



REPUBLIC OF YEMEN

# YEMEN VOLUNTARY NATIONAL REVIEW 2024





وِزَارَةُ الْخَطِّاطِ وَالْتَعَاوُنِ الدَّوْلِيِّ  
MINISTRY OF PLANNING AND INTERNATIONAL COOPERATION

# Yemen Voluntary National Review 2024

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## List of abbreviations

FDI	Foreign direct investment
GCC	Gulf Cooperation Council
GDI	Gender Development Index
GDP	Gross domestic product
HDI	Human Development Index
IFs	International Futures
IDP	Internally displaced person
MoPIC	Ministry of Planning and International Cooperation
PPP	Purchasing power parity
PWP	Public Works Project
SDGs	Sustainable Development Goals
SFD	Social Fund for Development
SSC	Supreme Supervisory Committee
SWF	Social Welfare Fund
TVET	Technical and vocational education and training
UNDP	United Nations Development Programme
USD	US Dollar
VNR	Voluntary National Review

## Foreword

Yemen has been experiencing an exceptional phase and highly complex conditions for ten years due to a coup by the Houthis terrorist militia against the state. One of the consequences of this war has been the collapse of the state and the redirection of development and growth trajectories into the negative for many years, with Yemen falling in all international economic, humanitarian, and social indicators. However, despite this difficult reality, the resilience and cohesion of Yemenis, along with the sincere support from brothers and friends, have been fundamental in normalizing the situation, restoring stability, and resuming the building of state institutions. Despite all the challenges, including the ongoing war and difficult economic conditions, there are efforts being made to restore building and development, with national consensus on strengthening institutional work and developing tools to interact with the world and integrate into the visions of development and prosperity of the region and the world, and to address the consequences of the war.

The economic file represents a top priority in the government's agenda and its general program, including achieving sustainable development goals and enhancing economic resilience. Five main priorities have been set for the government's work in the coming phase: (a) restoring the state and achieving sustainable peace, (b) combating corruption and enhancing transparency and accountability, (c) achieving financial and administrative reform, (d) developing economic resources, and (e) maximizing the benefits from external aid and grants and directing them according to the needs and priorities of the government. Through these five priorities, we will strive to achieve tangible and clear progress towards the sustainable development goals, and we will harness all possible energies for this purpose.

The preparation of the first Voluntary National Review 2024 for the Sustainable Development Goals under exceptional circumstances represents an advanced step, new momentum, and an exceptional achievement that allows us to focus the efforts of the government, the private sector, civil society, and Yemen's partners towards making tangible progress in achieving the Sustainable Development Goals, especially in addressing poverty, unemployment, hunger, food insecurity, and developing education and health systems, creating job opportunities for youth and women, reducing the water crisis, and climate change.

Finally, we believe that cooperation between the government, the private sector, civil society, and international partners is the way to achieve the Sustainable Development Goals and ensure that no one is left behind. With everyone's support, we can build a better and more sustainable Yemen for current and future generations.

**Dr. Ahmed Awad bin Mubarak**  
**Prime Minister**

### **Word by the Minister of Planning and International Cooperation**

The preparation of the first Voluntary National Report on the Sustainable Development Goals 2024 is the fruit of a collaborative effort where the government's endeavors were primarily combined with those of the private sector, civil society, and Yemen's development partners—the United Nations Program believing in the importance of partnership and inaugurating a new phase of constructive and creative developmental work. We hope this phase will stabilize Yemen, restore its economy's vitality, and regain the momentum and correct course of economic and social development. Additionally, it positions the 2030 Sustainable Development Agenda at the forefront of developmental plans and government programs.

The launch of the Sustainable Development Agenda in September 2015, the same month in which the Houthis militia, specifically on September 21, 2014, turned against constitutional legitimacy, the outcomes of the National Dialogue, the Gulf Initiative and its executive mechanism, and caused the war that entered its tenth year and led to the destruction of large parts of Infrastructure, a sharp deterioration in the public services system, and an unprecedented contraction in economic activity. The economy lost more than 50% of the national product, and the purchasing power of the national currency deteriorated, which was reflected in the deterioration of the population's standard of living. About 80% of the population became below the poverty line. There are also repercussions. Negative effects on all aspects of economic, social and human life and on future generations. Development indicators have set back many years and undermined opportunities for progress in achieving significant achievements in the sustainable development goals.

Nevertheless, to ensure Yemen does not fall behind - despite half the timeframe having elapsed - the Ministry of Planning and International Cooperation has taken the initiative, stemming from its responsibility for planning and development and mobilizing international support. It formally expressed its intention to present its report on the progress made in the Sustainable Development Goals at the High-Level Political Forum under the United Nations Economic and Social Council in New York in July 2024 and prepared a general framework for the first Voluntary National Report, which was endorsed by the Council of Ministers. A supreme supervisory committee was formed under our chairmanship along with a technical team to assist in the report's preparation, adopting a broad participatory approach that included stakeholders, notably the private sector and civil society as well as women's and youth associations across all of Yemen.

The report at hand includes a thorough analytical approach to the current status of the Sustainable Development Goals, precisely defining a baseline for each Goal and expected trajectory of the first eight Goals. It highlights the efforts implemented and planned for the coming phase and identifies the challenges still hindering achievement, in addition to exploring opportunities for progress in certain Sustainable Development Goals. Moreover, the report provides an analysis of the conflict's impact on the present and future of sustainable development and outlines a strategic national vision that includes short, medium, and long-term developmental goals and priorities, particularly in terms of economic aspects. We humbly affirm that this is a noteworthy attempt, deserving recognition despite its limitations, particularly in providing precise statistical data, in the hope that it will be followed by more comprehensive reports under better conditions, with our country enjoying stability, security, and peace.

**Dr. Waed Abdullah Badhib**

**Minister of Planning and International Cooperation**

**Chairman of the Supreme Supervisory Committee for the Preparation of the First  
Voluntary National Report on the Sustainable Development Goals**





## Key messages of the VNR report

### **Conflict has led to severe developmental challenges in Yemen.**

On September 21, 2014 AD, the Houthi militia turned against the Yemeni state and the outcomes of the national dialogue in which it was participating, causing a war, leading to the destruction of infrastructure, killing of tens of thousands of Yemenis, and displacement of 4.5 million people. Yemen lost about 23 years of developmental gains and more than 80% of the population was deprived of access to essential social services. The war halved the gross domestic product, costing the economy more than USD 126 billion, halted oil and gas production, and increased domestic and foreign debt due to the government's inability to pay off debts. With Yemen already reliant on imports for the vast majority of food requirements, food insecurity affected more than 60% of the population. Today, 80% of the population is in need of humanitarian assistance. At the same time, these internal challenges are compounded by the effects of international crises including the COVID-19 pandemic, the repercussions of the Russian-Ukrainian war, rising energy prices, supply chain disruptions, and climate change. Amid these crises, it is unlikely that Yemen will achieve any of the Sustainable Development Goals by 2030.

### **However, the country still has promising potential and recovery efforts can improve the lives of millions.**

Yemen's geographical location uniquely positions it to play a strategic role, politically, economically, and security-wise. Situated in the southwest of the Arabian Peninsula, it boasts the port of Aden, which was the world's second-largest port in the 1950s. Yemen also has a 2,500 km long coastline stretching along the Red Sea, Gulf of Aden, Indian Ocean, and Arabian Sea, overlooking the Bab Al-Mandeb Strait through which 20% of the world's oil passes, making it the shortest and least expensive maritime route for global trade. The country has considerable natural resources, including oil and gas which can support development and investment needs in the short term, as well as a great potential for renewable energy. Previous research has shown that a lasting peace along with a strong development program can fully make up for the lost SDG progress in less than a generation.

### **Yemen is determined to reclaim its development trajectory, and international community support is essential.**

Progress towards achieving Sustainable Development Goals requires the development and implementation of a comprehensive strategy for recovery and reconstruction, while building capacity to confront future challenges. This Voluntary National Review is the first of its kind for Yemen, and has been prepared despite the challenges, through a participatory mechanism. It conveys numerous messages and orientations, both at the national and international levels, affirming Yemen's active membership in the international community and its commitment to harnessing all available opportunities to catch up with the pace of progress in the coming years, with the support of regional and international partners. It identifies a handful of key priorities needed to pursue progress toward achieving sustainable development.

### **The key priorities are as follows:**

1. Supporting the efforts of the United Nations and the international community in reaching a comprehensive and sustainable peace agreement in Yemen, in line with the

outcomes of the National Dialogue Conference, the Riyadh Agreement, and the GCC Initiative, and international legitimacy resolutions, ensuring the restoration of state institutions and the promotion of transparency, accountability, and the rule of law.

2. Preparing and implementing a comprehensive plan for recovery, reconstruction, and achievement of the SDGs while mobilizing financing from regional and international communities for reconstruction of the country.
3. Resuming oil and gas production, maximizing their benefits in developing productive sectors, and sustaining public finances, concurrently with investing in renewable and clean energy.
4. Implementing programs and policies designed to eradicate poverty, hunger, and malnutrition by strengthening the growth of micro and small-scale projects, creating job opportunities for women and youth, expanding social protections, developing the agricultural and fishing sectors, improving access to basic services, utilizing technology, the digital and green economy, and reducing inequalities.
5. Addressing external debt through debt-for-climate swaps, negotiating with creditor countries and international financial institutions to partially or fully exempt Yemen from debt and interest, converting short-term loans to long-term loans with reduced interest rates, and securing concessional financing.
6. Implementing effective measures and policies to conserve natural resources, maximize their sustainable utilization, and mitigate the negative impacts of climate change, particularly in the areas of water, agriculture, livelihoods, and green economy, as well as developing and protecting marine wealth.
7. Building institutional capacities at the central and local levels and investing in digital infrastructure suitable for government institutions and the public sector at large.
8. Diversifying economic opportunities by introducing climate-resilient measures in promising sectors, including agriculture, fisheries, water resource management, and enhancing small and medium-sized enterprises and value chains in potential sectors.
9. Improving the quality of basic social services, including water, health, and education, and increasing investment in human capital.
10. Facilitating technological transformation and digitization by enhancing internet connectivity and access to information.
11. Building a broad partnership with the private sector and civil society and enhancing the role of the private sector in financing reconstruction and development.
12. Strengthening statistical capacities to monitor progress in achieving Sustainable Development Goals.
13. Enhancing the role of the Central Organization for Control and Auditing, and the Supreme Authority for Combating Corruption in applying the principles of good governance, transparency, accountability, and combating corruption.

## Introduction

In September 2015, the United Nations launched the Sustainable Development Agenda, comprising 17 Sustainable Development Goals (SDGs), 169 targets, and 231 measurement indicators. This global agenda represents an important shared commitment to improving lives while protecting the environment and leaving no one behind.

However, at a time when the international community was preparing to launch the sustainable development agenda, Al-Houthi had turned against constitutional legitimacy, the outcomes of the national dialogue, and the Gulf initiative, and caused a war that led to the damage of large parts of the infrastructure and the deterioration of the public services system, an unprecedented deterioration, and the economy suffered major losses. In its development gains, which shifted the path of development back many years, great opportunities were lost to achieve tangible progress in sustainable development goals, and the domestic product fell by half, leading to unprecedented levels of poverty and food insecurity. Millions of Yemenis were displaced, and a large number of Yemenis became in dire need of humanitarian aid in light of the loss of sources of income, the destruction of infrastructure, and the rise in prices. In addition to the repercussions of global crises such as the Coronavirus (Covid-19) pandemic, the war in Ukraine, and the war on Gaza.

Prior to 2015, Yemen had been making progress in reducing poverty and unemployment, improving health and education, encouraging the private sector, empowering women and youth, and strengthening partnerships within the framework of the Millennium Development Goals. However, the conflict wiped out much of these delicate gains, setting human development back by more than two decades. While hostilities have eased in recent years, the damage done thus far poses a significant challenge to improving development – recovery and reconstruction needs are already estimated at between USD 20 and 25 billion, 4.5 million Yemenis remain displaced, and more than 80% of the population suffers from multidimensional poverty.<sup>1</sup>

Despite these major challenges, by publishing Yemen's first Voluntary National Review (VNR) this year, Yemen reiterates its commitment to pursuing both immediate and long-term sustainable development progress in the country. This review is intended to confirm the country's commitment to the SDGs, identify main challenges and priorities for intervention, and develop a baseline against which to compare future trends.

## Report preparation and methodology

### Preparation of the report

This report was prepared to take a whole-of-Yemen approach, with participation from various stakeholders, including government agencies, the private sector, civil society, , governorates, local communities, and the international community. These stakeholder consultations were organized in regions across Yemen.

Following this participatory methodology, a general framework for preparing the first VNR was concluded, which included a general background on the SDGs, report methodology, including feasibility and preparation stages and timelines, and a proposal to form the Supreme Supervisory Committee (SSC) to supervise the report preparation. The full list of team members participating in this preparation can be found in Annex II.

This general framework was presented to the Cabinet, which approved it and issued on December 2, 2023 Cabinet Resolution No. 25 of 2023 in its 22<sup>nd</sup> session to form the SSC, headed by MoPIC and including 15 Ministers, to supervise the report preparation. The

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<sup>1</sup> UNDP, "Measuring Multidimensional Poverty in Yemen."

technical team was formed to assist the SSC, collect and analyze statistical data for the SDGs, identify challenges and propose solutions to achieving the SDGs, participate in consultative meetings with stakeholders, and prepare and submit a draft of the Voluntary National Review.

Along with the above teams, this report was produced with forecasting support by the Frederick S. Pardee Institute for International Futures along with financial and technical support from the United Nations. Program

## Challenges in preparing the VNR

One of the biggest challenges to preparing the VNR and assessing SDG progress generally is a lack of quality data, especially since 2015. Conflict conditions have prevented the conducting of surveys, and existing technical statistical capacity is low. There is limited awareness of the SDGs among government agencies, private sector, and civil society.

The VNR team addressed these challenges by using international data sources and estimation techniques where recent data are unavailable and by conducting consultative workshops with a wide range of stakeholders.

## Forecasting and scenario analysis

In order to both address some of the challenges listed above as well as better project the likelihood of SDG achievement, this process also included an aspect of forecasting and scenario analysis, using the International Futures (IFs) forecasting tool. IFs is an open source integrated assessment modeling platform with coverage of 188 countries and dynamic and integrated representation of 12 core systems: agriculture, demographics, economics, education, energy, environment, finance, governance, health, infrastructure, international politics and technology, with gender included in a cross-cutting fashion across all systems.<sup>2</sup> Utilizing over 5,000 historical data series, IFs is a tool for better understanding countries' long-term development futures as well as providing data- and literature-informed estimates where exact data may not be available. The IFs tool has been used to better understand the effects of conflict and climate change on development in Yemen previously<sup>3</sup> and has also been used to support the VNR process in Egypt.<sup>4</sup>

This Report includes estimates and forecasts of select SDG indicators in 2023, 2030, and 2050, under two scenarios:

- The **Current Path** is a baseline scenario, reflecting business-as-usual development patterns. *Current Path* outcomes are not just projections of historical trends but dynamic projections from complex systems interactions. The scenario reflects a future of continued but simmering conflict and the challenges of recovering from the massive damage already done with severely constrained resources.
- The **Development Push** is an ambitious scenario modeling a successful and concerted push towards improving sustainable development in Yemen. It models important

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<sup>2</sup> Hughes, *International Futures: Building and Using Global Models*.

<sup>3</sup> Moyer et al., "Assessing the Impact of War on Development in Yemen"; Moyer et al., "Assessing the Impact of War on Development in Yemen on Achieving the Sustainable Development Goals"; Hanna, Bohl, and Moyer, "Assessing the Impact of War in Yemen."

<sup>4</sup> Ministry of Planning and Economic Development of Egypt, "Egypt's 2021 Voluntary National Review."

improvements to governance and security along with policy interventions designed to improve economic growth, infrastructure, food and health systems, and build resilience to climate change and future challenges. It is meant to be highly ambitious but also achievable and reflect a realistic best-case scenario for Yemen's development future.

There is a great deal of uncertainty inherent to any long-term forecasting exercise, and it is important to make all assumptions and considerations clear. The *Current Path* scenario explored in this report assumes that conflict and risk of future conflict will remain a concern, but it does not include any significant escalation or resurgence in fighting, which allows some level of development improvements to proceed in the coming years. It also includes a broad assumption of climate change and its effects on temperature and precipitation change in line with the Representative Concentration Pathway (RCP) 6.0 scenario. However, it does not include an assumption of major acute effects of climate change, like severe flooding. This scenario is not meant to be a point prediction of the future, but to help better understand the trajectory that the country is on and how strong development interventions can alter that future. More detailed information about the interventions included in the *Development Push* scenario can be found in Annex I.

## Structure of the report

The remainder of the report examines each of the 17 SDGs. Each section includes a table of the most recent available data for each SDG indicator and a summary of any progress made and how the Goal has been affected by conflict in the recent decade. For select SDGs where forecasts are available, a section titled "Forecasting Progress and Achievement" explores the trajectory of select indicators along the *Current Path* and *Development Push* scenarios, described above. Each SDG section concludes with a review of the challenges faced and interventions taken by the Government of Yemen to advance progress toward the Goal. Finally, the Report concludes with a set of key priorities and concluding remarks.

# Sustainable Development Goals

## Goal 1: No Poverty

### Summary

Table 1: Data available for SDG 1 indicators in Yemen.

Goal 1: End poverty in all its forms everywhere		
Target	Indicator	Value (Year)
<b>1.1: By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day</b>	1.1.1: Proportion of the population living below the international poverty line.	42.4% (2015) <sup>5</sup> 58.9% (2019) <sup>5</sup>

<sup>5</sup> Using the international extreme poverty threshold of \$2.15/day in 2017 USD at purchasing power parity (PPP). Data from the World Bank's Poverty and Inequality Platform.

<b>1.2: By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.</b>	1.2.1: Proportion of population living below the national poverty line.	48.6% (2018) <sup>6</sup> 80% (2022) <sup>7</sup>
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SDG 1 is to “end poverty in all its forms everywhere.” It is not only the first in the SDGs but also important for the alleviation of human suffering broadly as well as the achievement of many other SDGs. Poverty is highly interconnected with hunger, health, education, and lack of access to many important services, and thus it is synergistic with many other SDGs.

Poverty in Yemen was on the rise even prior to the SDG period due to slow economic growth and limited job opportunities and private sector activity. The portion of the population living under the national poverty line grew from 35% in 2005 to 42% in 2009. Following the Arab Spring in 2011, the economy was disrupted and many Yemeni migrant workers, whose remittances had previously made up roughly one tenth of Yemen’s gross domestic product (GDP), were forced to return from Saudi Arabia. Subsequently, poverty rose to over half of the population. The population living under the international extreme poverty line<sup>8</sup> grew at the same time – gradually from 1998 to 2010 (8% to 10.5%) then sharply in 2011 (to 17.9%).

While the data are limited, there is no doubt that the conflict led to a further drastic rise in poverty. The economy shrank by more than half while much of trade and production came to a halt, businesses closed, prices rose, and public employees stopped receiving full salaries. By the fall of 2015, 45% of Yemenis surveyed said they had lost their main source of income due to the conflict.<sup>9</sup> A set of microsimulations estimated poverty rates in early conflict years, indicating a rise in poverty across levels.<sup>10</sup> In 2024, the United Nations Development Programme (UNDP) released a Multidimensional Poverty Report, which found that 80% of Yemenis suffer from deprivation of access to basic social services.<sup>11</sup> Moreover, this poverty is not experienced equally by all. Multidimensional poverty was higher among rural than among urban populations, for instance, as well as among households with members with disabilities.<sup>11</sup>

## Forecasting progress and achievement

Model estimates from IFs suggest that from just under 20% in 2014, international extreme poverty rate more than doubled in 2015 alone - to 42% - and has continued to increase in the decade since (Figure 1). In 2023, an estimated 73% of Yemen’s population lived below the extreme poverty threshold – roughly 20 million more people living in extreme poverty than in 2014.

Along the *Current Path*, we expect that poverty will remain stagnant for the next several years and then slowly decline. But by 2050 still over half of Yemenis (32 million) will live on less than

<sup>6</sup> Data from the World Bank’s Poverty and Inequality Platform.

<sup>7</sup> Multidimensional poverty measure reported in UNDP, “Measuring Multidimensional Poverty in Yemen.”

<sup>8</sup> The international extreme poverty line has now been updated to \$2.15/day in US Dollars (USD).

