of human capital. Climate change is already severely impacting people, communities and economies globally, threatening livelihoods

and productivity, affecting health and nutrition outcomes, and impacting learning and educational attainment. Heat and pollution raise the likelihood of illnesses in both children and adults and directly impede learning and productivity (Please find below a selection of peer-reviewed studies for reference) (Currie et al 2009). Heat and drought affect crop production, consumption, and nutrition, leading to inadequate cognitive development early in life, which in turn depresses an individual's entire earnings trajectory. Even present discounted losses solely in terms of lost wages are enormous. Extreme weather events disrupt access to critical human development services. These setbacks undermine investments in human capital and make the task of improving human capital much more difficult for the education, health, and labor-intensive sectors. Although the impacts of climate change on human development depend on one's physical exposure to them and one's adaptive capacity, the adverse effects disproportionately disadvantage the poor and the most vulnerable.

Climate-smart policies and interventions can help significantly reduce the negative impacts of climate change on human capital. Developing such policies, however, requires a keen awareness of climate risks, an understanding of the country's delivery capacity, and a fundamental grasp of context and location-specific vulnerabilities—for example, how exposed are people, particularly the most vulnerable, to weather-related shocks? How dependent are people on jobs that expose them to greenhouse gas emissions? To what extent are people's livelihoods or access to human capital services affected? And what education and skills will be needed to drive the changes required in designing and implementing climate-smart policies and programs?

The global climate crisis poses an existential threat to the low-lying archipelago of the Maldives.

The economy, society, and geography are all extremely vulnerable to rising temperatures, sea level rise, flooding, and coastal storms. As the lowest-lying nation in the world, the Maldivian islands are vulnerable to changes in weather patterns and inundation caused by sea level rise, which can result in beach erosion, damage to infrastructure, contamination of fresh water sources, damage to coral reefs, and weather-related impacts to human health and the economy. It is not inconceivable that climate change will make many of the islands uninhabitable by the end of the century. Indeed, the predicted sea-level rise between 10 and 100 centimeters by 2100 could see the Maldives completely submerged under water. Even if the climate stays below 1.5°C of global warming, Maldives would see a further 70–90 percent deterioration of its surrounding life-giving coral reefs than in the business-as-usual case. While global projections indicate a mean sea-level rise of 0.44–0.74 meters by 2100, substantiated by the IPCC Fifth Assessment, some analysts foresee more substantial elevations, such as the 2007 National Adaptation Program of Action’s observation of a slightly higher long-term trend of 1.7 millimeters annually compared to the global average (IFRC 2021). In terms of economic loss, the Asian Development Bank in 2014 projected that, by 2100, the Maldives will be the hardest hit of six South Asian countries, losing on average 2.3 percent of GDP in 2050 and 12.6 percent of GDP (ADB 2021). In addition, critical infrastructure, such as communications, airports and over 100 harbors are located within 100 meters (328 feet) of the coast and are vulnerable to climate change-related weather events (ADB 2021).

Climate change will impact all of Maldives’ major livelihood sectors—including agriculture, fisheries, tourism and tourism-related ancillary activities such as food and fish processing.

Given the nature of the archipelago—more than 80 percent of its 1,190 coral islands lie less than a meter above sea level, for example—many communities on remote islands are at higher risk of being negatively impacted by climate change because of the lack of diversified incomes. Specifically, women, persons with disabilities, and migrants face numerous systemic economic and social challenges that can be further exacerbated by climate change events and impacts.

The socioeconomic development of the islands is thus intrinsically linked to its environmental health, which will undoubtedly be negatively impacted by climate change in a business-as-usual scenario.

Climate change will affect everyone, but some more than others. Below is an overview of the impacts of climate change on human capital in the Maldives, with a focus on food security, health, education, livelihoods, and specific vulnerable groups.

Adaptive social protection instruments are gaining increasing attention as valuable tools for helping individuals and households to build resilience so they can be better prepared for future shocks (climate or human-made).

Social protection has a role to play in both climate mitigation as well as adaptation. Building resilience through productive inclusion/livelihoods programs and savings programs can provide a cushion of protection to households when a climate shock hits but before the social response kicks in. Likewise at the community level, community and public work programs that restore land, promote home/community gardens, and repair culverts or roads may support adaptation by reducing the severity of climate impacts.