<sup>9</sup> Fakhreddine, “Yemenis Divided Politically, United in Misery.”

<sup>10</sup> Arezki et al., “A New Economy in Middle East and North Africa”; Arezki et al., “Middle East and North Africa Economic Monitor, Spring 2018.”

<sup>11</sup> UNDP, “Measuring Multidimensional Poverty in Yemen.”

USD 2.15 per day. It should be noted that this scenario assumes that levels of conflict remain low enough to allow for limited economic growth, whereas a significant resurgence in fighting and/or economic restrictions could push poverty back up again.

The *Development Push* scenario, which includes measures addressing both economic growth and inequality, leads to poverty reduction immediately and accelerates alleviation over time, reducing the poverty rate by more than 20 percentage points relative to the *Current Path* by 2050.

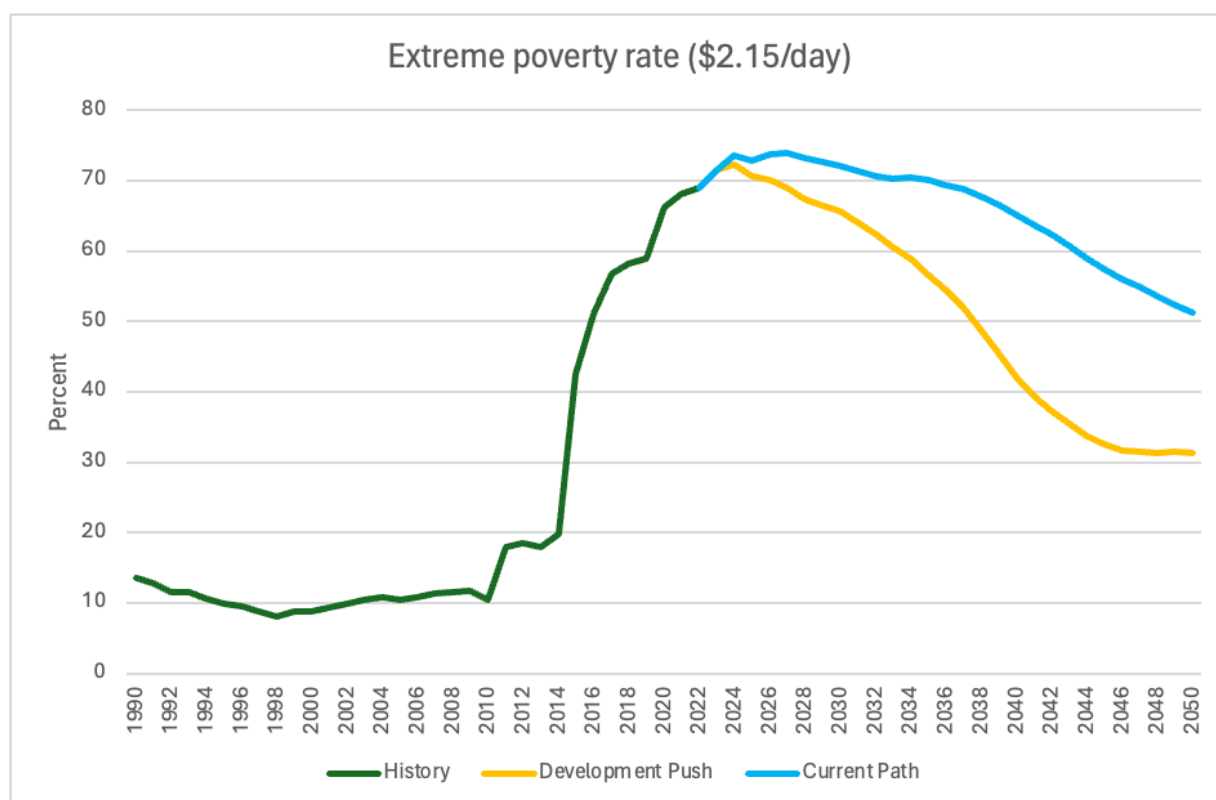


Figure 1: Percent of the population living below the international extreme poverty line (\$2.15/day at 2017 PPP) in Yemen across scenarios. Source: IFs 8.19 using historical data from the World Bank's Poverty and Inequality Platform.

Yemen is not expected to achieve the SDG target of complete elimination of poverty in either scenario by mid-century. Poverty is complex and multifaceted, and the country has very limited resources for addressing the needs of those that are the worst off. But while still far from achieving the SDG target of complete elimination, a strong *Development Push* pulls more than 15 million Yemenis out of extreme poverty who would have been otherwise in 2050.

### Government efforts, challenges, and needs

The challenges Yemen faces in tackling poverty are immense. War has led to the loss of hundreds of thousands of jobs, deteriorating standard of living, and a sharp decline in the purchasing power of the national currency. Additional global crises – including the COVID-19 pandemic and the Russia-Ukraine conflict – have led to increases in energy and food prices. And ongoing conflict continues to stifle growth in the economy, incomes, and in public spending.

Government efforts have attempted to reduce poverty in the face of these challenges. These efforts include:



- The continuation of projects through the Social Fund for Development (SFD) and the Public Works Project (PWP) have helped to build resilience, expand services access, and provide temporary employment opportunities.
- Unconditional cash assistance and social protection programs for poor families have provided assistance to 1.5 million Yemenis. While cash assistance alone cannot meet the minimum requirements for subsistence and is unsustainable in protracted crises, it has provided protection to families in danger of falling into poverty.
- Donor-funded economic empowerment projects and livelihood programs have provided support to small farmers and poor families in the countryside.

While these efforts have certainly provided critical support to households in need, much more is required to alleviate poverty in Yemen. Addressing poverty is an urgent priority and should be a featured goal of any reconstruction and economic recovery program in the country. In the short term, this calls for developing a national strategy for poverty reduction in all its dimensions; strengthening the capacities of joint action and actors on promoting and coordinating poverty reduction actions; continuing labor-intensive projects through the SFD and PWP, supporting and developing small and medium enterprises, livelihood programs, and support to the agriculture and fisheries sectors. In the medium and longer term, it will be critical to stimulate sustainable pro-poor growth across economic sectors. In addition to critical support from donors, there is great potential in reviving the role of Zakat for addressing poverty, unemployment, and expanding social protections for the poor.

## Goal 2: Zero Hunger

### Summary

Table 2: Data available for SDG 2 indicators in Yemen.

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture		
Target	Indicator	Value (Year)
<b>2.1: By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round</b>	2.1.1: Prevalence of undernourishment	34.5% (2022) <sup>12</sup>
	2.1.2: Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)	67.2% (2022) <sup>12</sup>
<b>2.2: By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of</b>	2.2.1: Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age	35.1% (2022) <sup>12</sup>
	2.2.2: Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the	<i>Wasting:</i> 16.4% (2013) <sup>13</sup>

<sup>12</sup> FAO et al., *The State of Food Security and Nutrition in the World 2023*.

<sup>13</sup> UNICEF, WHO, and World Bank Group, "Joint Child Malnutrition Estimates."



adolescent girls, pregnant and lactating women and older persons	median of the WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight)	<i>Overweight:</i> 1.7% (2022) <sup>13</sup>
	2.2.3: Prevalence of anaemia in women aged 15 to 49 years, by pregnancy status (percentage)	61.5% (2019) <sup>12</sup>

Hunger and food security were concerns even before the current war, with rising food prices making food affordability difficult for many households. But the escalation of conflict in 2015 brought the country to the brink of famine, as food production and distribution systems were destroyed and disrupted and imports stalled, leading to a sharp increase in food prices.<sup>14</sup> From 2015 to 2018, the portion of the population suffering from undernutrition rose from 29% to 43%, though recent data suggest that portion has fallen back to 34.5% in 2022.<sup>12</sup>

In recent years, this trend has settled somewhat, but hunger and food insecurity have exacerbated the humanitarian situation for a large segment of Yemen's population, with estimates suggesting that around 17.4 million people suffered from food insecurity in early 2022, including 5.6 million facing emergency levels of food insecurity.<sup>15</sup>

## Forecasting progress and achievement

### 2.1.1: Prevalence of undernourishment

Along the *Current Path*, undernutrition is projected to improve gradually, dropping below 30% by 2030 but, with population growth, increasing in number from roughly 11.7 million today to 12.1 million. This scenario does project improvements in hunger in line with some of the more acute food access challenges easing but leaves many still suffering. By 2050, 1 in 5 Yemenis, or 12.3 million, are still projected to suffer from undernutrition along the current trajectory (Figure 2). The *Development Push* scenario includes measures not only to increase food production and boost household incomes but critically to improve the equitable distribution of calories. In this scenario, undernutrition falls to just under 6% (3 million Yemenis) by 2050. While Yemen is not likely to fully achieve the SDG target of eliminating hunger, a concerted *Development Push* could pull 3.7 million Yemenis out of undernutrition in comparison to the *Current Path* by 2030 and 9.4 million by 2050.

<sup>14</sup> IPC, "IPC Acute Food Insecurity Analysis: Yemen"; WFP, "Yemen Market Watch Report."

<sup>15</sup> IPC, "Yemen: Food Security & Nutrition Snapshot."

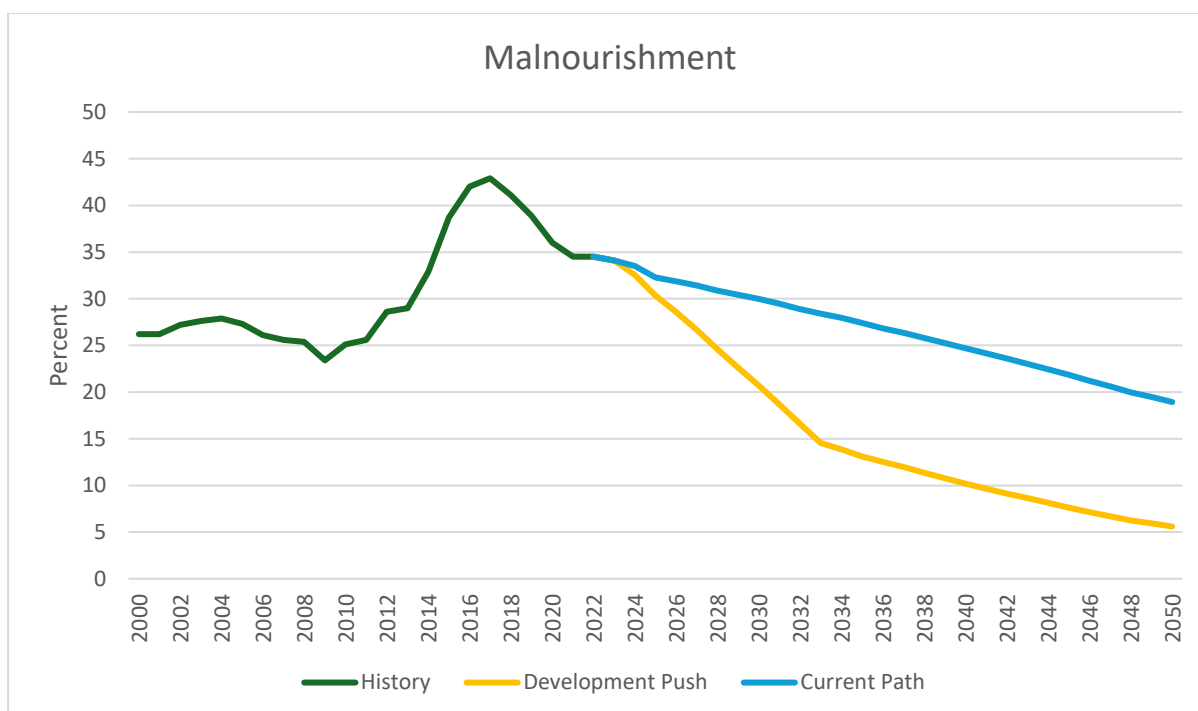


Figure 2: Prevalence of undernourishment as a percent of the population in Yemen across scenarios. Source: IFs 8.19 using historical data from FAO Food Security and Nutrition.

### 2.2.2: Prevalence of malnutrition among children under 5 years of age, by type

Young children are especially vulnerable to undernutrition and children have suffered disproportionately from the effects of the conflict on food access as well as on infrastructure and health services. In 2023, an estimated 41% of children under five years old (2 million) suffer from undernutrition (Figure 3). In the *Current Path*, child hunger is expected to remain stagnant for the next several years while the total number of children suffering grows (to 2.2 million by 2030), In this scenario, by 2050, still nearly 24% of children will suffer from undernourishment.

A strong *Development Push* scenario reverses the trend of growing child hunger, offering relief and lowering the child malnutrition rate to below 14% by mid-century. While this fails to meet the SDG goal, it provides relief to nearly 1 million children who would be undernourished in the *Current Path*.

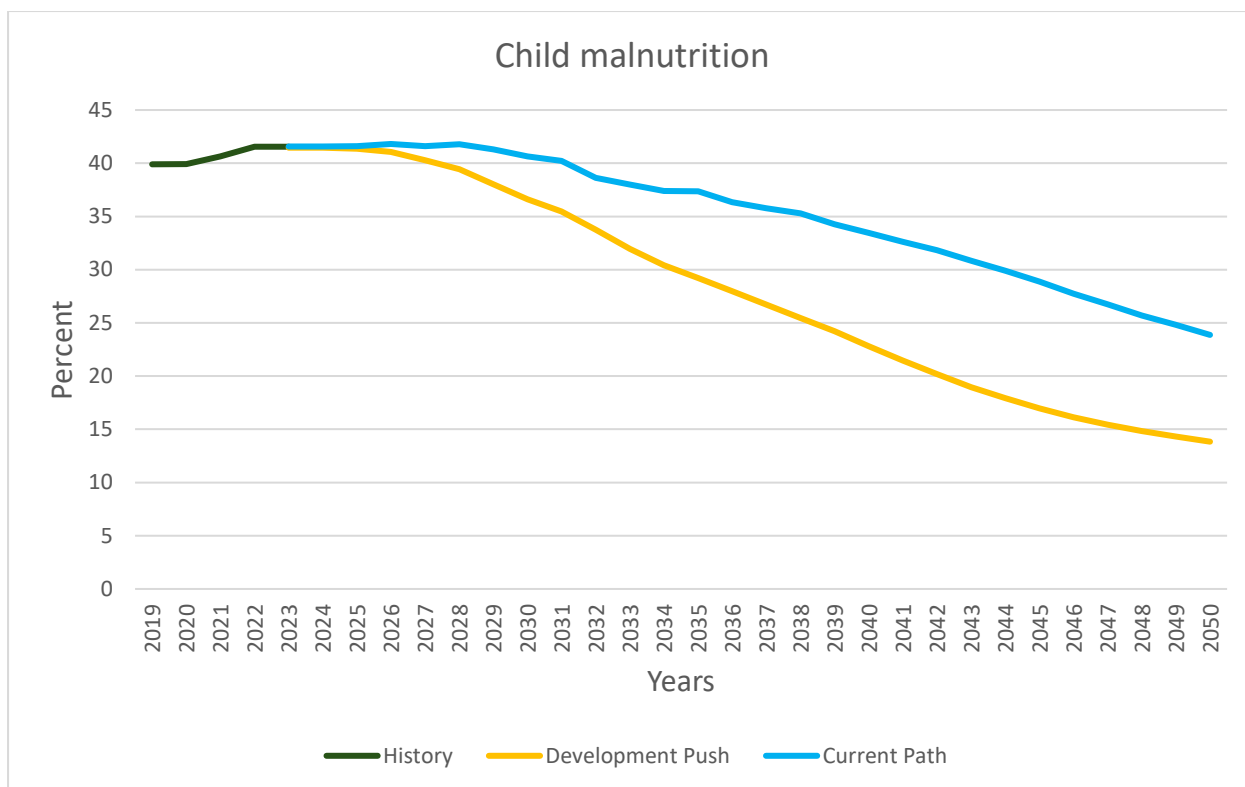


Figure 3: Percentage of children under 5 malnourished based on weight; US benchmark in Yemen across scenarios. Source: IFs 8.19 using historical data from UNICEF, WHO, World Bank: Joint child Malnutrition Estimates.

## Government efforts, challenges, and needs

Addressing SDG 2 requires both promoting sustainable agriculture and addressing major causes of hunger and food insecurity.

Challenges facing the agriculture and fisheries sector include dealing with scarcity of land and water resources, including from desertification due to climate change, overgrazing, inefficient agricultural practices, depletion of groundwater, and increasing urban encroachment. Crop productivity is low as a result of a decline in crop variety, weak crop management, and spread of pests, while the small size of agricultural holdings prevents the use of modern technologies and irrigation systems. Animal production is deteriorating due to limited genetic improvement, weak disease management, and limited resource availability. And fisheries are constrained by financial capabilities, poor infrastructure, and weak organizational and administrative structure of fisheries cooperatives and the deterioration of fish export mechanisms. Moreover, the war has resulted in the destruction and degradation of land, institutions, and infrastructure needed to support these sectors.

Aside from the challenges to agriculture, Yemen relies on imports for the vast majority of its food supply, making food security and hunger highly vulnerable to global disruptions and price increases. Internal war and global crises have both contributed to staggering food prices through affecting supply, transportation, energy costs, and exchange rates, making food inaccessible to many Yemeni households. While there is room to improve domestic food production, hunger in the country is a problem not just of supply but also of access. The worsening of hunger, food insecurity, and malnutrition is attributed to a combination of structural and recent factors, including: general price increases, particularly for food, fuel, water, and medicine; erosion of real incomes; loss of hundreds of thousands of permanent

and temporary jobs in the private sector, resulting in the loss of primary or sole income sources; internal displacement of around 4.3 million people from their areas; and suspension of salary payments for most government employees for over six years in areas the North, as well as the deterioration of basic services and lack of social protection mechanisms for the most vulnerable and conflict-affected groups.

The Ministry of Agriculture and Fisheries has developed a strategic plan for food security (2023-2027) aimed at optimizing the use of agricultural and fisheries resources, increasing grain and particularly wheat production, expanding cash crop cultivation, and improving the living standards of farmers and fishermen. The plan also seeks to enhance the infrastructure of agricultural and fisheries institutions, rehabilitate irrigation infrastructure, and improve water consumption. Additionally, it aims to improve the investment environment in the agricultural and fisheries sector, develop agricultural and fisheries exports, and diversify export markets.

In the immediate term, addressing the problem of hunger and food insecurity requires a number of measures and interventions within the framework of the reconstruction and development program, including facilitating the import of food commodities, resuming the payment of salaries to civil service employees, and a cash transfer program for beneficiaries of the Social Welfare Fund (SWF) program, a special program targeting elderly beneficiaries who are unable to work. Over the medium and long term, it will be important to promote pro-poor economic growth to address poverty with a focus on improving job opportunities. Improving the productivity of the agricultural and fisheries sectors can not only increase food production but also provide more income to rural households. And improving access to markets can lower the cost of transport, the cost of traveling to markets, and improve security for households.

Specifically, the following interventions are recommended as priorities to improve food security and reduce hunger:

- Enhancing the agricultural and fisheries sectors' ability to attract investment by providing incentives, legislation, guarantees, services, and insurance that encourage private sector participation.
- Activating the role of cooperatives in establishing collection and reception centers for products and setting up cold storage facilities for agricultural and fisheries products, thereby controlling supply and prices.
- Encouraging investment in crop production, particularly grains and other food crops, as well as reclaiming new lands and developing fisheries and export centers for agricultural and fisheries products.
- Promoting local industries for agricultural inputs, such as compost and pesticides, as well as fish canning.
- Regulating the agricultural and fisheries marketing process and encouraging food industries that rely on local agricultural and fisheries products.
- Supporting and promoting the Agricultural Research Authority, the Seed Multiplication Institution, and the Agricultural Guidance Authority in improving the quality and quantity of crop production, particularly grains, and the Marine Sciences and Oceanography Authority in conducting studies that ensure environmental balance, determine fish stocks, and achieve sustainable natural resource management.

- Building human resource capacities and enhancing the presence of Yemeni agricultural and fisheries expertise at the regional and international levels.
- Opening regional and Gulf markets for the export of high-quality agricultural and fisheries products.

## Goal 3: Good Health and Wellbeing

### Summary

Table 3: Data available for SDG 3 indicators in Yemen.

Goal 3: Ensure healthy lives and promote well-being for all at all ages		
Target	Indicator	Value (Year)
3.1: By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	3.1.1: Maternal mortality ratio	164 (2015) <sup>16</sup> 183 (2020) <sup>16</sup>
3.2: By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	3.2.1: Under-five mortality rate	60.8 (2015) <sup>17</sup> 61.9 (2021) <sup>17</sup>
	3.2.2: Neonatal mortality rate	28.3 (2015) <sup>17</sup> 28.3 (2021) <sup>17</sup>
3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases	3.3.1: Number of new HIV infections per 1,000 uninfected population, by sex, age, and key populations	0.04 (2021) <sup>18</sup>
	3.3.2: Tuberculosis incidence per 100,000 population	48 (2022) <sup>19</sup>
	3.3.3: Malaria incidence per 1,000 population	41 (2022) <sup>20</sup>
	3.3.5: Number of people requiring interventions against neglected tropical diseases	7,883,460 (2021) <sup>23</sup>
3.4: By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	3.4.1: Mortality rate attributed to cardiovascular disease, cancer, diabetes, or chronic respiratory disease	28 (2019) <sup>21</sup>
	3.4.2: Suicide mortality rate	5.8 (2019) <sup>22</sup>

<sup>16</sup> WHO, "Trends in Maternal Mortality 2000 to 2020."

<sup>17</sup> UN Inter-agency Group for Child Mortality Estimation.

<sup>18</sup> The Joint United Nations Programme on HIV/AIDS (UNAIDS).

<sup>19</sup> WHO, "Global Tuberculosis Report 2023."

<sup>20</sup> WHO, "World Malaria Report 2023."

<sup>21</sup> Probability of dying between the age 30 and 70 from the four disease types named. Data from WHO.

<sup>22</sup> Mortality rate per 100,000 population. Data from WHO.

<b>3.5: Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol</b>	3.5.2: Alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol	0.0 (2019) <sup>23</sup>
<b>3.6: By 2020, halve the number of global deaths and injuries from road traffic accidents</b>	3.6.1: Death rate due to road traffic injuries	29 (2019) <sup>22</sup>
<b>3.7: By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and Programs</b>	3.7.2: Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group	54 (2021) <sup>24</sup>
<b>3.8: Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality, and affordable essential medicines and vaccines for all</b>	3.8.1: Coverage of essential health services	42% (2021) <sup>23</sup>
	3.8.2: Proportion of population with large household expenditures on health as a share of total household expenditure or income	4.2% (2014) <sup>23</sup>
<b>3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination</b>	3.9.1: Mortality rate attributed to household and ambient air pollution, age-standardized	186.3 (2019) <sup>23</sup>
	3.9.2: Mortality rate attributed to unsafe water, unsafe sanitation, and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)	15.6 (2019) <sup>23</sup>
	3.9.3: Mortality rate attributed to unintentional poisoning	1.8 (2019) <sup>23</sup>
<b>3.a: Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate</b>	3.a.1: Age-standardized prevalence of current tobacco use among persons aged 15 years and older	20.3% (2020) <sup>23</sup>
<b>3.c: Substantially increase health financing and the recruitment, development, training, and retention of the health workforce in developing countries, especially in least</b>	3.c.1: Health worker density and distribution	2.9 (2014) <sup>25</sup>

<sup>23</sup> WHO Global Health Observatory Data Repository.

<sup>24</sup> United Nations Population Division, World Population Prospects.

<sup>25</sup> Medical doctors per 10,000 population. Data from WHO.

Conflict in Yemen has devastated an already weak health system, characterized by low levels of access and financial protection. Even before escalation, half of the population (and two-thirds in rural areas) lacked access to healthcare services<sup>26</sup> while the private share of health spending shot up from 42% to 70% between 2000 and 2013.<sup>27</sup> Since 2015, hundreds of health facilities have been damaged or destroyed, and those in operation struggle with shortages of essential medicines, supplies, and healthcare workers, as well as a lack of operational resources, safe water, fuel, and power as well as lack of regular payment of wages to the health workers. Low food access and undernutrition (See Goal 2) have made populations more vulnerable to disease. Moreover, poor living conditions have facilitated the outbreak and rapid spread of disease, especially water borne diseases. Water and sanitation conditions have been degraded by attacks on critical water infrastructure and overcrowding of displaced populations. Over 19 million lack adequate sanitation or safe water.<sup>28</sup> These conditions led to the largest cholera outbreak in epidemiologically recorded history<sup>29</sup> along with outbreaks diphtheria<sup>30</sup> and measles.<sup>31</sup>

## Forecasting progress and achievement

### 3.1.1: Maternal mortality ratio

The maternal mortality ratio in Yemen had been falling steadily for decades before reversing progress during the conflict. At 183 maternal deaths per 100,000 live births in 2020, Yemen's rate is among the highest in the Middle East and North Africa region, with a woman dying every two hours during childbirth, often from causes that are almost completely preventable. Less than half of births take place with the help of qualified medical teams.

In the *Current Path*, this ratio is projected to improve over time, reaching just over 130 by 2030 (Figure 4). These improvements are driven by the slow resumption of improvements in economic growth and development, including healthcare access, and a continuation of the historical trend of slowly-reducing fertility rates. If the situation does not get worse, Yemen could meet the SDG target of a maternal mortality rate below 70 by 2041. Even in this scenario, maternal mortality in Yemen remains among the worst in the region. However, a *Development Push* can accelerate this progress, reaching nearly 93 by 2030 and achieving the target two years earlier.

<sup>26</sup> World Bank, "Yemen: Immediate Priorities for Post-Conflict Recovery of the Health Sector."

<sup>27</sup> Pande et al., "The Republic of Yemen: Macro-Fiscal Context and Health Financing Factsheet."

<sup>28</sup> Devarajan and Mottaghi, "MENA Economic Monitor, April 2017."

<sup>29</sup> Dureab et al., "Yemen"; Federspiel and Ali, "The Cholera Outbreak in Yemen."

<sup>30</sup> Dureab, Müller, and Jahn, "Resurgence of Diphtheria in Yemen Due to Population Movement."

<sup>31</sup> UNICEF, "Alarming Global Surge of Measles Cases a Growing Threat to Children."

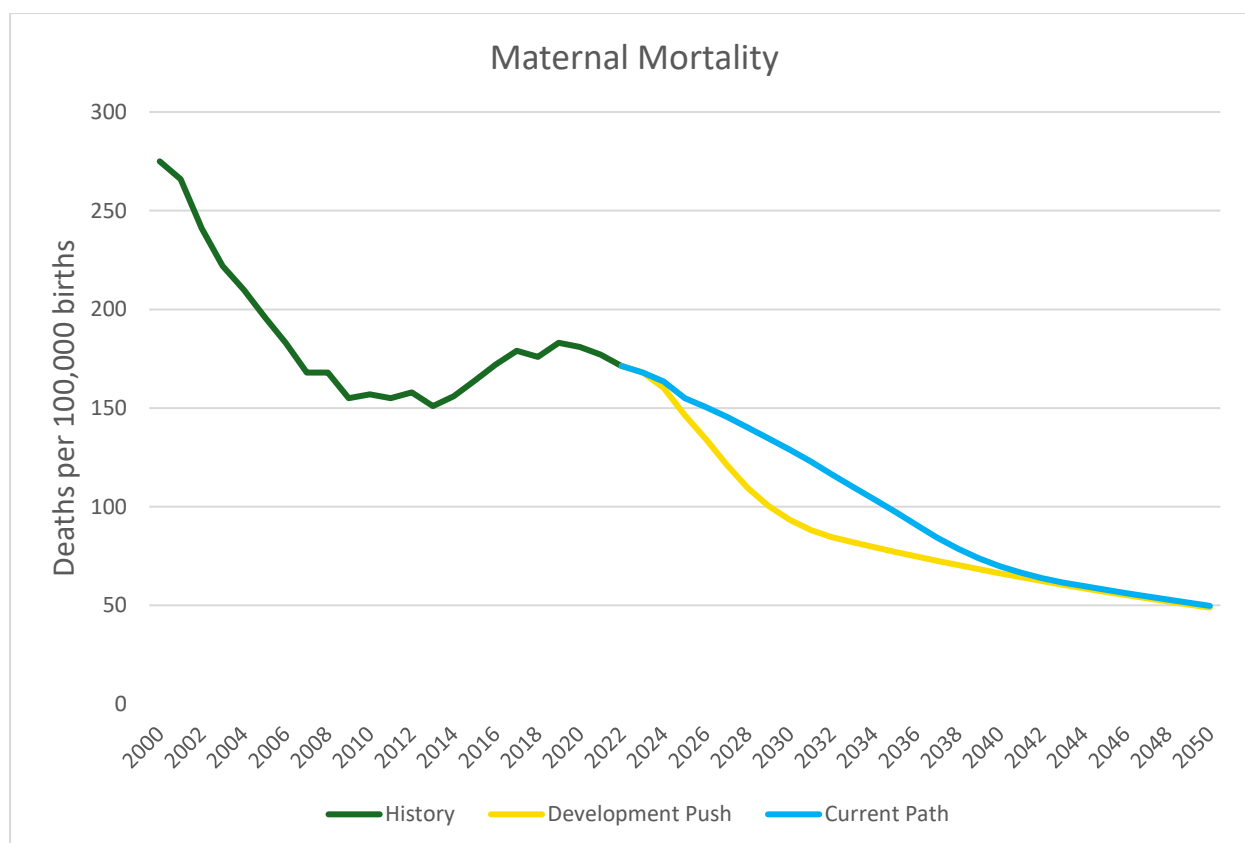


Figure 4: Maternal deaths per 100,000 live births in Yemen across scenarios. Source: IFs using historical data from WHO, UNICEF, UNFPA, World Bank Group, and UNDESA/Population Division. Trends in Maternal Mortality 2000 to 2020. Geneva, World Health Organization.

### 3.2.1 Under-five mortality rate

Child mortality in the country was improving steadily in the 1990s, the under-5 mortality rate falling by more than half in 20 years. But progress began to stall in the 2010s, and the country's current conflict has hit young children especially hard, leading to sharp increases in child mortality. Conflict is responsible for more than 259,000 child deaths since the war escalated,<sup>32</sup> leading the under-five mortality rate to reach nearly 65 deaths per 1,000 live births in 2023.

Along the *Current Path*, child mortality is projected to improve, driven by gradual changes to poverty and hunger described above as well as access to health services, water, and sanitation. However, this improvement is gradual. With an under-5 mortality rate still at 59 by 2030, Yemen is not projected to even come near to meeting the SDG target (an under-5 mortality rate of less than 25) by the middle of the century (Figure 5). A *Development Push* scenario models a future where improvements in health and nutrition along with water and sanitation access save young lives and speed up progress. Even in this scenario, the country does not quite meet the SDG target – reaching an under-5 mortality rate of just over 26 by 2050 – but this more rapid progress reflects real improvements in the futures of young children.

<sup>32</sup> Hanna, Bohl, and Moyer, "Assessing the Impact of War in Yemen."



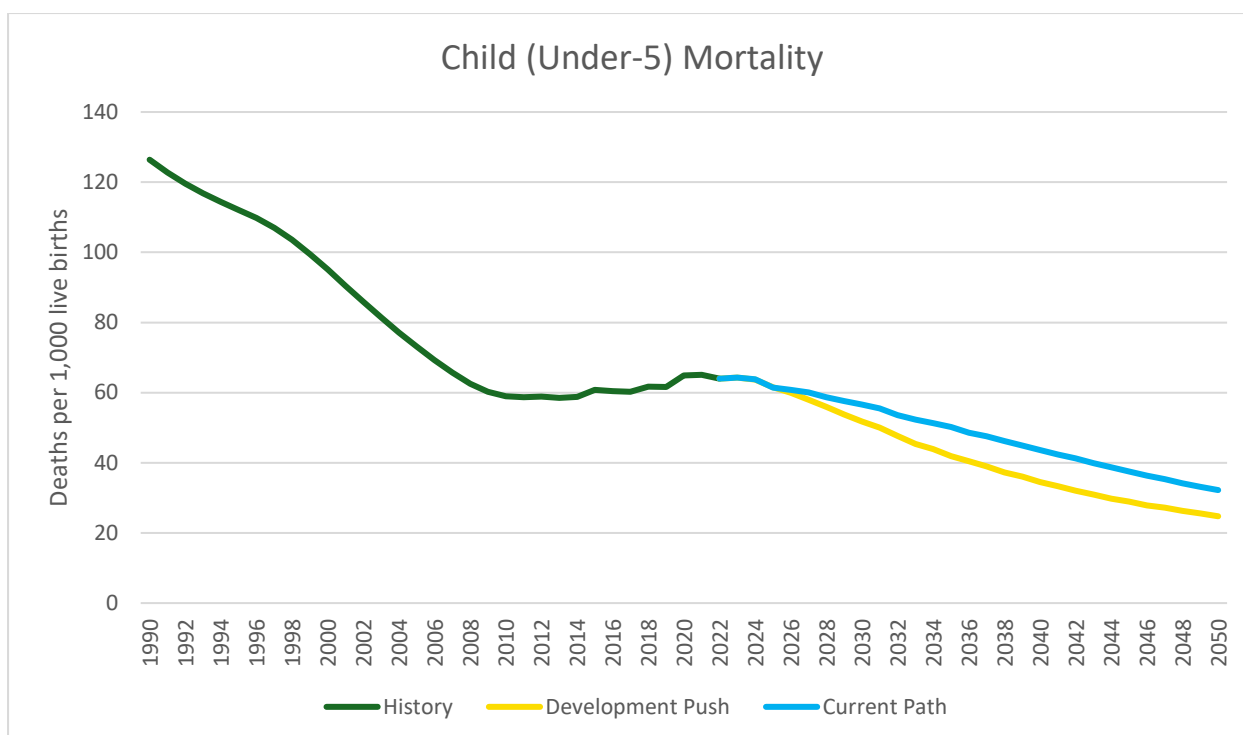


Figure 5: Child (under-5) mortality rate in deaths per 1,000 live births in Yemen across scenarios. Source: IFs 8.19 using historical data from Global Burden of Disease 2019 Under-5 Mortality and Adult Mortality.

### 3.2.2 Neonatal mortality rate

Historically, progress toward reducing neonatal mortality rates mirrors that of child mortality, with steady progress made for 20 years after 1990, followed by a stalling of progress into the current conflict period (Figure 6). Along the *Current Path* of development and similarly to child mortality, gradual improvements are projected to pick up, with the neonatal mortality rate nearly meeting the SDG target (a rate of 12) by mid-century. Accelerating this improvement, a *Development Push* scenario results in the critical care needed to support the health of young infants, achieving the SDG by 2045 and falling just below 10 by 2050.

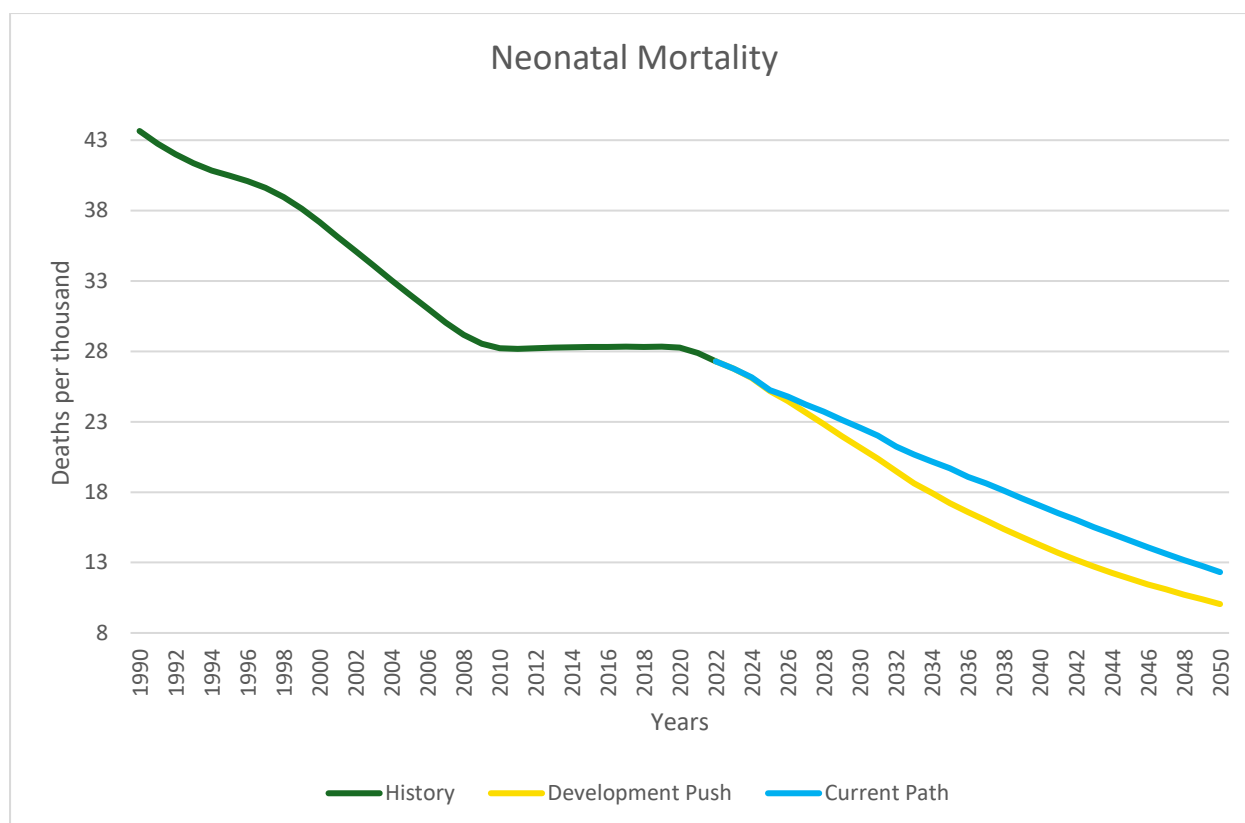


Figure 6: Neonatal mortality rate per 1000 live births in Yemen across scenarios. Source: IFs using historical data from the UN Inter-agency Group for Child Mortality Estimation.

## Government efforts, challenges, and needs

The healthcare sector in Yemen faces formidable obstacles and debilitating disruptions, which have severely compromised its ability to improve public health, enhance health indicators, and increase life expectancy, as well as respond to diseases. The sector struggles with inadequate infrastructure, including insufficient coverage of healthcare facilities and services, poor quality of care, and a scarcity of skilled healthcare professionals. Furthermore, there is a significant disparity in the geographic and demographic distribution of healthcare resources, exacerbating existing health inequities.

The challenges and risks threatening the healthcare sector have intensified, eroding the foundations of the healthcare system and its capacity to provide essential services. The 2016 Healthcare Services Assessment found that the healthcare system in Yemen operates just at 45% of its capacity, with 38% of facilities partially functioning and 17% completely non-functional. The sector faces a crippling shortage of essential medicines and medical supplies, a situation that was further complicated by the COVID-19 pandemic.

In order to address these challenges and improve health outcomes in the country, health facilities across the country will need to be rehabilitated and necessary resources allocated to improving the quality of services to the public. It will be critical to pay special attention to the rural population, to increase access to reliable health services in those areas. In addition, there is a need to conduct a national survey on maternal mortality to inform decision-making about progress on the health indicators.

## Goal 4: Quality Education

### Summary

Table 4: Data available for SDG 4 indicators in Yemen.

Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all		
Target	Indicator	Value (Year)
<b>4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes</b>	4.1.2: Completion rate (primary education, lower secondary education, upper secondary education)	<p>Primary: 62.3 (2013)<sup>33</sup></p> <p>Lower-secondary: 40.3 (2013)<sup>33</sup> 44.1 (2016)<sup>33</sup></p> <p>Upper-secondary: 30.6 (2013)<sup>33</sup></p>

Before 2015, educational outcomes were improving despite many challenges, with an increase in primary gross enrollment from 73% in 1999 to over 100% in 2013. This increase happened alongside improvements in girls' access especially – female educational enrollment grew from 52% to 92% at the same time.