5.3.1 Food security

Food security in the Maldives is extremely vulnerable to climate-related challenges.

Agriculture in the Maldives has always been a small-scale industry due to the small land area of the islands and even smaller area of cultivatable land, limited freshwater availability, and a shortage of domestic labor. Though more than 23 percent of Maldives land is devoted to agriculture, it makes up only a little over 4 percent of the economy (FAO 2017), and the sector accounted for only 5.2 percent of GDP in 2017. The country imports 90 percent of the food it consumes, including fresh produce and rice. During an extreme weather event, challenges with the distribution of food across the country, limited food storage facilities, and disruptions to both land- and sea-based transport would likely hinder the population's access to food. Additionally, since fish is the primary source of protein for Maldivians,

disruptions of local and regional fishery systems would further threaten access to this nutrient-dense food source.

Existing agricultural production is also under threat due to climate change, which may lower production capacity unless adaptations are made.

Challenges include less carbon dioxide availability (which affects all photosynthesis), changeable and intense precipitation and temperatures, limited availability of fresh water, soil organic matter transformation, soil erosion, changes in pest and disease profiles, and a decline in arable areas due to the submergence of coastal lands (ADB 2021). Despite these limitations, agriculture is a key sector the country should consider for investment, adaptation, and innovation in order to create a more food-secure population.

5.3.2 Education

Climate change poses a range of direct and indirect challenges for education. The direct impacts include potential damage to school infrastructure; indirect consequences include adverse effects on accessibility such as the disruption or destruction of roads caused by flooding or other extreme weather events, circumstances that can hinder students' and teachers' ability to reach schools, leading to prolonged absences, school closures, and a heightened risk of students dropping out. Even with functioning schools and roads, climate-related disasters or ongoing environmental degradation can push children from financially stressed families into day labor, negatively affecting their educational progress, and can force girls into early marriages if their family feels they need the dowry to supplement their resources. A family may also find the idea of their daughter's early marriage attractive as a way to cut down on the family food bill. The compounded effects of climate change and disasters disproportionately affect the most vulnerable children, including those who are already experiencing educational exclusion, particularly girls and children from disadvantaged backgrounds.

Extreme, prolonged heat directly impacts learning outcomes, as evidenced by research indicating that a child exposed to temperatures 2°C above the average is expected to achieve 1.5 fewer years of schooling compared to those experiencing average temperatures. This loss in education and learning perpetuates a damaging cycle of learning poverty and foregone future earnings that can affect an entire generation. Because they affect agriculture and food production, the consequences of extreme, prolonged heat are particularly severe for young children, leading to elevated rates of malnutrition and stunting, especially among those under the age of 2. Such effects directly impact their cognitive development and, in the long term, contribute to

diminished educational attainment, lower human capital accumulation, reduced labor productivity, hindered economic opportunities, and increased poverty rates.

The changing climate also exerts a direct influence on employment and training choices, particularly impacting vulnerable populations. Impoverished boys and young men frequently encounter circumstances that necessitate seeking low-paying, labor-intensive and precarious jobs for immediate income, diverting their focus from pursuing education to alleviate long-term financial burdens and provide for their families. These climate-related risks underscore the crucial significance of inclusive education and skills training systems that encompass all children and adults who are out of school, thereby fostering elevated learning levels and expediting the enhancement of human capital.

Fundamental literacy, numeracy, and socioemotional skills are paramount in determining individuals' readiness for learning, both within formal education settings and when adapting to disruptions in the job market. Regrettably, curricula often fail to keep pace with the evolving demand for the new skills required in newly emerging sectors, industry fields, and economies. Starting with very young children, schools can integrate climate and hazard awareness, efficient utilization of resources, and environmental care into their subjects to instill behavioral changes that will persist throughout the children's lives. This would position educational institutions to equip their students with the requisite knowledge, skills, values and outlook to navigate the challenges presented by climate change, resource scarcity, and increased global competition, thereby ultimately redirecting the nation's developmental trajectory toward a sustainable future.