Good, country-wide data are not available since the escalation of war in 2015. But the conflict has clearly reversed much of the earlier progress and its damage will continue to slow recovery. Thousands of schools are out of use due to destruction, closing, or usage as internally displaced person (IDP) shelters. Children have lost access to education through displacement, security risks, recruitment, early marriage, and child labor. UNICEF reported that in 2021, more than 2 million school-aged children were out of school, more than double the number of out-of-school children in 2015.<sup>34</sup>

### Forecasting progress and achievement

#### 4.1.2 Completion rate (primary education, lower secondary education, upper secondary education)

Per the latest available data, Yemen's gross primary completion rate was 62.3% in 2013. Without data available since the conflict escalation, the estimations and forecasts below certainly overestimate current conditions, which are likely much worse. However, even with that in mind, Yemen was not on track to meet the SDG target of universal primary education even by 2050 in a *Current Path* scenario, with the gross enrollment rate reaching just under 92% (Figure 7).

A *Development Push* scenario demonstrates the potential not only to keep students in school but to bring students who have or are at risk of dropping out back to primary education, with

<sup>33</sup> UNESCO Institute for Statistics (UIS). Public education in Yemen is divided into two stages, basic and secondary. Basic education was divided in the report into primary and preparatory for the purposes of international comparison.

<sup>34</sup> UNICEF, "Education Disrupted: Impact of the Conflict in Children's Education in Yemen."

a gross enrollment rate averaging more than 140% during the 2030s. This scenario would provide children with the critical educational access needed to progress to the upper levels, but it would also place considerable demands on an already weakened education system.

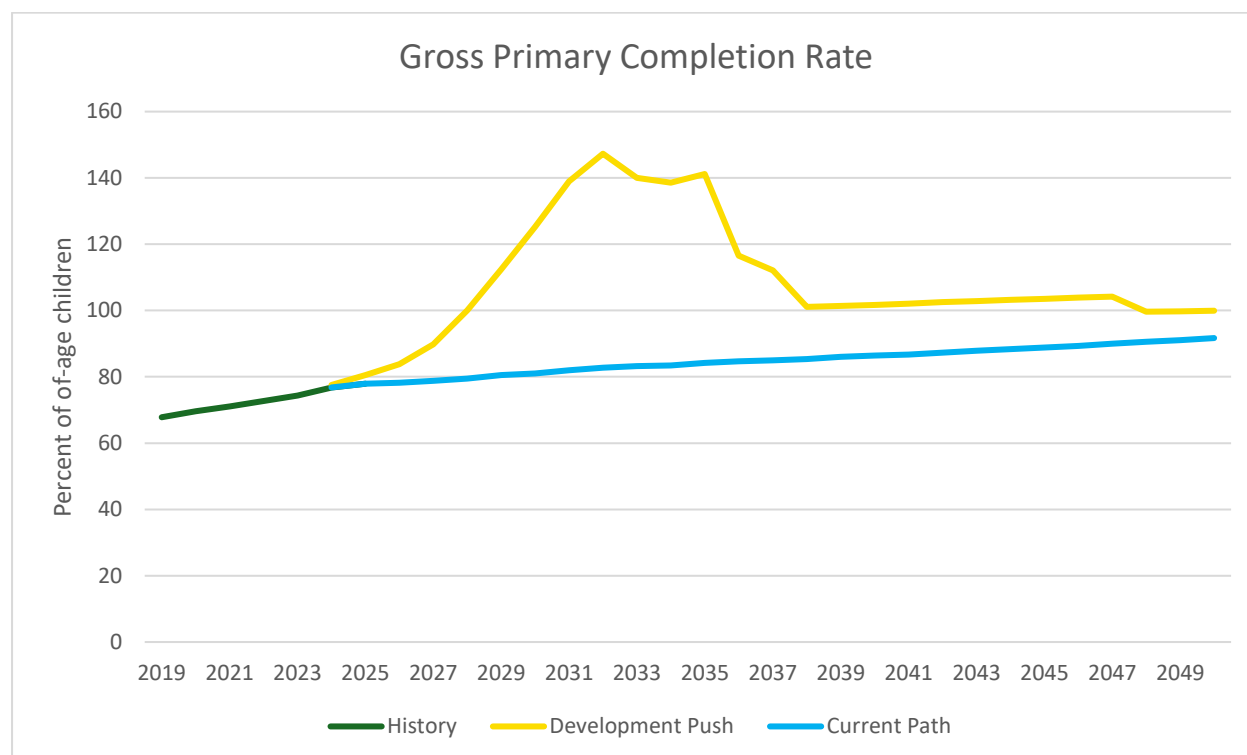


Figure 7: Gross primary completion rate as a percentage of of-age children, both sexes, in Yemen across scenarios. Source: IFS 8.19 using historical data from UNESCO Institute for Statistics.

The lower secondary completion rate was estimated at 44% in 2016, and in the *Current Path*, it is expected only to reach 66% by 2030 and just over 75% by 2050 (Figure 8), still well behind universal enrollment. A *Development Push* includes interventions to improve education at all levels, meaning that not only do more students stay in school in lower secondary, but there are also more students eligible to enroll in lower secondary as more students have completed primary education. In this scenario, the gross enrollment rate grows to 120% as overage students complete their lower secondary schooling before settling around 100% in 2040.

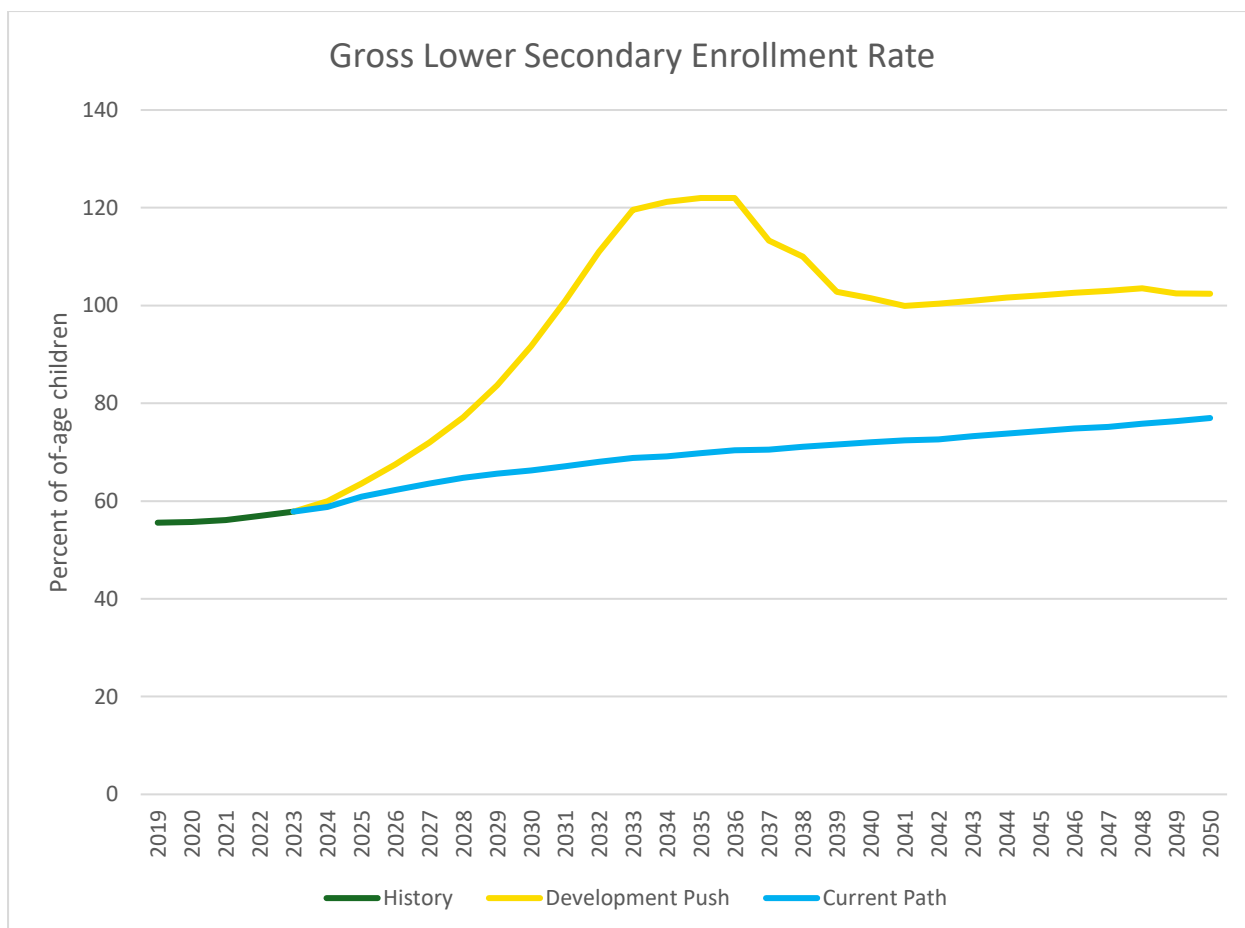


Figure 8: Gross lower secondary enrollment rate as a percentage of of-age children, both sexes, in Yemen across scenarios. Source: IFs 8.19 using historical data from UNESCO Institute for Statistics.

Upper secondary enrollment rates are even further behind, with an estimated gross enrollment rate just over 25% today (Figure 9). Along the *Current Path* scenario, this is projected to grow steadily to 45% by 2050 – reflecting an improvement but still leaving more than half of the upper secondary-aged population behind. Improvements in even the most optimistic scenario are still constrained by not only resources but also the ability for students to complete primary and lower secondary levels. In the *Development Push*, more of those eligible students stay in the education system through upper secondary levels. But by 2050, Yemen’s gross enrollment rates are still projected to meet just 53%.

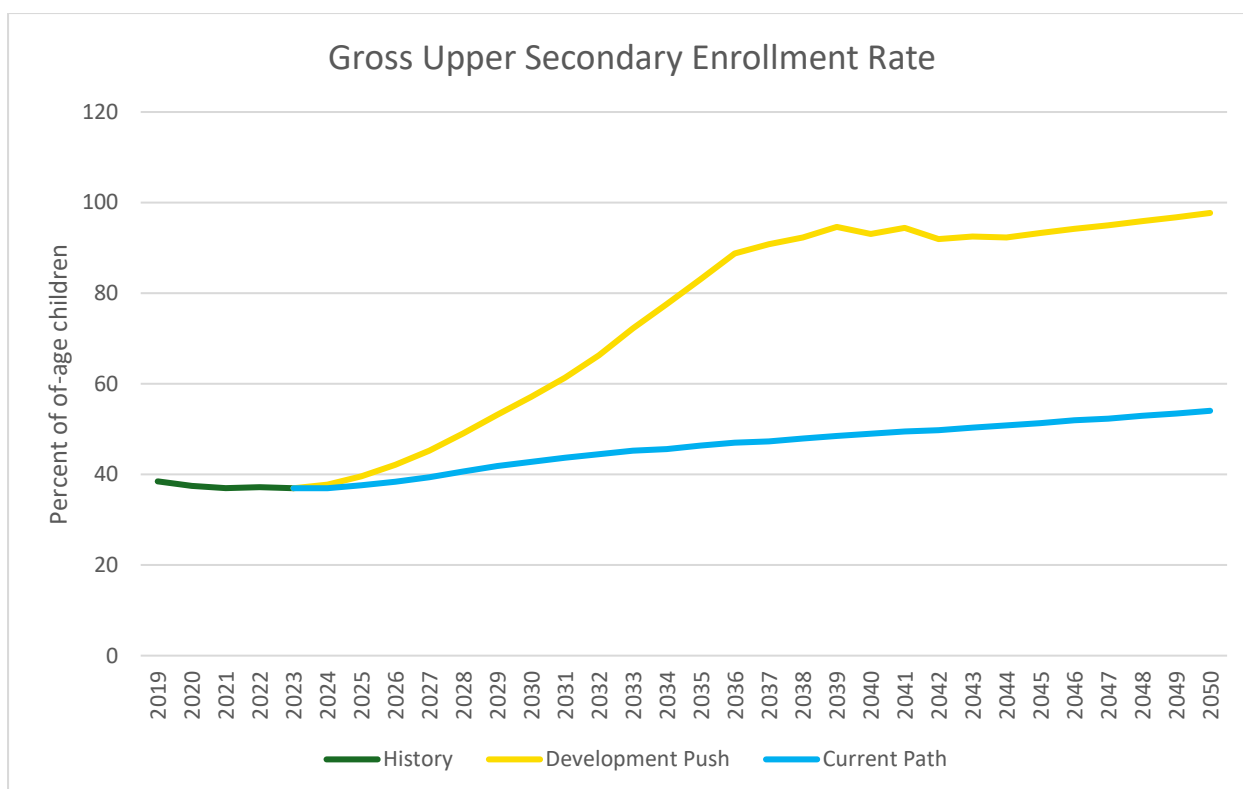


Figure 9: Gross upper secondary enrollment rate as a percentage of of-age children, both sexes, in Yemen across scenarios. Source: IFs 8.19 using historical data from UNESCO Institute for Statistics.

## Government efforts, challenges, and needs

One major challenge to improving the educational system is a lack of a comprehensive and accurate diagnosis of the education sector, due to the political and security situation. Survey data and statistical information are scarce and, where they exist, often unreliable and unrepresentative. Moreover, the country has not participated in international testing for several years and the difficulty of national-level testing has limited the ability to assess educational quality. However, a comprehensive educational survey is planned as a part of the 2024-2030 Education Sector Plan, and preparations are underway for its implementation.

Even without this information, it is clear that the education sector has suffered severe damage during the war. Basic education indicators have deteriorated, and approximately 2.3 million children are out of school. The educational infrastructure has been severely impacted, with around 1,842 educational facilities either completely destroyed (18%), partially damaged (77%), used to shelter internally displaced persons (8%), or converted into military barracks (1%).

In order to address these challenges, several programs have been planned and implemented to accelerate SDG achievement in education:

- The **School Development Program** aims to enhance schools' capacity to manage, improve, and develop the educational process. This includes building capacities of schools and staff in addition to engaging and supporting local communities to work together to develop the quality of education in their regions. The Program grants schools a wide range of autonomy in managing their affairs, including planning, implementation, monitoring, and self-evaluation, while utilizing their human and

financial resources within a framework of transparency, accountability, and self-assessment.

- In 2014, the Ministry of Education launched the **Rural Female Teachers Program**, which aims to address the shortage of teachers in rural schools. The program included a six-month training course on basic teaching skills and methods, after which successful trainees received certificates from the Higher Institute for Teacher Training and Development. With support from the International Bank and the Global Partnership, 2,100 female teachers received training. Upon completing the course, successful trainees were supposed to be transferred to the civil service system and officially recognized, but the deteriorating situation in the country and the outbreak of war prevented the completion of these procedures, which remain pending to this day. It is worth noting that rural female teachers participating in the program received a contractual salary during their training period, funded by development partners.
- To provide suitable educational opportunities for all children in light of ongoing war, climate change, and deteriorating living conditions, the Ministry of Education established the **Community Education Department** (formerly known as the Alternative Education Department) in 2018. With funding from UNESCO, the Department developed a reference framework for alternative education and prepared educational materials for these children. Accelerated education classes were opened, and a number of teachers and facilitators who passed competitive exams were trained and contracted for a school year. The goal of this program is to provide intensive education (completing a full academic year's curriculum in one semester) to enable children to catch up with their peers in regular education and eventually return to school. This program is still ongoing as of this report.

In considering future programs to advance education in the country, it will be critical to ensure that they are addressing gender gaps in education, adapting to the needs of children with disabilities, and considering the alignment of education and training with labor market needs. There is also a need to develop a joint education strategy among all concerned institutions.

## Goal 5: Gender Equality

### Summary

Table 5: Data available for SDG 5 indicators in Yemen.

Goal 5: Achieve gender equality and empower all women and girls		
Target	Indicator	Value (Year)
<b>5.3: Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation</b>	5.3.1: Proportion of women aged 20-24 years who were married or in a union before age 15 and before age 18	<i>Before 15:</i> 6.5% (2022) <sup>35</sup>
		<i>Before 18:</i> 29.6% (2022) <sup>35</sup>
<b>5.5: Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-</b>	5.5.1: Proportion of seats held by women in (a) national parliaments and (b) local governments	<i>National:</i> 0.3% (2015) <sup>36</sup> 0.0% (2023) <sup>36</sup>

<sup>35</sup> CSO and UNICEF, "Yemen MICS 2022-2023."

<sup>36</sup> Inter-Parliamentary Union.

making in political, economic and public life	5.5.2: Proportion of women in managerial positions	4.1% (2014) <sup>37</sup>
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The marginalization of women and girls in Yemen is not the result of the current conflict – Yemen already ranked lowest in the world in the Gender Inequality Index and the Gender Development Index in 2014. But war has severely exacerbated already-entrenched gender inequalities, resulting in increases in gender-based violence, early marriage, and mobility restrictions.<sup>38</sup> Women and children account for 80% of those displaced by war and one-fifth of IDP households are headed by girls under 18.<sup>39</sup> In 2023, an estimated 7.1 million women and girls were in need of services preventing violence or treatment from violence, which are unavailable in many areas of the country.<sup>40</sup> And after several years of very slight improvements, the Gender Inequality Index increased again in 2021 and 2022. Moreover, data on many of these issues remains sparse and unreliable due to hesitancy to report, social stigma, and the absence of mechanisms to pursue legal remedies.

## Forecasting progress and achievement

### *5.3.1 Proportion of women aged 20-24 years who were married or in a union before age 15 and before age 18*

In 2018, nearly one tenth of women aged 20-24 had been married before they were 15 and nearly one third before they turned 18. While this exact measure is difficult to forecast due to a lack of reliable data, one proxy measure sometimes used is the average age of women at the time of their first marriage.

In 1990, the average age of marriage for Yemeni women was just over 18, indicating a significant presence of child marriage (Figure 10). This has increased over the following decades, reaching 22.8 years by 2019.<sup>41</sup> Along the *Current Path* this is expected to grow gradually, reaching 24 by 2050, while the *Development Push* increases the average age at first marriage by one year.

<sup>37</sup> International Labour Organization.

<sup>38</sup> Heinze and Stevens, “Women as Peacebuilders in Yemen.”

<sup>39</sup> UNOCHA, “Yemen: 2018 Humanitarian Needs Overview.”

<sup>40</sup> UNFPA, “UNFPA Response in Yemen, Issue #1 Jan-Mar 2023.”

<sup>41</sup> UN World Marriage Data.



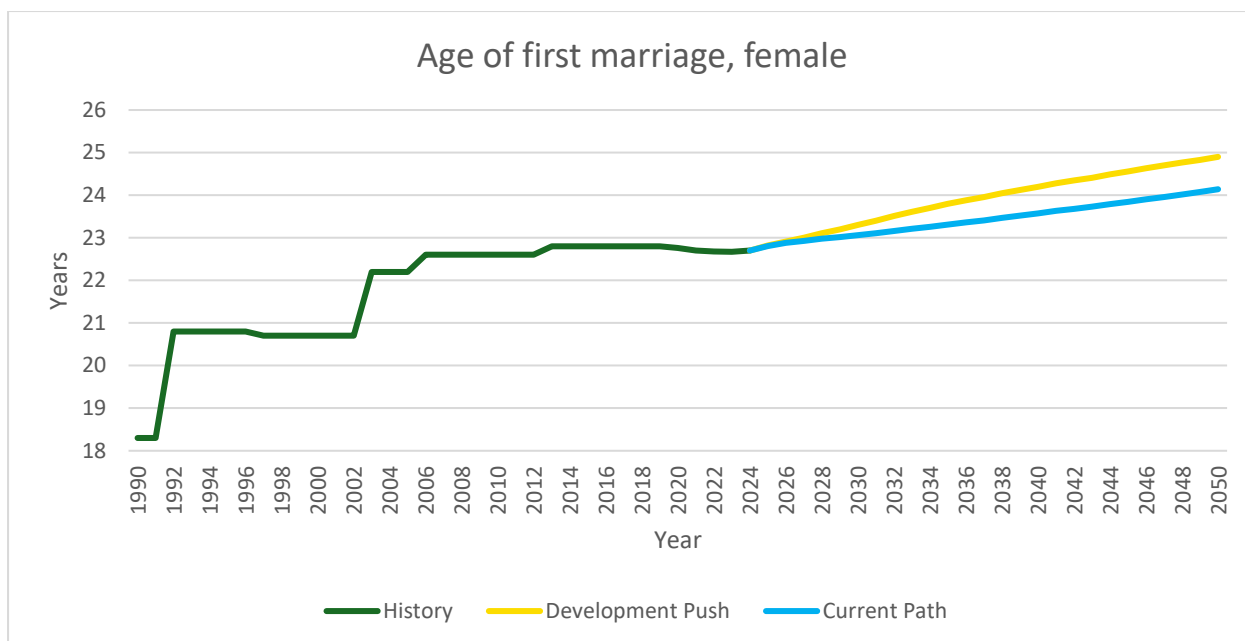


Figure 10: Mean age of women at first marriage. Source: IFs 8.19 using historical data from UN World Marriage Data 2019.

### Gender Development Index

The Gender Development Index (GDI), a measure of the ratio of female to male Human Development Index (HDI) values, is not itself an SDG target. However, it can reveal strong inequalities when it comes to access to education, healthcare, and income, and is referenced here to better understand how core development needs are met for women and girls in the future. In the earliest years of data, the GDI in Yemen was increasing gradually, reflecting improvements in the position of women and girls relative to men (Figure 11). However, this trend reversed starting in 2011 before falling by more than a third in just seven years, revealing that even while the conflict hurt outcomes overall, it also widened the gender gap significantly.

Along the *Current Path*, the GDI is projected to improve gradually as women begin to make up some of the damage lost in the previous decade. However, the country only catches back to where it was in 2010 after 2040. In the *Development Push*, an emphasis on gender equality does increase that progress, but female HDI is still well behind male HDI through the coming decades.

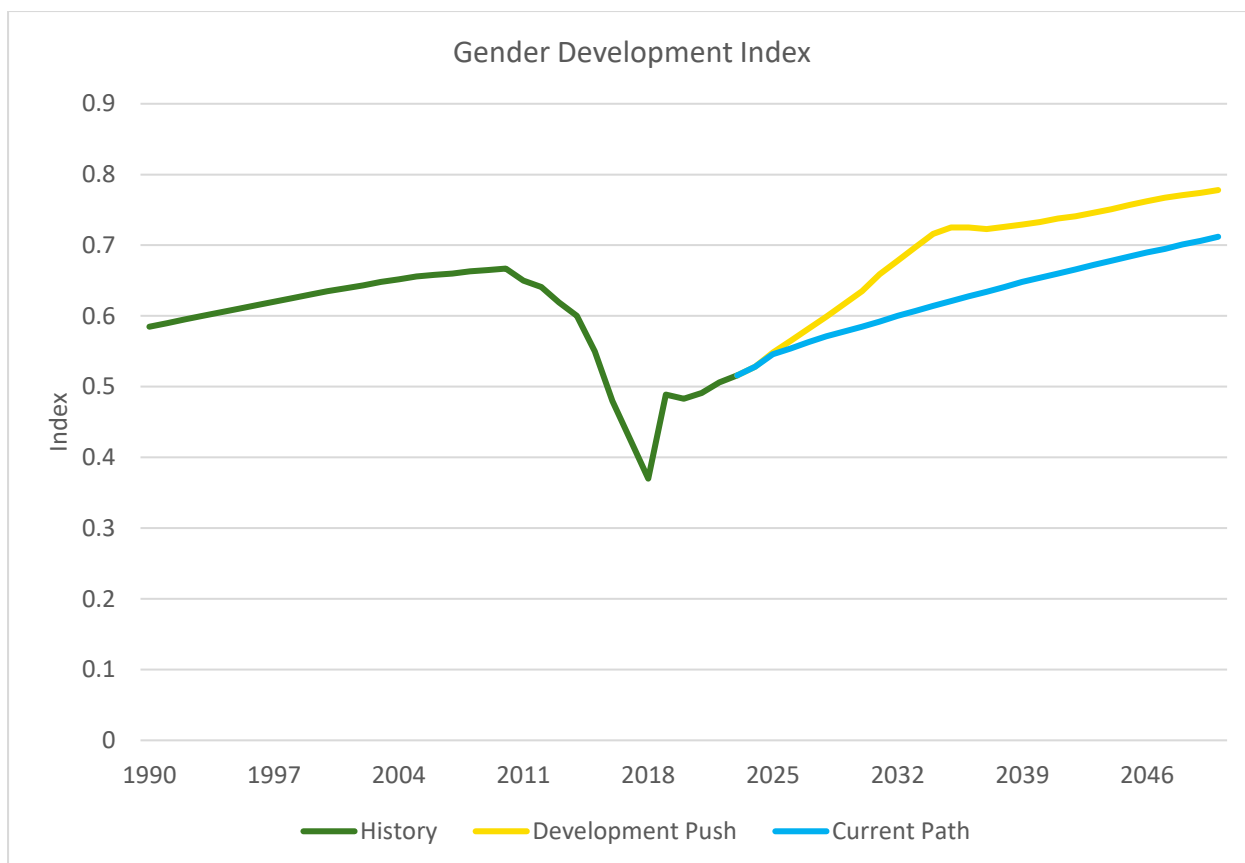


Figure 11: Gender Development Index (GDI) in Yemen across scenarios. Source: IFs 8.19 using historical data from UNDP Human Development Report.

## Government efforts, challenges, and needs

Efforts to improve gender equality in Yemen face a number of challenges. In general, economic conditions, weak security, and political instability have resulted in a lack of access to basic services for all members of society, but women are often disproportionately affected. Social and community norms around issues like girls' education may slow progress in some of these areas. And finally, women face laws and restrictions that limit their access to resources, mobility, and decision-making power.

Significant efforts are being made within the framework of national plans and government programs to improve gender equality and female empowerment at all levels. Special schools for girls in areas of need and laws requiring compulsory basic education for all are intended to address the gender gap and ensure girls have access to education, while additional measures are intended to improve opportunities for girls to enroll in technical, vocational, and university education. Monitoring of violence against women has been improved in both rural and urban areas. And efforts have begun to remove laws and text that discriminate against women.

In one positive step, the Yemeni National Plan for Women, Peace and Security is being implemented in application of UN Security Council Resolution No. 1325 on Women, Peace and Security. Headed by the Ministry of Social Affairs and Labor and with membership of a number of relevant government agencies, civil society organizations, and social and academic figures, the Plan was launched on March 7, 2023. Recent research shows that women's empowerment

in peace and recovery can unlock significant potential country-wide for economic and human development.<sup>42</sup>

### **Box 1: Gender activities in Aden**

A number of activities and events related to women, peace and security were implemented in Aden Governorate, and a committee for the plan was formed in Aden Governorate. This committee, in collaboration with civil society organizations, has implemented the following activities:

- Forming subcommittees for the National Plan for Women in a number of governorates and implementing a number of programs and activities in this field;
- Generations Without Qat (a project to enhance the effective participation of women in the relief, early recovery and peace process (CARE - Taiz/Aden);
- Youth Without Borders Organization (a project to operate youth service centers in Aden and support the involvement of youth in advocating violence against women and building youth consensus capacities to build peace);
- Salam Foundation for Sustainable Communities, Bottom-up Peacebuilding Project (Aden);
- National Organization for Community Development, Bottom-up Peacebuilding Project (Taiz); and
- Akon Foundation for Rights and Freedoms, Project for Localization of the Women, Security and Peace Agenda, Peace Initiative Organization (Aden, Abyan, Shabwa, Hadhramaut).

While these programs and initiatives are in their early stages, additional urgent action is required to address gender inequality in the country. Proposals and projects should target universities and vocational centers to ensure women's representation in these institutions. Decisionmakers must continue to push improvements in legislation while awareness campaigns featuring social figures, advocates, and influencers can raise the profile and acceptance of the importance of gender equality. Women's representation within state administrative bodies along with the private sector should be encouraged and fostered, with a target representation rate of 10% in 2024. Income-generating projects targeting rural women can enable their participation in agriculture and fisheries sectors. Finally, gender should be considered in all policy measures, including ensuring that plans to address basic services access consider how to increase women's access specifically.

## **Goal 6: Clean Water and Sanitation**

### **Summary**

*Table 6: Data available for SDG 6 indicators in Yemen.*

<b>Goal 6: Ensure availability and sustainable management of water and sanitation for all</b>		
<b>Target</b>	<b>Indicator</b>	<b>Value (Year)</b>
<b>6.2: By 2030, achieve access to adequate and equitable sanitation and</b>	6.2.1: Proportion of population using (a) safely managed sanitation	(a) Sanitation

<sup>42</sup> Hanna, Bohl, and Moyer, "Assessing the Impact of War in Yemen."

hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations	services and (b) a hand-washing facility with soap and water	17.4 (2015) <sup>43</sup> 18.8 (2020) <sup>43</sup>
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Yemen has historically faced numerous challenges in providing water and sanitation infrastructure. A wide gap exists in access between rural and urban populations. In rural areas, settlements are spaced out between challenging terrain, and costs to provide access are especially high while financing is limited. In urban areas, government and donor financing has been more plentiful, but access is provided by a patchwork of public and private providers and urban population growth has outpaced the ability to provide new connections and find sustainable water sources. Water infrastructure challenges are compounded by water stress. Yemen's groundwater resources have been declining rapidly, and are expected to continue due to population growth, demand, and irrigation.<sup>44</sup> The agriculture sector consumes the majority of available water in Yemen, and much of that is wasted due to inefficient irrigation.<sup>45</sup>

These existing challenges have been exacerbated by conflict, which has affected access through the destruction of infrastructure, displacement of populations, and disruption of continued maintenance and expansion. The World Bank found that as of 2020, 38% of water and sanitation assets in the country had been damaged by conflict and just over 70% of water facilities in the assessed cities were at least partially functioning.<sup>46</sup>

## Forecasting progress and achievement

### 6.1.1 Proportion of population using safely managed drinking water services

Data for the population using safely managed water services in Yemen are not available, but model estimates suggest that in 2023, approximately 57% of the population had access to at least basic water services, with less than half of those (or 23% of the total population) having access to safely managed services (Figure 12). Along the *Current Path*, progress in both levels of access is projected to be challenged by existing damage, financing constraints, and population growth, with access rates projected to be stagnant still for several years. However, over time access is projected to expand again, with safely managed services covering just under 40% of the population and at least basic services reaching 77% by 2050.

<sup>43</sup> WHO/UNICEF Joint Monitoring Program for Water Supply, Sanitation and Hygiene.

<sup>44</sup> Aklan and Lackner, "Solar-Powered Irrigation in Yemen: Opportunities, Challenges and Policies."

<sup>45</sup> Baig et al., "Realizing Food Security Through Sustainable Agriculture in the Republic of Yemen."

<sup>46</sup> World Bank, "Yemen Dynamic Needs Assessment: Phase 3, 2020 Update."

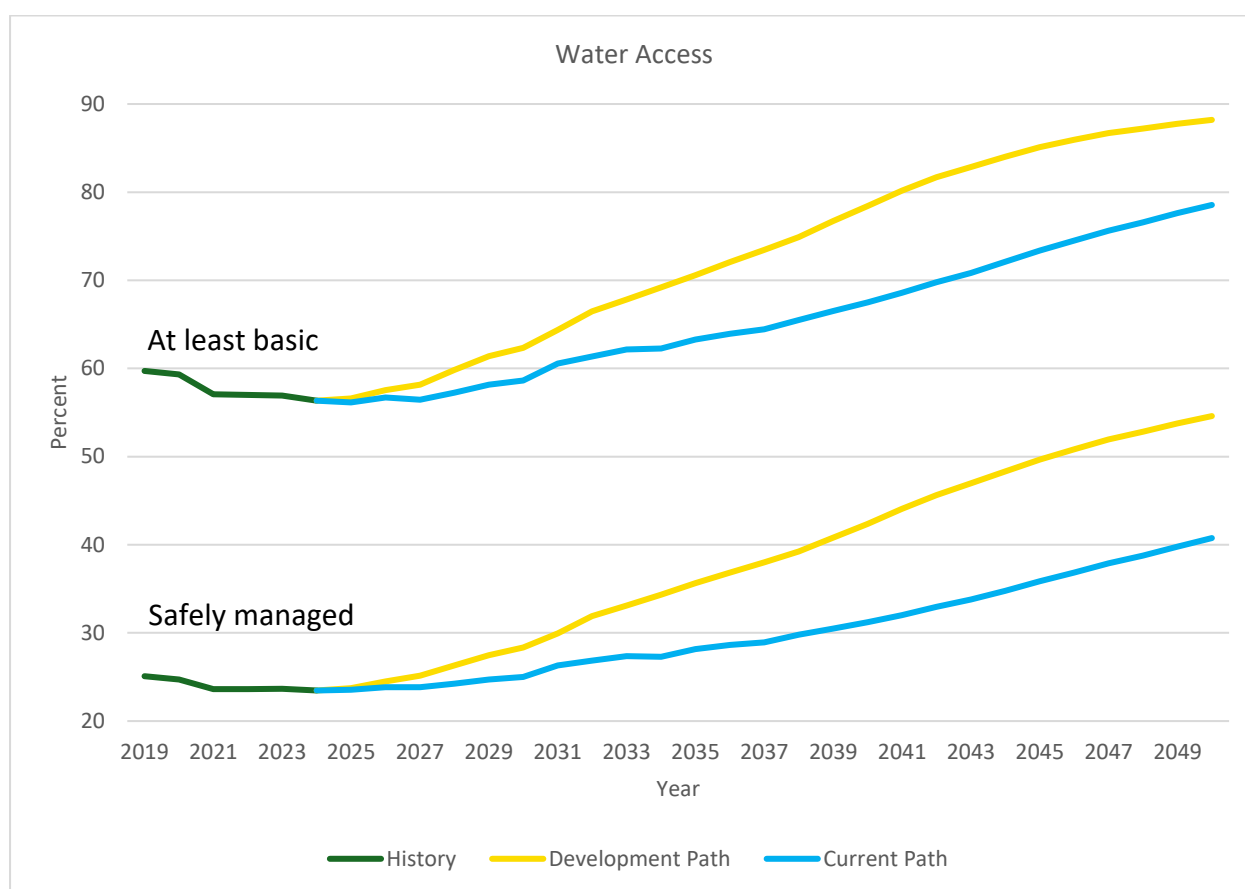


Figure 12: Percent of population with at least basic or safely managed access to safe drinking water. Source: IFs 8.19 using historical data from WHO/ UNICEF Joint Monitoring Program for Water Supply, Sanitation and Hygiene.

The *Development Push* scenario includes investments aimed at improving access for individuals at all levels, including increasing access to safely managed water sources at the same time as addressing those the furthest behind, with access only to surface water. This scenario results in expanding access to at least basic services to an additional 10% of the population and to safely managed services by nearly 15% (5.7 million) by 2050.

#### 6.1.2 Proportion of population using (a) safely managed sanitation services

Sanitation access typically lags behind water access, and rates are accordingly lower in Yemen. In 2023, an estimated 22% of the population has access to safely managed sanitation sources, and roughly half to at least basic. As with water access, in the *Current Path*, safely managed access is expected to remain stalled in the near future, while population growth and financial constraints result in the basic access rate actually continuing to fall for the next decade (Figure 13).

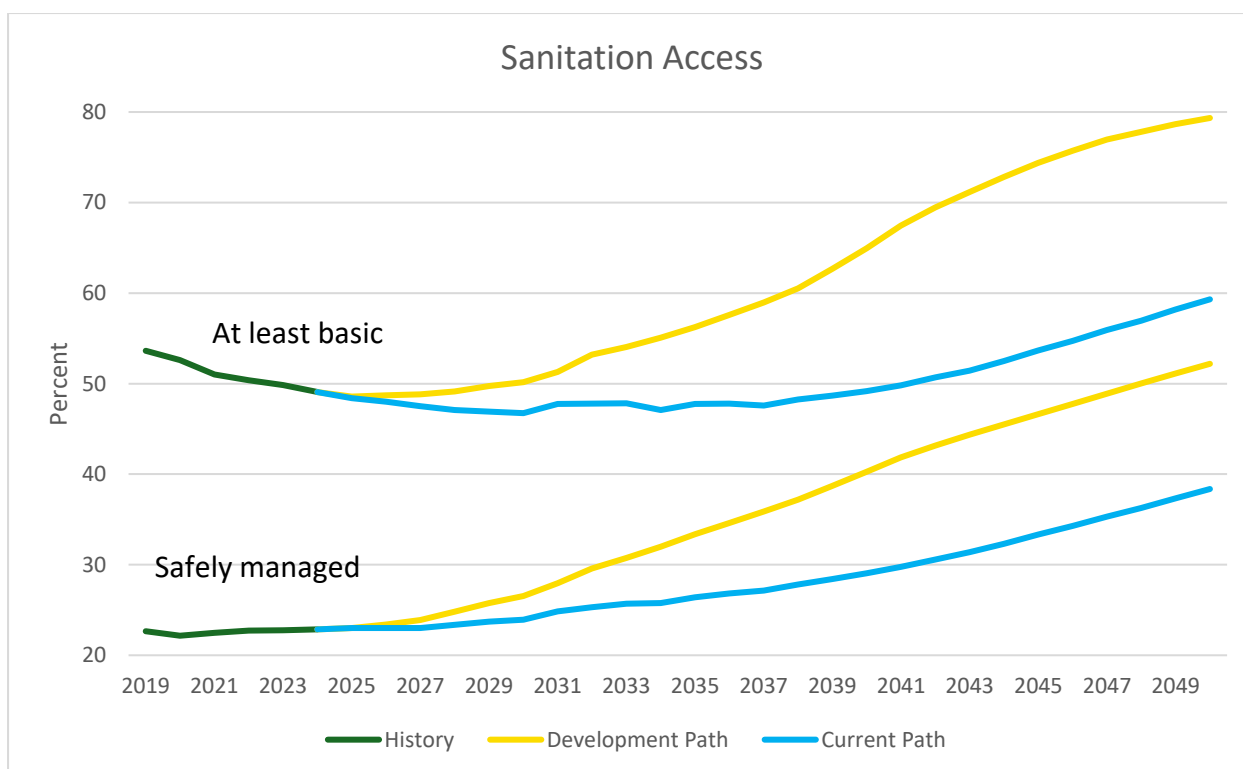


Figure 13: Percent of population with at least basic or safely managed access to sanitation services. Source: IFs 8.19 using historical data from WHO/ UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene.

## Government efforts, challenges, and needs

Yemen has long faced the growing problem of water scarcity. Accompanied by a lack of water planning and allocation, this has resulted in an unsustainable balance between water supply and demand. Improvements in access are constrained by weak governance structures, a fragile enabling environment, a lack of institutional capacity, and the absence of a national vision that prioritizes the value of water. Water basins are exposed to excessive water extraction and lack water management plans, while recharging water basins are inefficient. The country has insufficient infrastructure to address flooding, storms, and climate-related issues, and does not yet have plans to protect agricultural biodiversity and adapt to climate change.

The government has identified a number of priority interventions to improve water and sanitation:

- Developing a plan aimed at restoring balance (relief-recovery-development).
- Conducting a targeted analysis to identify reform-oriented interventions, including a damage and needs assessment for local institutions.
- Enhancing current water fields with seawater desalination to alleviate the water service gap from 62% to 70% in major cities.
- Rehabilitating water and sanitation networks, as well as wastewater treatment plants, to their pre-crisis condition, with a target of 100%.
- Keeping pace with urban development in financing and establishing water and sanitation networks in urban areas.
- Designing interventions to harvest rainwater for household use within the framework of rural water projects (needs assessment, intervention mapping, and fundraising).

- Programs incentivizing movement away from the cultivation of highly water-intensive crops, like qat.
- Exploring options for optimal utilization of surface water.
- Complete and further develop the national strategy on water and sanitation services.

## Goal 7: Affordable and Clean Energy

### Summary

Table 7: Data available for SDG 7 indicators in Yemen.

Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all		
Target	Indicator	Value (Year)
<b>7.1: By 2030, ensure universal access to affordable, reliable, and modern energy services</b>	7.1.1: Proportion of population with access to electricity	46% (2015) <sup>47</sup> 43% (2021) <sup>47</sup>

In 2015, less than half of Yemen's population had access to electricity, a figure which has only worsened over time. The conflict has destroyed and damaged physical infrastructure directly, prevented maintenance and led to fuel shortages, all contributing to lack of electricity access in the country. Of those who do have electricity, roughly half of those are reliant instead on diesel generators or solar panels rather than a public grid connection.<sup>48</sup> Public electric services are completely unavailable in some cities,<sup>49</sup> while in others it is limited through load-shedding and power shortages. At the same time, the demand for energy is expected to increase as climate change will lead to rising temperatures and an increased need for cooling.<sup>50</sup>

Yemen does have a high potential for renewable energy, especially from solar, wind, and geothermal sources.<sup>51</sup> Since the conflict, the use of solar energy has expanded significantly in order to cope with lack of grid access and fuel.<sup>52</sup> While these projects have been small and limited in capacity, they reflect the potential for renewable sources for Yemen in a larger way.