5.3.3 Health

Health threats due to climate change in the Maldives will stem from sea-level rise, higher frequency and intensity of floods and storms, heat stress, and the spread of vector-borne diseases. Weather events can have both direct and indirect impacts: direct human impacts can include sickness and death from dehydration, injury, drowning, and disease. Indirect health effects may include impacts on food production as discussed above, water provision, ecosystem disruption, infectious disease outbreaks, and vector distribution. Over the long term, climate change impacts can result in post-traumatic stress, reduced access to services, and population displacement (WHO and UNFCCC 2016). Specific climate change-related factors may include:

- **Heat-related sickness and mortality:** Increases in mean annual temperature and higher intensity and more frequent heat waves will likely result in greater incidences of heat exhaustion, heatstroke, and hyperthermia. Extreme heat can also worsen chronic conditions such as cardiovascular disease, respiratory disease, cerebrovascular disease, and diabetes-related conditions. The elderly, children, the chronically ill, the socially isolated, and manual laborers working outdoors are particularly vulnerable to heat-related conditions (NIEHS 2022).
- **Undernutrition:** Higher temperatures, land and water scarcity, flooding, drought and displacement negatively impact agricultural production, create disruptions to fisheries, and can cause breakdowns in food systems and

access to a varied diet. Poor and vulnerable households are disproportionately at risk of hunger and undernutrition. It is estimated that the global risk of hunger and malnutrition will increase to 20 percent by 2050. The Maldives is already well on its way toward this prediction unless the country changes course. As of 2017, 14.8 percent of children under 5 (more than one in seven) are underweight,²⁴ 15.5 percent suffer from stunting,²⁵ and 9.1 percent exhibit wasting (World Bank n.d.c).²⁶

- **Infectious and vector-borne diseases:** Temperature extremes and changing precipitation patterns affect the geographic distribution, seasonality, and incidence of disease vectors and the diseases they transmit (NIEHS 2022). Climate conditions are projected to become significantly more favorable for the transmission of infectious and vector-borne illnesses, increasing the risk to many populations if control measures are not maintained or strengthened (WHO and UNFCCC 2016).
- **Air pollution:** Polluting forms of energy are major drivers of climate change and also contribute to worsening air quality. In the Maldives, it is estimated that approximately 9 percent of the population in rural areas use primarily solid fuels such as charcoal, crop waste, or dung for cooking, thereby increasing the risk of ischemic heart disease, stroke, lung cancer, chronic obstructive pulmonary disease and acute lower respiratory due to household air pollution. Women and children are at especially great risk of becoming ill from household air pollution (WHO and UNFCCC 2016).

24 The prevalence of **underweight** children is the percentage of children under age 5 whose weight for their age is more than two standard deviations below the median for the international reference population ages 0-59 months.

25 The prevalence of **stunting** is the percentage of children under age 5 whose height for their age is more than two standard deviations below the median for the international reference population ages 0-59 months.

26 The prevalence of **wasting** is the proportion of children under age 5 whose weight for their height is more than two standard deviations below the median for the international reference population ages 0-59.

5.3.4 Livelihoods

Tourism and fisheries are the primary economic drivers in the Maldives and both sectors are highly vulnerable to the impacts of climate change. These two sectors together account for three out of four jobs in the country, 90 percent of its GDP, and almost all its foreign exchange earnings (Waheed 2020).

Fisheries

Fisheries are a critical component of the Maldivian economy, with more than 20 percent of the population employed in this sector, and is a major contributor to the financial subsistence of the local labor force (besides providing the population's primary source of dietary protein). Tuna is the most common fish and appears daily in the local diet. Tuna fisheries are highly seasonal, with catches peaking around April and November, at the onset and offset of the Northwest monsoon season. However, in the past few years, the fishing season has followed irregular trends, which may be attributed to changes in local weather, sea water temperatures, and PH levels caused by global climate change (FAO 2023). Tuna has a strong preference for specific conditions of the ocean environment, and given the climate projections, it is possible that a greater proportion of tuna catch will need to be made in international waters. In addition, coral reefs are linked to the fisheries sector, and demand for reef fish has been increasing over the years (ADB 2021).