### Forecasting progress and achievement

#### 7.1.1 Proportion of population with access to electricity

Electricity access in Yemen has been uneven historically and has fallen since the conflict onset, with just 44% of Yemenis estimated to have access in 2023. In the *Current Path*, expansion of access is projected to start to pick back up after 2030, but still reach just 65% of the population by mid-century (Figure 14).

<sup>47</sup> International Energy Agency (IEA).

<sup>48</sup> Al-Wesabi et al., "A Review of Yemen's Current Energy Situation, Challenges, Strategies, and Prospects for Using Renewable Energy Systems."

<sup>49</sup> World Bank, "Yemen Dynamic Needs Assessment: Phase 3, 2020 Update."

<sup>50</sup> RCCC, "Yemen: Country-Level Climate Fact Sheet."

<sup>51</sup> Alkipsy, Raju, and Kumar, "A Review of the Challenges of Energy Sector and Prospects of Renewable Energy Utilization in Yemen"; Al-Wesabi et al., "A Review of Yemen's Current Energy Situation, Challenges, Strategies, and Prospects for Using Renewable Energy Systems"; Pacudan, "Renewable Energy Strategy and Action Plan."

<sup>52</sup> Aklan and Lackner, "Solar-Powered Irrigation in Yemen: Opportunities, Challenges and Policies."

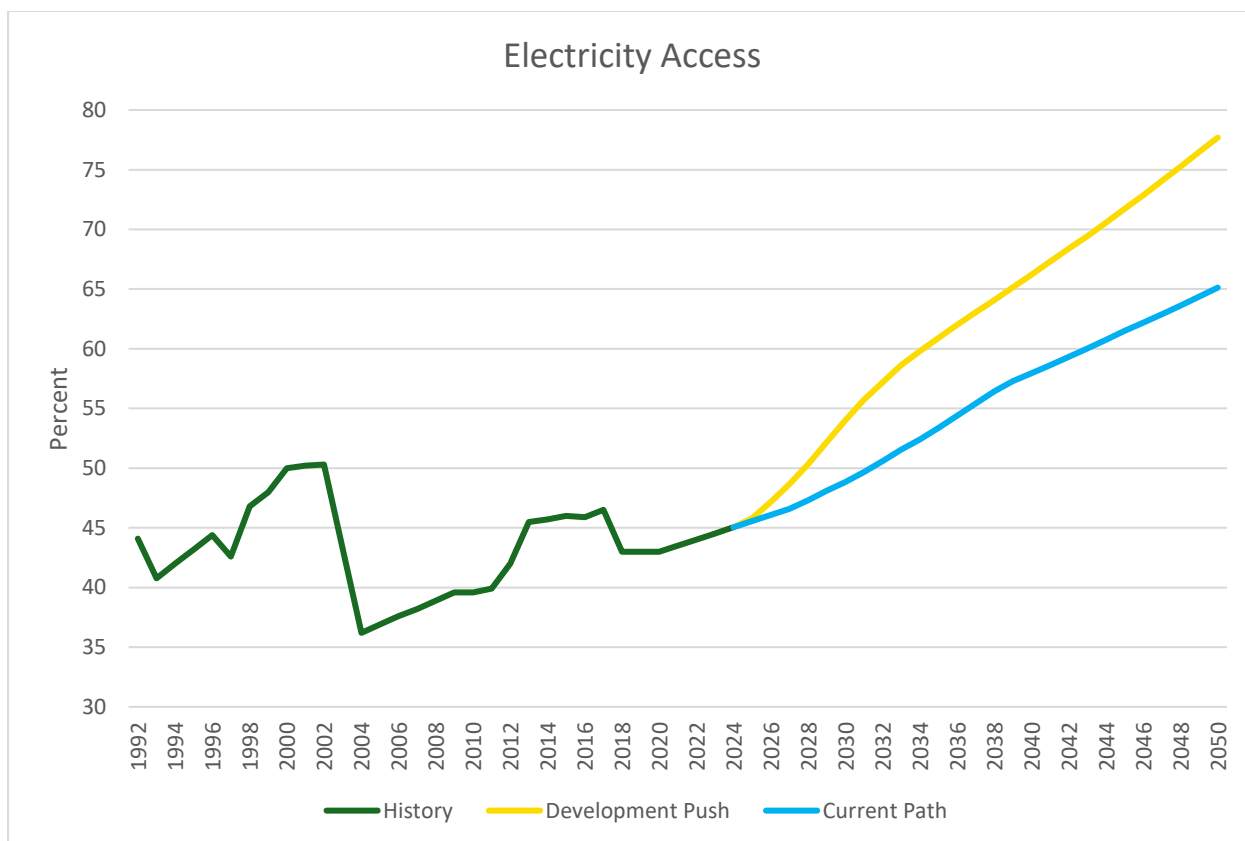


Figure 14: Percent of population with access to electricity in Yemen across scenarios. Source: IFs 8.19 using historical data from IEA.

The *Development Push* scenario includes a push to expand access, with a focus on expanding access to rural populations, and thus results in a significant increase in access rates. Even in this scenario, Yemen is not projected to reach universal electricity access, reaching not quite 80% by 2050, but this reflects 2 million more electricity connections than projected otherwise.

### Government efforts, challenges, and needs

The energy and electricity sector has not been able to provide electricity for commercial and residential purposes, and in 2016 only 10% of the population had access to electricity through the national grid. The current conflict has resulted in significant damage to energy infrastructure, including power plants, transmission lines, and distribution networks. The 2020 Dynamic Needs Assessment report by the World Bank revealed that approximately 71% of power generation stations were partially damaged, 10% of distributed generation units were completely destroyed, and 45% of distributed generation units suffered partial damage. War has also resulted in lapses in maintenance and deferred construction. Most power plants in Yemen, particularly diesel-powered plants, have a weak generating capacity due to age and inadequate maintenance. Transmission and distribution lines are also outdated, leading to high energy losses during transmission, distribution, and generation.

The Government of Yemen is committed to implementing a long-term plan to transition to clean energy, with the expectation of integrating clean energy sources to account for 35% to 50% of the energy mix by 2050. To achieve this goal, projects in the fields of solar energy, wind power, geothermal energy, and waste energy will be established between 2022 and 2050 to meet the growing demand and reduce dependence on traditional fossil fuels and natural gas.



This will also require mobilizing resources from respective international organizations and funds.

## Goal 8: Decent Work and Economic Growth

### Summary

*Table 8: Data available for SDG 8 indicators in Yemen.*

<b>Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</b>		
<b>Target</b>	<b>Indicator</b>	<b>Value (Year)</b>
<b>8.1: Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries</b>	8.1.1: Annual growth rate of real GDP per capita	-29.9% (2015) <sup>53</sup> -4.2% (2021) <sup>53</sup>
<b>8.2: Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors</b>	8.2.1: Annual growth rate of real GDP per employed person	-30.9% (2015) <sup>54</sup> -2% (2022) <sup>54</sup>
<b>8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value</b>	8.5.2: Unemployment rate, by sex, age, and persons with disabilities	13.5% (2014) <sup>54</sup> 17.5% (2023) <sup>54</sup>

Yemen's economy contracted initially after unrest in 2011 and then was devastated by the escalation of conflict in 2015. In the first year of the war, businesses closed, oil production came to a halt, imports were halved, and oil and gas exports fell 85%. After years of conflict and a further serious contraction in 2020, by 2021 Yemen's GDP was less than 60% of its size in 2014. A UNDP report estimates that the conflict and subsequent shocks led to a cumulative USD 126 billion in lost production from 2015 to 2021.<sup>55</sup>

Just under one-third of adults (15+) in Yemen participate in the labor force, a slight reduction from the same figure before the war (36% in 2014). While remarkably low, this rate masks an even greater disparity in labor force participation rates between men (60%) and women (5%). In 2014 the unemployment rate was 13.5%, but unemployment was much higher among young adults (24.5%) and women (26.1%). Recent data suggest that overall unemployment has increased since the war, to an estimated 17.5% in 2023. Of those who do work, half are self-employed, with 30% in the public sector.<sup>54</sup> The informal economy continues to account

<sup>53</sup> World Bank and IMF.

<sup>54</sup> ILO Modelled Estimates and Projections database.

<sup>55</sup> Hanna, Bohl, and Moyer, "Assessing the Impact of War in Yemen."

for a large portion of the economy and employment, in which women workers are overrepresented.<sup>56</sup>

## Forecasting progress and achievement

### 8.1.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries

GDP per capita in Yemen fell drastically in the years leading up to and during the escalation of conflict. In fact, GDP per capita growth between 2010 (when GDP per capita was just under USD 4,000<sup>57</sup>) and 2023 (just over USD 1,500) was, on average, less than -5% annually (Figure 15). These losses can largely be attributed to economic devastation from unrest and war during that time, combined with a rapid population growth rate. In a *Current Path* scenario, growth is expected to resume but very slowly, with an average growth rate of 1.7% over the next 15 years to reach nearly USD 2,500 by 2050. The *Development Push* accelerates this growth, but from a low level. With an average growth of more than 3%, GDP per capita just exceeds its previous level before the war by 2050, reaching just over USD 3,500.

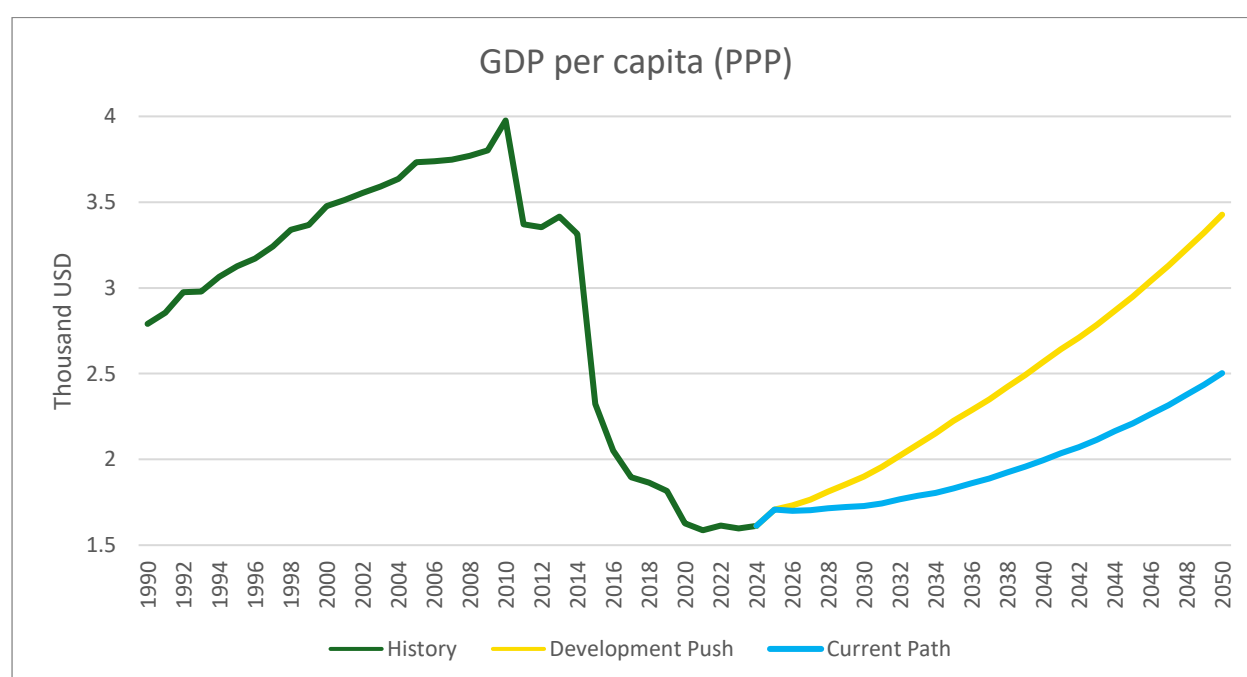


Figure 15: GDP per capita at PPP (in 2017 USD) in Yemen across scenarios. Source: IFs 8.19 using historical data from World Bank's World Development Indicators.

## Government efforts, challenges, and needs

War has devastated already weak economic growth and significantly increased unemployment, especially among young people. As government programs and a large portion of economic activity came to a halt, donor funding was suspended and most foreign investors withdrew, resulting in a 90% reduction in oil and gas exports, significant capital flight, and a major contraction of government revenues. This only exacerbates the constraints posed by

<sup>56</sup> Bruni, Salvini, and Uhlenhaut, "Demographic and Labour Market Trends in Yemen."

<sup>57</sup> GDP per capita figures reported here in purchasing power parity (PPP).

pre-existing challenges, including fragile infrastructure and a workforce with low levels of education and training, and a largely informal employment environment.

The government and the private sector are working with partners to develop the strategic framework for technical and vocational education and training, with the aim of providing market-relevant programs to increase trainees' employability and access to decent jobs. In these programs, the technical and vocational education and training (TVET) sector paves the way towards public-private partnerships, socioeconomic recovery, peacebuilding, and sustainable human development. Other activities include private sector capacity building through training and follow-up support related to participatory planning to sustain businesses at the governorate level. Through funding partners, UNDP has been supporting emergency employment across the country, as well as supporting the establishment of micro and small enterprises, and is now elaborating a sustainable livelihoods strategy.

Still, a number of measures are required to promote economic growth and subsequent employment. These include, in the short term:

- An economic recovery package that works to develop economic management, activate economic and financial policy, unify the exchange rate of the national currency, stop the deficit financing policy, and develop public revenues;
- Developing a policy framework for supporting and encouraging small and medium enterprises.
- Adopting labor-intensive projects and economic empowerment programs for women, youth, and displaced people, to provide decent job opportunities, especially in economically promising sectors;
- Considering humanitarian response plans within the framework of a macro-economic vision to develop the productive assets of farmers, create job opportunities for unemployed youth, and rebuild the productive capacities and energies of the displaced, leading to sustainable growth and enhancing economic activity;
- Providing basic services that meet the needs of the population, and developing a plan to rebuild and reconstruct the infrastructure as it represents the necessary basis for restoring confidence in the overall economic performance; and
- Regular payment of salaries to civil service employees and the reconstruction, restoration and rehabilitation of productive assets damaged by the war, especially in the areas of electricity, water, education, health, and waste collection.

In addition to these urgent measures, the following medium and long-term interventions will help boost economic growth and employment in the long run:

- Addressing the structural challenges that the economy suffers from, including the increasing reliance on oil revenues as a main source of public revenues and the lack of development of non-oil revenues, such as taxes of all kinds and revenues from the profits of public and mixed production and service companies;
- Developing the education and health sector and increasing the percentage of public spending on human capital, especially education and health, and urging donors to increase financial allocations and invest in building the technical and human capabilities of national and local institutions that provide health and education services;

- Active private sector participation in the recovery process, enhancing dialogue and partnership between the public and private sectors, and approving the partnership law with the private sector, which enhances the role of the private sector in the recovery, development and reconstruction process;
- Developing promising economic sectors such as fisheries, mining, tourism, and others; and
- Developing the oil and gas sector, which represented about 24% of the GDP at current prices for the year 2014, and establishing industrial cities that depend on local energy, and investment can be made in raising the production capacity of local refineries (Aden, Marib), and the efficiency and quality of their products to meet local needs and in raising the generating efficiency of the existing gas station, and investing in new stations.

## Goal 9: Industry, Innovation and Infrastructure

### Summary

Table 9: Data available for SDG 8 indicators in Yemen.

Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation		
Target	Indicator	Value (Year)
<b>9.3: Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets</b>	9.3.2: Proportion of small-scale industries with a loan or line of credit	1.9% (2013) <sup>58</sup>
<b>9.c: Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020</b>	9.c.1: Proportion of population covered by a mobile network, by technology	<p>At least 2G: 89% (2022)<sup>59</sup></p> <p>At least 3G: 73.7% (2022)<sup>59</sup></p> <p>At least 4G: 45% (2022)<sup>59</sup></p>

Nearly a decade of conflict has led to considerable destruction and damage of infrastructure. In 2020, the World Bank estimated the cost needed to rebuild damaged infrastructure in the country between USD 11 and 13 billion.<sup>60</sup> An estimated one-third of paved roads in the

<sup>58</sup> World Bank Enterprise Surveys.

<sup>59</sup> International Telecommunication Union (ITU).

<sup>60</sup> World Bank, "Yemen Dynamic Needs Assessment: Phase 3, 2020 Update."

country have been destroyed as a result of the war, many others blocked or closed, and even more are in disrepair due to lack of maintenance.<sup>61</sup>

Prior to 2015, industry (including extractive industries and construction) made up nearly 40% of Yemen's GDP, but in just four years that fell to 25%.<sup>62</sup> The sector has suffered from direct physical damage as well as the result of changes to supporting infrastructure, supply chains, and increasing costs.

One challenge to industrial development historically is that small and medium enterprises have extremely low access to credit – just over 3% of small and medium businesses had access to a loan or line of credit in 2013. And during conflict, with the formal finance sector ruptured, this has only become more difficult.

Second- and third-generation mobile networks cover approximately 92% of the population, providing some potential for more digital access. However, the actual access to and use of mobile phones is still limited. The number of mobile phone subscriptions has fallen from 62 per 100 population in 2013 to 46 in 2021, and there are fewer than 5 mobile broadband subscriptions per 100 population as of 2021.

### Government efforts, challenges, and needs

Pursuit of this goal will require significant effort to rebuild, revitalize, and promote industry and innovation in Yemen. Industrial and technology sectors still make only a limited contribution to GDP and are constrained by limited operational capacity. Security and political risks alongside a weak infrastructure environment make for an unattractive investment climate, further holding back opportunities for advancement.

These challenges can be addressed in part by formulation of a manufacturing strategy that leverages Yemen's diverse mineral wealth and the development of manufacturing industries in order to boost these sectors' contribution to GDP. Through the creation of productive and sustainable job opportunities, this can not only advance the economy as a whole but improve inclusive and sustainable growth to support development across the board. There is also a need to support local innovation and manufacturing using modern technologies and available resources.

## Goal 10: Reduced Inequalities

### Summary

*Table 10: Data available for SDG 10 indicators in Yemen.*

Goal 10: Reduce inequality within and among countries		
Target	Indicator	Value (Year)
<b>10.b: Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in</b>	10.b.1: Total resource flows for development, by recipient and donor countries and type of flow (e.g. official development	\$3,782.95 million (2021) <sup>63</sup>

<sup>61</sup> Coombs and Salah, "The War on Yemen's Roads."

<sup>62</sup> <https://data.worldbank.org/indicator/NV.IND.TOTL.ZS?locations=YE>

<sup>63</sup> OECD via UN SDGs database.

<b>particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programs</b>	assistance, foreign direct investment and other flows)	
<b>10.c: By 2030, reduce to less than 3 per cent the transaction costs of migrant remittances and eliminate remittance corridors with costs higher than 5 per cent</b>	10.c.1: Remittance costs as a proportion of the amount remitted	5.16% (2021) <sup>64</sup>

Goal 10 aims to reduce inequalities in income and wealth levels, access to services, and political participation both within countries and among them. Social justice is a fundamental element that leads to fairer outcomes, reducing disparities in income and wealth among members of society. It also enables all residents, including the impoverished and most vulnerable groups, to benefit from the fair distribution of economic growth in terms of income and wealth, as well as access to economic and social rights, particularly rights related to income, health, education, water and sanitation, and social protection.

Income inequality has increased in Yemen over the past several decades. Figure 16 shows inequality in Yemen using a Lorenz curve, with income disparities deepening from 1998 to 2014. Results from the 2014 Household Budget Survey suggest that the wealthiest 20% of the population received 71.8% of income. And while detailed data are not available since 2015, evidence strongly suggests that income inequality has significantly worsened during the conflict.<sup>65</sup> Despite poverty increasing dramatically, conflict opens up avenues for a few to benefit disproportionately from exploiting the war economy and corruption, leading to even deeper disparities.<sup>66</sup>

<sup>64</sup> World Bank via UN SDGs database.

<sup>65</sup> Moyer et al., "Assessing the Impact of War on Development in Yemen."

<sup>66</sup> Eaton et al., "Conflict Economies in the Middle East and North Africa"; Sana'a Center for Strategic Studies, "Corruption in Yemen's War Economy"; Sana'a Center for Strategic Studies, "Yemen Economic Bulletin."