Tourism

Tourism, the Maldives' main economic driver, is highly vulnerable to climate change and will likely face major challenges moving forward. Tourism accounted for a quarter of national GDP in 2019, is the country's fastest-growing sector, and accounts for more than

a third of government revenue (ADB 2021). The sector is a big driver of employment and a source of income for the local population in service areas such as accommodation, catering, handicrafts, transport, and outdoor activities like diving, boat tours, and parasailing. More than a fifth of the population is engaged in the tourism sector, and visitor exports and investments in the sector are expected to grow over the next ten years. Since tourism is highly dependent on the dry season and on environmental capital such as pristine beaches, coral atolls, marine life and a pleasant climate, it is particularly vulnerable to climate impacts. Tourism infrastructure such as resorts but also airports and communications infrastructure are typically located within 100 meters of the coastline. Over time, rising sea levels, shoreline and beach erosion, coral bleaching, a reduction in sea life, and supply chain disruptions will likely reduce the quality of resort and beach spaces and the range of tourism-related activities available (ADB 2021). In fact, 62 percent of all inhabited islands and 45 percent of tourist resorts already report experiencing extensive beach erosion (UNDP n.d.).

Beach activities such as snorkeling and diving are major draws for tourists from around the world and will be highly impacted by climate change. In a survey by the Ministry of Tourism in 2017, when asked what their main purpose of visiting the Maldives was, 8 percent of respondents said snorkeling and 6 percent said diving. When asked about what they most liked about the Maldives, 27 percent said the beach, 22 percent said marine life, and 16 percent said snorkeling and diving (Ministry of Tourism 2017). Environmental degradation, loss of coral reefs, and coastal erosion all threaten the recreational snorkeling and diving sector as well as the beaches and marine life.

5.4 Climate change and impacts on at-risk populations

Although climate change will impact everyone, foreign and domestic migrants, the most at-risk population groups—rural women and children, communities residing in the remote northern and less-developed atolls, and persons with disabilities—face numerous systemic economic and social obstacles to their progress that emerge as a result of their response to climate change challenges.

5.4.1 Domestic and foreign migrants

Migration from the outer atolls is one response to climate change in communities with higher levels of poverty, limited access to resources and healthcare facilities, and greater dependence on natural resources such as fishing and agriculture. Extensive internal migration from the provinces to the capital to find employment are common in the Maldives, mainly for livelihood, social and environmental reasons (Asia-Pacific RCM Thematic Working Group on International Migration 2012). Migrants come to urban centers for better economic opportunities and tend to be men, often leaving their wives and families behind (IFRC 2021). Higher migration often leads to the urbanization of health problems and mental health challenges. Migrants face numerous systemic **economic** complications such as informality, unsteady work, income disparities, lack of information, and lack of social safety nets, as well as **social** challenges such as family separation, poor living conditions, discrimination, ostracization, negative profiling/stereotypes, and limited access to services. This places them at

increased risk of livelihood insecurity and overall loss of wellbeing (IFRC 2021). Many migrants are also prone to becoming more exposed to infectious diseases during transit and resettlement, becoming infected by or transmitting diseases to host populations, and engaging in health behaviors that increase communicable disease risk (IFRC 2021).

5.4.2 Women

Although the Maldives has made significant progress in the legal codification of gender equality over the past 30 years, other indicators of gender equality indicate that there has been less progress. The Maldives has taken steps to strengthen and further align its legal framework with gender-related provisions and principles in international law, such as the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW). However, Maldives' rank as 83rd out of 191 countries on the 2021 UNDP Gender Inequality Index points to the fact that Maldivian women still face high discrimination in health, empowerment, and the labor market.²⁷

Rural women in the Maldives tend to be more dependent on climate-sensitive natural resources and activities for their livelihoods, such as subsistence farming, home gardening, coconut collection, handicrafts, rope weaving, and fish processing (IFRC 2021). Women participate in all areas of agriculture and horticulture as well as fish-related, post-harvesting activities aimed at adding value such as drying and salting. Recent declines in the fishery sector have impacted women the most. Additionally, the migration of men to urban centers to look for job opportunities results in women being left on their own to maintain the household and care for children and older

27 In 2021, Maldives scored 0.348 (lower being better) on the UNDP Gender Inequality Index, placing it 83rd (higher being better) out of 191 countries (IFRC 2021).

parents (more than 50 percent of households are female-headed). Female-headed households tend to be poorer than other households because of lower income, limited diversification options, and limited control over household assets (El-Horr and Pande 2016).