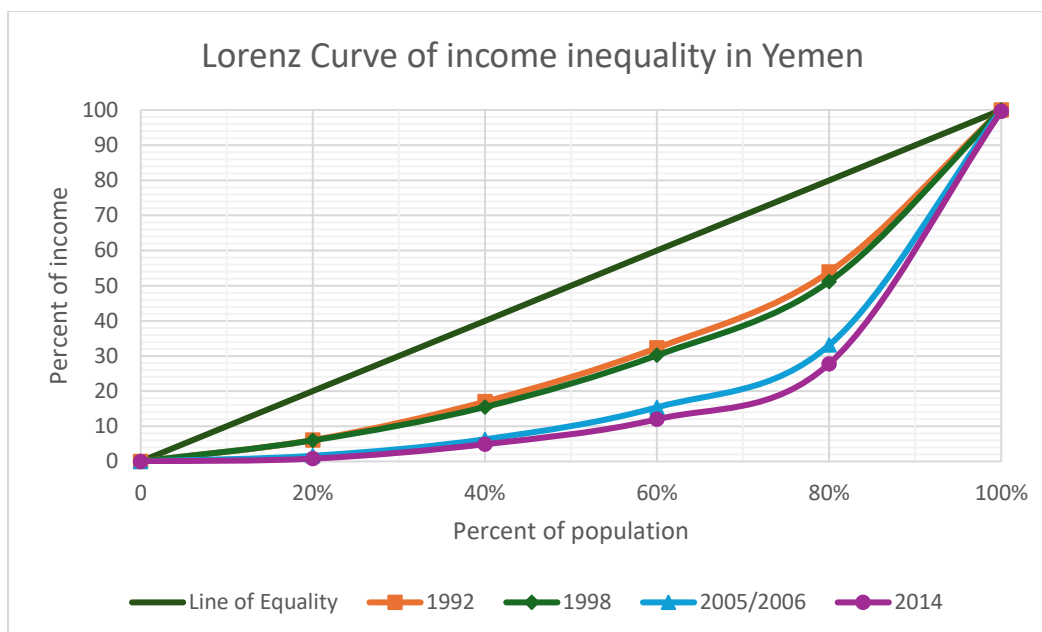


Figure 16: Lorenz curve showing income inequality in Yemen 1992-2014 using historical survey data.

Significant imbalances exist between rural and urban areas in access not only to income but also to basic services. For example, the secondary enrollment rate in urban areas (50.7%) is nearly twice that of rural areas (27%). Moreover, these geographic disparities exacerbate gender inequalities. For instance, enrollment among urban boys is 60% higher than rural boys (48.1% and 30.1%, respectively), whereas it is 125% higher between urban and rural girls (53.6% and 23.8%).

In addition to significant inequality within the country, Yemen is one of the poorest countries in the world, a result of a great deal of inequality between countries. For global inequality to improve and for Yemen to be able to pursue other SDGs, it will require external financing, which several Goal 10 targets are focused on. Yemen has been the recipient of external assistance. Based on available data, total resource flows in 2021 (including official development assistance, foreign direct investment, and other fellows) reached nearly USD 3.8 billion. However, these flows are primarily directed toward humanitarian needs rather than allocated for development purposes. And while remittances play an important role in the economy as a source of income for many households and a source of foreign currency, the cost of remittances, at 5.16% of transferred amounts, is well above the targeted 3%.

### Government efforts, challenges, and needs

Efforts to improve inequality face many challenges in Yemen, including continued conflict hindering the delivery of support. The resulting infrastructure destruction also continues to impede efforts to achieve developmental justice and equity. High poverty and unemployment rates affect access to education, healthcare, and economic opportunities. And severe disparities between urban and rural areas perpetuate significant developmental gaps geographically.

Addressing inequality will require paying special attention to those who are the most vulnerable, including growing cash transfer programs in both scope and volume and increasing the spending targeted for low-income individuals through education and health programs. Greater support for food security policy, including support for agricultural and fishing sectors,

can provide greater support for vulnerable communities. And more support for rural hospitals can address a key geographic gap in access to diagnostic, therapeutic, and surgical services.

## Goal 11: Sustainable Cities and Communities

### Summary

Table 11: Data available for SDG 11 indicators in Yemen.

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable		
Target	Indicator	Value (Year)
<b>11.1: By 2030, ensure access for all to adequate, safe, and affordable housing and basic services and upgrade slums</b>	11.1.1: Proportion of urban population living in slums, informal settlements or inadequate housing	45.5% (2014) <sup>67</sup> 44.2% (2018) <sup>67</sup>

The majority of Yemenis live in rural areas, but the country has become increasingly urbanized, from just over a quarter of the population living in urban areas at the turn of the century to nearly 40% in 2022. Urban areas have faced considerable challenges since the conflict. The portion of the population living in informal settlements has been falling gradually, from over 60% in 2000 to roughly 44% in 2018, but that will not be fast enough to eliminate slums in the near future. Moreover, the conflict has led to mass displacement, and approximately 4.5 million internally displaced persons lack access to basic services and reside in unsuitable dwellings. Data are especially limited for many indicators about the quality of and environmental impact of life in urban areas in Yemen, but it is clear that living conditions have degraded overall.

### Government efforts, challenges, and needs

Ongoing war has displaced millions of Yemenis and disrupted many urban services. Supporting sustainable cities and communities in the country will require an end to conflict and a reconstruction and recovery program to rebuild destroyed urban infrastructure and help to support those whose homes have been damaged and destroyed.

## Goal 12: Responsible Consumption and Production

### Summary

Table 12: Data available for SDG 12 indicators in Yemen.

Goal 12: Ensure sustainable consumption and production patterns		
Target	Indicator	Value (Year)
<b>12.c: Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with</b>	12.c.1: Amount of fossil-fuel subsidies (production and consumption) per unit of GDP	0.002 (2020) <sup>68</sup>

<sup>67</sup> UN-Habitat.

<sup>68</sup> UNEP via UN SDGs database.



<b>national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities</b>		
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Sustainable consumption and production involve managing and utilizing natural resources in production and consumption sustainably, especially since the present patterns of production and consumption are rapidly depleting natural capital, degrading ecosystem services, and undermining the ability of countries to meet their needs sustainably. Transitioning towards sustainable consumption and production patterns includes increasing efficiency and productivity throughout supply chains and product life cycles.

As one of the least developed countries in the region, Yemen is more prone to deprivation due to a lack of resources, capacity, and the repercussions of war and economic crises that have led to reduced productivity and economic growth, and a deterioration in living standards. Hence, it requires substantial financial and technical support to transition to clean and modern technologies and practices that promote sustainability in consumption and production, including the transfer of modern technology to achieve green economic growth and expedite progress in meeting Goal 12.

### Government efforts, challenges, and needs

Several periods of suspension and reduction of oil and gas exports have lowered revenues from oil and gas production and thus an increased budget deficit. Continued depreciation of the Yemeni Riyal against the US Dollar has led to higher energy, transportation, and commodity prices. Spending for the investment program has been frozen, with only those government projects currently underway allowed to continue. This has resulted in lost job opportunities, particularly for youth, leading to increased unemployment and poverty. And public debt has been rising, both internal and external, as a result of accumulated arrears and inability to pay due to decreased foreign exchange resources, particularly from oil and gas exports and diminishing international support.

The following interventions are recommended to accelerate the achievement of the Goal:

- Implementing practical measures to develop the state's financial resources through the application of a value-added tax, increasing the collection rate of sovereign revenues of all kinds, and combating tax and customs evasion.
- Resuming the export of oil and gas and protecting oil facilities from attack.
- Enhancing institutional and human capacities for producing and regularly publishing financial data to increase transparency.
- Benefiting from the expertise of international and regional organizations to develop national capabilities in preparing high-quality measurement indicators, utilizing the

expertise of the national private sector, and establishing a national network in the field of data.

- Strengthening dialogue and partnership between the government and the private sector to increase its contribution to scaling up investment across different economic sectors, including infrastructure projects and the alternative energy sector.

## Goal 13: Climate Action

### Summary

*Table 13: Data available for SDG 13 indicators in Yemen.*

Goal 13: Take urgent action to combat climate change and its impacts		
Target	Indicator	Value (Year)
<b>13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries</b>	13.1.1: Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population	813.9 (2023) <sup>69</sup>

Goal 13 is aimed at limiting and adapting to climate change. In recent years, the consequences of climate change have emerged as one of the primary challenges facing Yemen, posing severe threats to the country, which already suffers from significant weaknesses in its infrastructure and service provision. These consequences include droughts, floods, storms, heatwaves, the spread of pests and diseases, changes in rainfall patterns, increased frequency and severity of storms, sea-level rise, and other hazards, which directly hinder development. Furthermore, the ability to predict disaster occurrences in Yemen is extremely limited due to the lack of accurate tools for assessing disaster risks. The country has already experienced effects of natural hazards like severe flooding, and it is very likely that Yemen will continue to experience rising temperatures and increased variability in precipitation as a result of climate change.<sup>70</sup> By 2050, Yemen is likely to experience between 18 and 24cm of sea level rise across different scenarios, above the global average.<sup>71</sup>

Globally, climate and extreme weather are responsible for a greater portion of disasters in recent decades.<sup>72</sup> And extreme events in Yemen have already caused considerable damage. Flooding in Yemen has affected hundreds of thousands of Yemenis, resulting in deaths and injuries, damage to housing and key infrastructure, disruption of humanitarian activities, and reductions in agricultural production and income.<sup>73</sup> These effects are felt by a country already weakened by years of devastating conflict. Moreover, climate change threatens what was already one of the most water-stressed countries in the world, with resources declining

<sup>69</sup> MBRSG and UN SDSN, "The Arab Region SDG Index and Dashboards 2023/2024."

<sup>70</sup> Hanna et al., "The Impact of Climate Change on Human Development in Yemen."

<sup>71</sup> UNDP, "UNDP Human Climate Horizons."

<sup>72</sup> IFRC, "World Disasters Report 2022."

<sup>73</sup> IFRC, "Yemen."

rapidly.<sup>74</sup> In this context, Yemen is classified as one of the most vulnerable countries to climate change as well as one of the least prepared to deal with or adapt to its consequences.<sup>75</sup>

There is still uncertainty about the effects of climate change, both its most direct effects as well as how the country will be able to deal with its consequences. Moreover, it is challenging to obtain accurate figures on losses caused by climate-related disasters. There is not a systematic approach to collecting data on losses and estimates by partner organizations and agencies in Yemen vary widely. Recent research by the UNDP suggests that in a likely scenario, climate change could result in a cumulative USD 93 billion lost in GDP, pushing more than 8 million people into extreme poverty and 3.8 million more into malnutrition, compared with a scenario without climate change.<sup>76</sup>

### Government efforts, challenges, and needs

Yemen faces numerous challenges in taking climate action and facing the threat of climate change. For one, data availability is poor, and uncertainty is high. The capacity for in-country monitoring and evaluation of SDG indicators and disaster-related losses is limited, and available data are primarily sourced from international organizations.

Moreover, as climate change continues to take effect, Yemen has very little ability to mitigate this global issue. Without strong mitigation action from the countries largely responsible for the climate and planetary crises continuing to worsen, Yemen will likely continue to face the effects of climate change, including the damage from heavy rainfall and storms, spread of diseases, degradation of aquatic ecosystems, loss of biodiversity, and vulnerability of natural resources, including agricultural, livestock, soil, and water sources, to climate change.

In the past, government efforts have focused on addressing the impacts of climate extremes and leveraging available resources. Notably, Yemen has had success in transitioning to clean energy and preparing national reports and assessments (First, Second, and Third). According to the Third National Report of Yemen (2018), greenhouse gas emissions amounted to approximately 34,136 gigagrams of carbon dioxide equivalent in 2010, distributed among sectors as follows: Energy (22,038 gigagrams), Industry (1,798 gigagrams), Agriculture (8,247 gigagrams), and Waste (2,053 gigagrams). Meanwhile, carbon sequestration by the forestry sector and land-use change in 2010 was estimated at 1,885 gigagrams, resulting in a net greenhouse gas emission of approximately 32,249 gigagrams of carbon dioxide equivalent.

In addition, the “Enhancing Resilience for Building Sustainability in Yemen” project is being implemented in a collaboration between the Ministry of Water and Environment and the United Nations Office for Disaster Risk Reduction. The project aims to achieve a national strategy and a national coordination mechanism for disaster risk reduction and climate change, in order to address the current institutional and legislative weaknesses. A national team has also been trained to estimate disaster losses and develop a framework for addressing the issue of weak data on climate-related losses and damages.

In addition, the following measures are recommended as priority interventions for combatting and coping with climate change:

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<sup>74</sup> Weiss, “A Perfect Storm”; Firebrace, “Yemen Urban Water: Extreme Challenges, Practical Solutions, and Lessons for the Future from the Case of Taiz.”

<sup>75</sup> Chen et al., “University of Notre Dame Global Adaptation Initiative Country Index Technical Report.”

<sup>76</sup> Hanna et al., “The Impact of Climate Change on Human Development in Yemen.”

- Developing a crisis management plan, adopting an ecosystem-based adaptation approach, and transferring environmentally friendly technologies across various sectors such as agriculture and industry, while promoting safe and clean production mechanisms and techniques. This includes embracing modern environmental technologies, localizing them, and leveraging them to encourage scientific research in environmental protection and conservation, in addition to mobilizing necessary resources from donors and international funding agencies.
- Establishing national databases related to climate change and climate-related disaster losses and utilizing them to prepare national mitigation and adaptation plans, as well as programs for climate-related loss and damage funds.
- Setting national goals and indicators for climate action in line with national priorities, focusing on them during the next phase, and designing a national dashboard to monitor and report on progress, in accordance with global goals and indicators.
- Developing early warning systems at the local level to prevent climate-related disaster losses, thereby providing a thorough understanding of climate risks, monitoring, and assessing hazards and risks.
- Completing the national institutional and legislative framework to mitigate climate-related disaster risks and climate change.
- Enhancing the capacity of the team responsible for tracking and monitoring indicators.
- Preserving biodiversity and enhancing agricultural and fisheries resilience and adapting to the impacts of climate change, while mitigating climate-related disasters.
- Managing sustainable environmental systems and enhancing the capacity to adapt to climate change.
- Developing new crop varieties that can tolerate high temperatures, salinity, and drought, which are conditions that will prevail under climate change.
- Developing new crop varieties with shorter growth seasons to reduce water requirements and adapt to climate change conditions.

## Goal 14: Life Below Water

### Summary

Table 14: Data available for SDG 14 indicators in Yemen

Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development		
Target	Indicator	Value (Year)
<b>14.5: By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information</b>	14.5.1: Coverage of protected areas in relation to marine areas	30.6% (2022) <sup>77</sup>

The marine environment in the Republic of Yemen is characterized by a rich biodiversity, including 416 identified fish species. The marine ecosystem provides a habitat for a diverse array of both resident and migratory species, many of which hold significant national and

<sup>77</sup> MBRSG and UN SDSN, "The Arab Region SDG Index and Dashboards 2023/2024."

international value due to their overfished status, risk of extinction, or vulnerability. Notably, this includes marine mammals such as whales, dolphins, and dugongs, along with marine turtles. These species face threats from overfishing, pollution, habitat destruction due to oil and solid waste, and the use of illegal fishing gear.

Yemen's coastline spans over 2,500 kilometers but is threatened by increasing pollution rates and degradation of marine water quality. These problems are particularly present in coastal areas near cities and population centers overlooking the Red Sea (Meedi, Al-Luhayyah, Al-Khawbah, Al-Salif, and Hodeidah, Al-Tuhayta, Al-Fazzah, Al-Khawkhah, Al-Makha, and Dhu-Bab), on the Gulf of Aden (Al-Siqyah, Ras Al-Arah, Khor Umayrah, Qawah, and Aden, and Al-Mukalla), and on the Arabian Sea (Sayhut, Qishn, Haswayn, and Al-Ghaydhah). Untreated waste and sewage are disposed of in the sea in major cities like Hodeidah, Aden, and Al-Mukalla, while unauthorized construction of buildings and roads encroaches on coastal areas and results in loss of natural habitats, disruption of the biological balance, and depletion of fish stocks. Moreover, the beaches are being eroded, and the coastal lands and groundwater are being salinized. Furthermore, the damage caused by overfishing and oil pollution resulting from oil spills is significant.

Maritime trade traversing the Red Sea and Gulf of Aden significantly complicates efforts to protect and conserve the marine environment, primarily due to insufficient focus on preserving vital marine resources. These resources, including fish populations, coral reefs, and other critical food sources, are pivotal to the fisheries sector and are essential for maintaining ecological balance. To address these challenges, it is imperative to include the creation of marine protected areas and the strengthening of institutional capabilities for marine environmental preservation in economic development strategies.

Given the significance of Yemen's marine resources, which play a crucial role in enhancing food security, health, nutrition, income, and livelihoods, as well as supporting the livelihood of coastal populations, it is essential to prioritize the development of marine resources, including the development of fish wealth and the reduction of overfishing and illegal fishing.

### Government efforts, challenges, and needs

Efforts to conserve and protect marine resources are constrained by poor data, a lack of resources, and ongoing climate change.

Accurate information on the condition of the marine environment is scarce. The last study on fish stock was undertaken in 1987, for instance. There are neither strong monitoring and surveillance programs assessing the marine environment, nor detailed mapping of areas with high environmental sensitivity/ vulnerability.

Funding to implement required plans is often insufficient and human resource capacity is highly limited, particularly in monitoring, surveillance, and evaluation of SDG-related indicators. Infrastructure in the fisheries sector is especially weak, including fish landing centers, reception centers, and processing factories. And coastal governorates typically have poor service quality and access.

At the same time, climate change and other planetary crises continue to take effect, leading to increasing destructive effects. These include coral reef destruction, pollution, climate change impacts, and severe weather phenomena like cyclones, which have affected fish stock volumes.

To date, the Republic of Yemen has taken several steps to protect the marine environment, including establishing the General Authority for Environmental Protection, the General Authority for Maritime Affairs, and the Coast Guard to promote attention to the marine environment as a sustainable economic resource, as well as establishing a marine operations and marine inspection control room.

A number of actions have focused on the fisheries sector, like establishing a national fisheries information center and developing a plan to improve food security and infrastructure. The fish-landing port in Hageef, Al Tawahi District, Aden, has been rehabilitated and sunken ships salvaged. And a number of fish landing centers have been rehabilitated, including the dock yard Fish Landing Center in Aden (locally known as Dock Yar) with repaired fish storage refrigeration units.

Finally, the government has pursued several measures to protect important areas, including the Socotra Archipelago in the Arabian Sea has been declared a natural reserve, covering an area of 362,500 hectares; the Kamaran Island Forest in the Red Sea, Hodeidah Governorate, covering an area of 5,257 hectares; and the Aden Wetlands Reserve, covering an area of 2,586 hectares. Furthermore, requirements have been completed for declaring Bir Ali and Yurum protected areas in Shabwah and Hadhramaut Governorates, and Sharmah- Gathmoon protected area in Hadhramaut Governorate.

In addition to actions already underway, the following interventions are required for the protection of the marine environment in Yemen:

- Studying the biodiversity in inhabited islands in the Red Sea.
- Building a database that reflects the status of the marine and coastal environment.
- Expanding the establishment of natural marine reserves, developing and implementing plans for commercial fisheries management, addressing poverty in coastal communities, and building the capacity of women in coastal communities and promoting their role in in developing coastal environmental resources.
- Developing scientific research activities, including applied research on coastal and marine resources, and providing necessary financial resources to the Marine Sciences Authority, the Marine Pollution Center, and the Marine Life Center.
- Setting standards and specifications for acceptable levels of coastal and marine pollution and preparing work programs to protect the marine environment from pollution from land-based activities.
- Enhancing the capacity of the team responsible for tracking and monitoring marine and coastal environmental indicators and managing marine surveillance and inspection.

## Goal 15: Life on Land

### Summary

*Table 15: Data available for SDG 15 indicators in Yemen.*

**Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss**

<b>Target</b>	<b>Indicator</b>	<b>Value (Year)</b>
<b>15.3: By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought, and floods, and strive to achieve a land degradation-neutral world</b>	15.3.1: Proportion of land that is degraded over total land area	17.5% (2019) <sup>78</sup>

Yemen suffers from the phenomenon of land degradation due to climate change, rising temperatures, drought, and weather fluctuations that have led to the erosion of agricultural lands, deterioration of vegetation cover, and reduction in land and water productivity, both in surface and groundwater. Approximately 90% of land was desertified in 2014, distributed among desert dandy lands, coastal areas, mountains, residential land, roads, and investment zones. It is anticipated that the percentage of land degradation affected by anthropogenic changes will increase in the coming years.