5.4.3 Persons with disabilities

Persons with disabilities are more likely to have adverse socioeconomic outcomes such as less education, poorer health, lower levels of employment, and higher poverty rates (IFRC 2021), as well as discrimination and exclusion from the health, education, employment, social and governance spheres. They therefore have less resources and capacities to draw on to adapt to a changing climate (IFRC 2021). Women with disabilities tend to have even fewer resources and skills, face higher social discrimination, and have limited work opportunities than women without disabilities. More women also work as caregivers to not only children but also both men and women with disabilities, even as they face gender-based barriers to access to health facilities and secure livelihoods (IFRC 2021).

5.4.4 Children

The food security, health and livelihoods challenges discussed above also have a distinct impact on children because they are still growing, are at greatest risk of injury, disability or death caused by climate change, and are less mentally and emotionally equipped to cope with life-threatening conditions (World Vision n.d.). One-third of Maldivians are children or adolescents, mainly

concentrated in the less developed Northern region. Climate-driven poverty will likely contribute to poor dietary habits and low access to vitamin-rich vegetables and fruits as well as reduced access to fish as the main dietary source of protein. In addition, 28.36 percent of boys and 45.42 percent of girls in Maldives are anemic (iron-deficient), resulting from a diet poor in red meat and other iron sources (Orłowska 2018). Access to drinking water is limited on most islands largely because of factors such as saltwater infiltration and contamination issues. Communicable diseases connected with climate change are causing morbidity among Maldivian children, according to WHO. These diseases include dengue, scrub typhus, toxoplasmosis due to diarrhea, and acute respiratory infections (Orłowska 2018). As a result of poor water security, many children and adolescents are additionally exposed to water-borne diseases (UNICEF 2015).

5.5 Responses to date

Recognizing the detrimental impact of climate change on the country, the Government has been proactive in disseminating policies and plans to mitigate these impacts and adapt the country to climate and disaster risks.²⁸

For example, the 2019–2023 Strategic Action Plan aims to promote climate resilience and sustainability and treats climate change as a cross-cutting issue. For example, Action 1.2 considers climate change a health risk, and commits to monitoring the health impacts of climate change and reorienting programs to address emerging diseases and health impacts. Policy 3 intends to mainstream climate-smart, sustainable agricultural practices and to address the impact of climate change on livelihoods. The ambitious plan also covers

28 Additionally, the Government of Maldives is party to several international treaties. The main ones are Biodiversity, Climate Change—Kyoto Protocol, the Montreal Protocol, the UN Framework on Climate Change, and MARPOL Ship Pollution. Maldives is also a member of the Intergovernmental Organization for Marketing Information and Technical Advisory Services for Fishery Products in the Asia and Pacific Region (INFOFISH) and the Bay of Bengal Programme (BOBP).

resilient infrastructure and the protection of natural resources, and advocates for climate-sensitive social protection (Government of Maldives 2019).²⁹

The Ministry of Environment and Energy, in August 2015, published the Maldives Climate Change Policy Framework, setting out the key issues and steps that the government and other stakeholders, ranging from NGOs to the private sector to the people of the Maldives, should focus on to mitigate and adapt to the effects of climate change. The framework focuses on low emissions development aimed at stabilizing greenhouse gases, adaptation of ecosystems to climate change, the safety for food production, sustainable economic development, and meeting international obligations. These goals are intended to be achieved through a combination of technology transfers, finance and capacity building (Ministry of Environment and Energy 2015).

Climate change adaptation has been mainstreamed into several national disaster risk reduction policies over the past 25 years. Key policies are the 2014 Community Based Disaster Risk Management Framework, the 2015 Disaster Management Act, the 7th National Disaster Management Plan (NDMP), the National Emergency Operations Plan (NEOP), the 2010–2020 Strategic National Action Plan for Disaster Risk Reduction and Climate Change Adaptation (SNAP), and the 2014–2024 Maldives Climate Change Policy Framework (MCCPF). All of these policies use a community-based disaster risk management approach to create awareness and action plans as well as capacity building and adaptation measures around climate and disaster risks throughout the country. Through

various programs and policies, the aim is to mainstream disaster risk reduction at the national level (ADPC and UNDRR 2019).

Beyond the policy level, the government has invested in physical adaptations to counter climate change impacts. These include the promotion of desalination water plants and the elevation of water storage systems to counter saltwater intrusion and to increase access to clean drinking water; building sea walls around Malé; and building artificial islands so that families impacted by climate change can move to urban centers where there are more economic and educational opportunities. Other interventions that aim to mitigate the impacts of climate change include improved waste management practices, enhancing water harvesting, and promoting deep-sea tuna harvests (IFRC 2021).

Although the multi-faceted impact of climate change is high up on the government’s agenda, the implementing protocols may thus far not be enough. The “soft” aspects of climate change adaptation also need to be reinforced. Systematic and accurate data collection of weather- and climate-related indicators throughout the islands is necessary to ensure that adaptations are evidence-based. Meaningful engagement of communities and civil society is necessary to ensure that the implementation of policies is relevant and sustainable (IFRC 2021). Measuring outcomes regularly through both quantitative and qualitative methods is needed to assess progress against stated objectives and to adapt programs and policies to ensure they are on track to achieving their goals. Finally, the government needs finance and capacity to enact the above measures in a meaningful way (IFRC 2021).

29 The 2015 Intended Nationally Determined Contributions and 2020 Update of Nationally Determined Contribution also set out the government’s commitments for climate change adaptation and mitigation. The main foci of intervention include targets related to agriculture and food security, infrastructure resilience, public health, water security, coastal protection, coral reef biodiversity, tourism, fisheries, disaster risk reduction, early-warning systems, and improved weather forecasting. The document, updated every five years, was submitted to the United Nations Framework Convention on Climate Change (UNFCCC).



Chapter 6

Conclusions and Recommendations

In the current fiscally constrained, post-COVID-19 context, Maldives must prioritize high-impact human capital investments that can promote increased equity, resilience and opportunity, as well long-term economic growth. Improving human capital accumulation and utilization for all and boosting future productivity require synergistic investments in health, education, and nutrition throughout an individual's life cycle, supported by resilient delivery systems to support people during crises and to avoid erosion in human capital.

Moving forward, and to address the main challenges identified in this report, Maldives should: (i) address persistent geographic disparities in access to education; (ii) focus on improving the quality of education for all; (iii) tackle the relatively high levels of stunting, with a focus on those regions with the worst outcomes; and (iv) promote better employment outcomes for Maldivian women. At the same time, Maldives ought to: (v) increase the efficiency and effectiveness of social sector spending to enable people to obtain good-quality education, maintain good health, find good jobs, and secure access to comprehensive

social protection that enables them to be resilient against shocks of various kinds.

To achieve these objectives, which would enable Maldives to leapfrog in terms of human capital accumulation and utilization, this report identifies the following recommendations at the national and sector levels:

6.1 At the national level

- **Increase the level and efficiency of social sector spending for improved human development and macro-fiscal outcomes.** Despite the social sectors making up a large share of the government's budget, spending remains inefficient and heavily geared towards health insurance and pensions. It is therefore important to continue investing in system strengthening for increased efficiency gains as well as to, for example, engage in difficult reforms (i.e.: subsidy reform) and re-allocate some of the savings to promote more and better investments in human development.

- **Integrate and strengthen service provision toward greater promotion and protection of human capital.** A whole-of-government approach is necessary to promote human capital accumulation and protect it during crises. Integrated and coordinated efforts across sectors are important to address persisting challenges such as stunting and poor learning outcomes. Effective coordination will require putting in place institutional arrangements, with clear roles and responsibilities for each institution, and the development of referral protocols and cross-sectoral monitoring tools.
- **Promote social and geographic equity through needs-based budgeting.** The national budgeting process can be used as a tool for promoting equitable outcomes, through the allocation of enhanced public resources based on degree or complexity of needs. For example, gender-responsive budgeting is used today by more than 80 governments world-wide to advance gender equity. The Maldives could use its budgeting process to tackle particularly gender and geographic inequalities in service delivery and labor markets.
- **Improve the management of the social sectors' workforce.** In all human development sectors, it is difficult to attract and maintain qualified professionals because of low salaries. Staffing is often insufficient or poorly distributed across the country. In the education sector, for instance, there is a shortage of teachers, especially trained ones, and the geography of the Maldives renders this issue even worse. Promoting effective management of social sectors' workforce will inevitably lead to improved equitable access to quality services, thus boosting human development levels, productivity and economic growth.
- **Support private sector-led job creation.** Although it is necessary to improve the quality and relevance of education and access to upper and tertiary education on the supply side,

it is equally important to address challenges on the demand side of the labor market related to limited jobs and high reservation wages. Creating more and better jobs is necessary to curb unemployment, especially as the country undergoes its demographic transition, and during the current peak of the WAP. In particular, supporting the fishing industry through market diversification and modernization—for example, supporting the nascent guesthouse sector through better regulation and upscale marketing, among other things—would bring higher returns, offer more resilience to Maldivians, protect human capital gains, and promote more equitable growth.

- **Improve data collection, relevance, analytics and reporting, and align these with the national policy vision.** As the Maldives moves forward with its development plan to establish regional economic hubs, data and reporting ought to follow this subnational division. The country can begin by establishing baselines in order to be able to measure progress down the road. Data quality and reporting is another issue that calls for attention. Education statistics, for instance, reflect only the total number of children enrolled yearly at the national, atoll, and island levels. Enrollment rates, which is a better indicator of access, are provided only at the national level.

6.2 Sector-specific recommendations

6.2.1 Education

- **Improve child development and learning outcomes by integrating high-quality, contextually relevant parenting and behavioral change programs into existing health, social protection, and education platforms.** Early intervention, including access to early childhood education, is vital to mitigating risks and promoting protective factors that shape healthy brain

development, yielding gains for future health, learning, and productivity.

- **Continue investing in improving the quality of education.** The government is aware of the challenges in the quality of education and has therefore laid out a strategic vision in its Education Sector Plan (2019–2023) for improving learning outcomes. This vision includes a series of initiatives that include, among other things, strategies for effective curricula implementation, school-based professional development of teachers, and the introduction of a quality assurance framework and system to monitor the quality of schools. Ensuring proper implementation of these initiatives will require financial and human resources, technical capacity, and a mechanism to systematically monitor, assess, and make course corrections to implementation if need be.
- **Strengthen and improve the use of national assessments for raising the quality of the education system.** National assessments are designed to provide evidence and feedback to improve a country's education system. Although the Maldives has been conducting national assessments (specifically, NALO) since 2015, it needs to further develop its institutional and technical capacity to administer and use the results of the assessment to improve the quality of education. Coordination and links between the Quality Assurance Division—the unit responsible for NALO—and the different units of the Ministry of Education, including the National Institute of Education, need to be strengthened to ensure that the findings of national assessments translate into appropriate policy actions.
- **Improve access to upper-secondary education through the expansion of multiple and flexible learning pathways (MFPs).** In a country like Maldives where

dispersed geography poses intrinsic challenges to educational access, MFPs can be an important strategy to improve access to learning, particularly at the secondary level, in those regions that lack secondary schools. Although the Maldives has implemented some flexible learning options, including the use of technology and distance learning, as part of its upper secondary education development strategy and during COVID-19, development and implementation of this strategy are still at a nascent stage. The Maldives needs to develop and effectively implement a robust, flexible learning system that can address its access challenge.

- **Develop an evidence based TVET system that is responsive to labor market needs.** In many developed countries, TVET is considered an important strategy to build human capital and prepare students for the labor market (OCED 2010). TVET, when properly planned and implemented, has great potential to address labor needs (World Bank 2021).

6.2.2 Health

- **Improve maternal and childhood nutrition to reduce stunting and malnutrition.** Childhood malnutrition significantly hinders health and human development outcomes in the Maldives, and efforts should therefore be made to improve maternal and childhood nutrition, particularly in the first 1,000 days of each child's life, through more comprehensive growth monitoring, better breastfeeding and diet practices in the community and the household, as well as early diagnosis and intervention for malnutrition.
- **Reform health financing and payment mechanisms for Aasandha.** Aasandha, the national health insurance scheme, has a very significant role to play in shaping an efficient and effective health system. Provider payment

reforms can help optimize resource allocation and improve the efficiency of service delivery. Currently, hospitals are reimbursed through an inefficient fee-for-service payment method in which all itemized expenses are paid by Aasandha. However, the global norm is to adopt a case-based approach, such as diagnosis-related groups, which implies the sharing of financial risk with the provider. Adopting such an approach would help to incentivize more judicious use of Aasandha resources. Developing the ability to leverage claims data for strategic purchasing would lead to better-informed decision-making and more efficient resource management in healthcare financing efforts. Aasandha could also benefit from a well-defined and costed benefits package of services. In addition, introducing benchmarking tools into the current outpatient reimbursement scheme could generate significant savings. The first step, currently being implemented, is to conduct internal benchmarking and set a unified price (a reimbursement rate). In the future, it may be useful to compare Maldives' prices with those of other countries and explore the possibility of developing an external reference pricing structure for various services, devices, and procedures.

- **Redesign the health service delivery system to tackle the growing burden of NCDs more effectively.** Establishing an integrated, people-focused continuum of care that incorporates effective referral links is crucial to maintaining high-quality healthcare services. Strengthening primary healthcare capacity, guided by evidence-based treatment protocols, is central to improving the quality of care and enhancing health system efficiency. Strengthening the quality of health services requires (i) effective accreditation systems, (ii) a focus on evidence-based treatment protocols, including regulatory supervision and monitoring of these protocols, and (iii) a

well-designed feedback loop to capture and respond to detailed end-user experience in as close to real time as possible. Strengthening preventive care and primary healthcare for NCDs, particularly in the atolls, can enhance promotive and preventive healthcare services and eventually limit the growth of healthcare costs. Considering the unique geography of the Maldives, telemedicine (both domestic and international) and digital health offer opportunities to bridge gaps in service provision. Rotating specialists from Malé to the atolls on a short-term or roster basis could also ensure broader access to good-quality care.

6.2.3 Social protection

- **Continue to invest in integrated and adaptive social protection systems to ensure equity, resilience, and opportunity for all.** Well-designed, integrated social protection systems protect individuals and households against risks throughout the life cycle and address their specific needs as and when they arise. They encompass an array of programs that promote and protect human capital during the human capital-formative years, facilitate its utilization during adulthood, and provide social care during old age. Adaptive social protection systems, on the other hand, promote household resilience in the face of shocks, including through programs that diversify assets and income, and ensure swift system response to crises.
- **Begin by further integrating and consolidating the demand side of the social protection system by developing the existing social registry as a gateway for social services.** This would facilitate the access of both individuals and households to all the services for which they are eligible under social protection, streamline the application process, and cut administrative costs on the supply side of the system.

- **Further expand social protection information systems to help scale up and speed up response during a shock.** NSPA's work in establishing a registry for people with disability (PWD) that can be accessed from island councils is commendable. However, more should be done to build an information system in support of creating a universal social registry that is comprehensively and thoroughly populated. The interoperability of the social registry with other information systems and programs is also critical. The government's work to develop a system to continually update the MPAO's beneficiary registry and link it to other government services should be promoted. Other information systems such as the PWD registry and eFaas, Maldives' national digital identification card system, should be integrated and interoperable with the social registry to allow for optimized social spending and to prevent the overlap of benefits.
- **Revisit social assistance benefit levels in terms of generosity and targeted groups.** Currently, social assistance spending is heavily skewed toward old age through a generous old-age pension. Little is dedicated to early childhood and school-age children. Greater focus should be given to early childhood and school-aged children. Another rationale for revisiting benefit levels is that the current social pension is unsustainable, especially in light of the country's fast-changing demographic structure.
- **Rationalize the universal health insurance program both from a targeting perspective and from a program operations perspective.** Savings from spending on the Aasandha program could be redirected to broaden the coverage of safety net programs. Measures to improve access to the disability certification process would also help enhance safety net coverage.
- **Continue to invest in active labor market programs and encourage partnerships between the job center network and employers.** Apart from increased and prioritized education sector investments to improve access to, and the quality and relevance of, education, active labor market programs are important to help address any information asymmetry and intermediation gaps in order to link individuals to jobs, especially those programs that target youth and women. Furthermore, ensure that reskilling, upskilling, TVET, and other labor market programs are designed in response to regular labor market demand assessments.
- **Address challenges to female labor market participation.** Increasing the participation of females requires ensuring access to reliable child-care services, addressing social norms that restrict female mobility, and ensuring safe sea travel and culturally appropriate accommodation on resort and industrial islands. This would not only help address poverty and human capital accumulation deficits at the subnational level but also contribute to increased, more equitable, and sustainable growth.

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November 2023



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