#### **Box 2: Socotra Island**

Socotra Island harbors a wealth of natural wonders, with 37% of its plant life designated as endemic or unique to the region.<sup>79</sup> It has been nicknamed "The Galapagos of the Indian Ocean." The island was neutralized in the Yemeni conflict as it is listed on UNESCO's World Heritage sites, but military forces deployed there in 2018, escalating the dangers it faces amid the ongoing war. The International Union for Conservation of Nature has proposed adding the island to the list of World Heritage in Danger due to several critical threats, including unregulated development, the spread of invasive alien species, and the effects of climate change.<sup>80</sup>

### **Government efforts, challenges, and needs**

The following priorities policies and measures have been identified as important to mitigate the increase and escalation of land degradation:

- Support from the international community to fund activities aimed at preserving biological diversity, natural reserves, forests, and agricultural terraces.
- Conduct studies to assess, understand, and monitor the degradation of soil and land, including the application of remote sensing technologies and geographic information systems to establish a national database.
- Establish an environmental monitoring system to reduce pollution and enhance oversight, inspections, and the enforcement of law and policies to reduce adverse effects on the environment.

<sup>78</sup> UNCCD, "Report from Yemen."

<sup>79</sup> UNESCO, "Nature and People in the Socotra Archipelago."

<sup>80</sup> IUCN, "IUCN Advises In-Danger Status for Yemen's Socotra Archipelago World Heritage Site."



- Implement a national program to help raise environmental culture among all segments of society. Initiate awareness programs on the importance of biodiversity and risks of land degradation and forest loss.
- Invest in strategic expansion of protected areas, particularly those rich in biodiversity. Launch national afforestation campaigns to combat desertification and enact laws to prevent random drilling for groundwater wells, stop deforestation, and ban tree cutting to prevent the deterioration of vegetation cover.

## Goal 16: Peace, Justice and Strong Institutions

### Summary

Table 16: Data available for SDG 16 indicators in Yemen.

<b>Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels</b>		
<b>Target</b>	<b>Indicator</b>	<b>Value (Year)</b>
<b>16.1: Significantly reduce all forms of violence and related death rates everywhere</b>	16.1.1: Number of victims of intentional homicide per 100,000 population, by sex and age	6.8 (2013) <sup>81</sup>
<b>16.2: End abuse, exploitation, trafficking, and all forms of violence against and torture of children</b>	16.2.1: Proportion of children aged 1–17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month	79% (2013) <sup>82</sup>
<b>16.5: Substantially reduce corruption and bribery in all their forms</b>	16.5.2: Proportion of businesses that had at least one contact with a public official and that paid a bribe to a public official, or were asked for a bribe by those public officials during the previous 12 months	64.3% (2013) <sup>83</sup>

This goal aims to establish safe, stable and peaceful societies that respect human rights and support the rule of law. It emphasizes the establishment of transparent and accountable institutions that ensure equitable access to justice for all. Since September 2014, Yemen has been living in unstable political and security conditions as a result of the Houthi coup and the escalation of war and conflict that left deep wounds in the Yemeni body. All aspects of life were affected, government institutions were divided, public resources declined, public services deteriorated, economic and human development indicators deteriorated, in addition to numerous violations in the field of human rights. And international humanitarian law. Therefore, restoring state institutions, ending war and conflict, reaching a sustainable and comprehensive peace, and establishing a safe and stable society remains an urgent priority.

<sup>81</sup> UNODC.

<sup>82</sup> UNICEF.

<sup>83</sup> World Bank.



The legitimate government has engaged with the efforts made by the United Nations through its special envoy to Yemen to reach a sustainable and comprehensive peace that achieves stability and peace and puts an end to the war and conflict in Yemen. Constitutional legitimacy has supported the efforts of the international community and the special envoys of the Secretary-General of the United Nations who took successive missions in Yemen starting from The negotiations in Kuwait, Geneva, Stockholm and others end with agreements that prepare for a sustainable peace. However, the coup party shirks the implementation of commitments and agreements and imposes impossible obstacles and conditions despite the concessions made by the legitimate government. There is currently discussion about reviving and renewing a broader truce led by the Sultanate of Oman and with the support of Saudi Arabia and the international community, which lays the foundation for permanent peace negotiations and the launch of a Yemeni-Yemeni peace process. It is hoped that this will rise to the level of the dreams and aspirations of Yemenis from east to west, from north to south, and from all parts of Yemen in achieving stability, rebuilding a modern state based on justice and equity, and achieving sustainable development.

### ***Box 3: FSO Safer Tanker***

The rescue of the FSO Safer Tanker, which contained over one million and one hundred thousand barrels of crude oil and posed an environmental risk to over 200 million people, the inhabitants of the neighboring coastal states, was a collaborative effort between the United Nations and the international community. The emergency ship-to-ship transfer operation, led by the United Nations, succeeded in averting this environmental disaster. The first phase of the FSO Safer Salvage operation was generously funded by the international community. And the Government of Yemen contributed USD 5 million towards the funding of the project.

## **Government efforts, challenges, and needs**

The biggest challenge to achieving SDG 16 is the ongoing conflict and failure thus far to reach a comprehensive and sustainable peace agreement to restore political stability, security, and adherence to the rule of law. This has been compounded by the recent developments in the Red Sea and the disruption of international navigation in the Red Sea and Gulf of Aden, which have added an additional barrier to peacebuilding efforts.

Conflict, along with natural hazards, have displaced millions of Yemenis – most of them women and children – increasing their vulnerability to abuse and exploitation. More broadly, high levels of poverty and food insecurity along with deteriorating living standards lead to lower levels of stability and security and lower access to justice.

The most powerful intervention to accelerate achievement to SDG 16 would be to secure an inclusive and sustainable peace agreement and end the conflict. But more specifically and perhaps within reach are additional institution-building and protective measures that can occur and strengthen efforts to build peace and justice, including the following.

- Restructure core public service committees to activate accountability and oversight mechanisms.

- Activate institutional mechanisms equipped to face disasters and conflicts, sch as the Supreme Council for Civil Defense.
- Build the capacities of local authorities in cooperation with the Social Fund for Development as part of the project “Rehabilitation of Local Institutions for Recovery and Reconstruction,” funded by the Transition Fund for Arab Spring countries.
- Strengthen the legal and institutional framework for human rights:
  - Reactivate the national mechanism for monitoring and reporting in the field of human rights.
  - Establish a ministerial committee for human rights to become the central coordination hub among various ministries and for interaction with civil society organizations, unions, and commercial chambers.
  - Create specialized general departments for human rights within ministries and governmental bodies.
  - Form the advisory body for the Ministry of Human Rights.
  - Establish the Supreme Committee for Relief.
  - Set up the Supreme Council for Women’s Affairs – National Committee for Women.
  - Institute the Supreme National Committee for the Care of the Disabled – Fund for the Care and Rehabilitation of the Disabled.
  - Build national capacity and technical assistance and raise awareness about human rights.
  - Implement social protection programs in Yemen.
- Implement the updated national policy to address internal displacement and forced displacement, approved on January 4, 2023, as a general national framework for addressing displacement and providing care, protection, and assistance to IDPs.
- Facilitate access to humanitarian aid and commercial goods through the Supreme Committee for Relief, established by Resolution No. 22 of 2015 and amended in 2016 as an institutional entity representing concerned government entities to facilitate access to aid via land and sea corridors.
- Strengthen and protect the rights of children, shielding them from capital punishment. It should be noted that there are no provisions in Yemeni law allowing for the execution of juveniles, in accordance with the provisions stipulated in Article No. 36 of the Juvenile Care Law.
- Prevent child recruitment and rehabilitate child soldiers. In the Council of Ministers’ Decision No. 212 of 2012, the Paris Commitments to protect children from unlawful recruitment or use by armed forces or groups was approved.
- A specialized "Juvenile Justice" system has been established under the supervision of the Ministry of Justice, as of August 2022, activating the "General Administration of Child and Minor's Funds" within the judiciary, and issuing Ministerial Decision No. 15 of 2019, which established the technical committee for the new system.
- Child units dedicated to children affairs have been established across various ministries, which work closely with UNICEF to implement child protection programs, most notably programs pertaining to combating and removing mines. The Child Protection Unit in the Ministry of Social Affairs and Labor has been added to the joint operations room, expanding its work to include the rest of the departments of grievances, reporting mechanisms, and military judiciary.

## Goal 17: Partnerships for the goals

### Summary

Table 17: Data available for SDG 17 indicators in Yemen.

<b>Goal 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development</b>		
<b>Target</b>	<b>Indicator</b>	<b>Value (Year)</b>
<b>17.1: Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection</b>	17.1.1: Total government revenue as a proportion of GDP, by source	9.6% (2022) <sup>84</sup>
<b>17.3: Mobilize additional financial resources for developing countries from multiple sources</b>	17.3.2: Volume of remittances (in United States dollars) as a proportion of total GDP	17.2% (2023) <sup>85</sup>
<b>17.4: Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress</b>	17.4.1: Debt service as a proportion of exports of goods and services	14.6% (2016) <sup>85</sup>
<b>17.6: Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism</b>	17.6.1: Fixed Internet broadband subscriptions per 100 inhabitants, by speed	1.19 (2021) <sup>86</sup>

This goal seeks to enhance global partnerships for sustainable development. Yemen, classified as one of the least developed countries, faces difficult financial and economic circumstances due to conflict and war, which have led to the deterioration of resources and exacerbated

<sup>84</sup> IMF.

<sup>85</sup> World Bank.

<sup>86</sup> ITU.

humanitarian and economic crises, as well as the decline of service sectors. While the oil and gas sector previously contributed roughly 65% of public revenue, the halt of production and exports has further diminished capacity. Despite these challenges and overwhelming need, international support for Yemen has declined in recent years, declining from USD 4.1 billion in 2018 to USD 2.2 billion in 2022 and to USD 1.4 billion in 2023. In this context, remittances from expatriates play an increasingly significant role in Yemen as an important source of foreign cash inflows, reaching about USD 4.7 billion in 2022.

### Forecasting progress and achievement

Digital connectivity is one way to build and bolster both formal and informal partnerships between people in Yemen and those elsewhere. Currently, fixed broadband access is quite low – at less than 2 subscriptions per 100 population. Along the *Current Path* scenario, this is expected to grow over time, nearing 5 subscriptions by 2030 and 29 by 2050. The *Development Push* scenario increases the expansion of access to broadband, which enables not only internet connectivity but digital access for businesses. In this scenario, fixed broadband access grows to 40 subscriptions per 100 by 2050, an increase of more than one third above the *Current Path* projection (Figure 17).

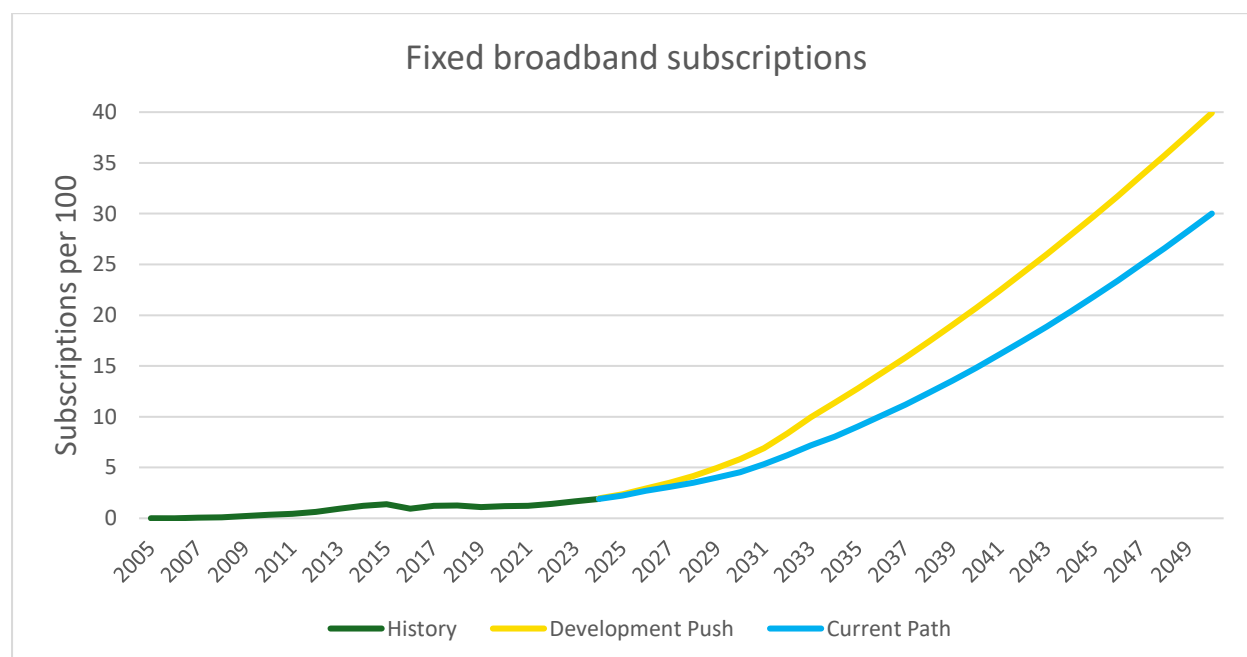


Figure 17: Fixed-broadband subscriptions per 100 inhabitants in Yemen across scenarios. Source: IFs 8.19 using historical data from the International Telecommunication Union.

### Government efforts, challenges, and needs

As soon as the SDG period began, conflict immediately hindered internal capacity to build partnerships as economic contraction and a reduction in export production led to fewer public revenues. The COVID-19 pandemic led to further reduction in remittances and local and foreign investments, while internal and external debt burdens accumulated. At the same time, a number of global crises have spread international resources and attention thin.

The government of Yemen has responded to these challenges through a number of measures to bolster economic governance capacity. A program has been adopted under the supervision of the Arab Monetary Fund which aims to achieve economic stability, rectify imbalances in the public budget, enhance the efficiency of the banking sector, improve the business

environment, encourage investment and production, and strengthen government and transparency. The General Investment Authority has been activated in order to address investment difficulties. At the same time, MoPIC is intensifying efforts to mobilize financial support from Yemen's regional and international development partners for reconstruction and economic recovery.

Beyond this, several priorities will be critical to continuing to build and strengthen partnerships to advance sustainable development in the SDG period and beyond:

- MoPIC will work to mobilize regional and international financing to fund reconstruction and stimulate the economy to make progress toward the SDGs.
- External debt should be addressed by negotiating with creditors for partial or full exemption of Yemen, reducing interest rates, and rescheduling debts over a time frame that matches available resources.
- Partnerships should be developed with Yemeni organizations and enterprises through activating the role of the private sector in reconstruction, creating jobs, increasing production, and partnering with the government in implementing projects, especially in infrastructure and alternative energy.

## Priorities for SDG progress

### Short-term priorities

In the short term, the focus must be primarily on providing essential services to meet the population's needs, halting economic deterioration, and establishing a plan for rebuilding and restoring critical infrastructure. This includes the following urgent priorities:

- Reaching a successful and lasting peace deal to put an end to the ongoing conflict is the single most powerful policy intervention in the country, enabling the recovery process to begin.
- The performance of fiscal and monetary policies can be enhanced, which includes unifying the national currency's exchange rate, stopping the policy of deficit financing, improving public revenues, addressing the internal public debt, and ensuring the regular payment of civil servants' salaries.
- The process of reconstruction, rehabilitation and recovery should begin for productive assets damaged by the war, particularly in the areas of electricity, roads, water, education, and health, as well as waste management.
- Much of the population is reliant on the agriculture and fisheries sectors, hence improving productivity and access to services for those promising economic sectors is crucial.
- The oil and gas sector, which accounted for nearly a quarter of GDP in 2014, can be made more efficient and leveraged to support the development and transition to renewable energy sources, in which Yemen has great potential.
- Maintenance and rehabilitation of community assets like roads, schools, and irrigation systems can begin through labor-intensive public works programs to provide employment opportunities.

## Medium-term priorities

While the most urgent needs should be addressed in the short term, it is also critical in the medium term to build a foundation to support sustainable peace, recovery, and development over the long run. This includes the following priorities:

- With security improved, efforts should move toward state building, including through implementation of the outcomes of the National Dialogue Conference: Reinstall democratic governance structures; and amending the Constitution, and undertaking elections of local authorities and parliament members.
- Social security should be strengthened and lists of those who are eligible updated, targeting the most vulnerable populations, including women who are heads of their families and those who have lost providers in the conflict, while further developing existing programs.
- Long-term human capital should be built through development of the education and health sectors to help build technical and human capacities.
- Economic empowerment programs are needed to provide decent work opportunities and improve sustainable livelihoods of women, youth, and displaced persons. This can include incentives for SME growth and development, including facilitating market access as well as providing training and financing opportunities, providing infrastructure services, and establishing business incubators.
- Damage to physical infrastructure must be assessed and a national rehabilitation strategy developed, focusing primarily on basic services, including schools, hospitals, seaports, airports, courts, and rebuilding institutional capacities in infrastructure sectors.
- The private sector must be encouraged to actively participate in the recovery process by the establishment of an enabling legal and institutional environment for private sector investment, enhancing dialogue and partnership between the public and private sectors and promulgating the law for private-public partnership. The private sector can be crucial not only for contributing financing required but also for the development of physical infrastructure and human capacities. Furthermore, repatriating migrated capital to participate in the economic recovery process is critical.
- The informal sector makes up more than one third of GDP. By simplifying business registration and licensing costs, offering tax exemptions, improving access to finance, and utilizing modern technology, the informal sector can be encouraged to formalize and even better contribute to a comprehensive economic recovery.

## Long-term priorities

Finally, the sustainable development agenda requires attention to be paid to essential long-term priorities:

- A stable fiscal policy should be formulated, predicated upon increasing government revenues from all sources, restoring confidence in the banking sector, maintaining the exchange rate, and enhancing confidence in the economy and national currency. This will also support security and judicial stability alongside improving transparency in economic governance.
- It will be critical to address structural challenges facing the financial sector, including the increased reliance on oil revenues for public income. Restructuring public

expenditures to achieve balance between current and capital expenditures as well as balancing defense and security expenditures with those on human development sectors and other productive and service industries.

- Investments are needed to attract Yemeni talent and expertise that may have migrated during the war while fostering opportunities for development and growth within the country.
- Financing these priorities will require significant resources, which can be mobilized through external sources from regional and international donors, partnerships with both the domestic and diaspora private sectors, and through innovative financing mechanisms involving pension funds, insurance companies, Islamic sukuk, and trust funds financed through public subscriptions.

## Conclusion

The SDG period so far in Yemen has been characterized by major challenges and setbacks, beginning with an already-weak development environment at the outset. More than eight years of war have resulted in an immense direct and indirect damages to the country, including loss of lives, significant infrastructure damage, and institutional collapse. Global crises have affected food and energy prices and donor priorities. And natural hazards, which will continue to worsen with climate change, have led to further disruption, destruction, and displacement. These challenges have slowed and set back progress across all SDGs, and Yemen is not likely to achieve any of the Goals by 2030.

However, it is critical to face these challenges and not to give up on Yemen, its people, and its environment. There remains significant potential for progress through an ambitious and integrated strategy for recovery and reconstruction. The population of Yemen has proven remarkably resilient in the face of immense devastation, and the *Development Push* scenario examined in this report shows that it is possible to make real improvements in human lives within and beyond the SDG horizon, lifting millions out of poverty and hunger, saving lives, and building a foundation for sustainable economic development to bring greater prosperity in the long-term future.

Nearly all external aid received by Yemen since 2015 has been directed toward urgent humanitarian needs and emergency relief. This work has been and continues to be crucial for saving lives and alleviating acute suffering. But these interventions should occur alongside interventions aimed at recovery and long-term developmental outcomes. Donors and institutional organizations should work not only to strike a balance between humanitarian and development interventions but also to strengthen their inter-linkages through a tripartite approach which emphasizes the importance of addressing humanitarian, developmental, and peace-building needs.

Through producing the country's first VNR report, Yemen confirms its commitment to the SDG agenda and calls on the international community for support, given the challenges the country has faced over the past decade, in peacebuilding and recovery toward a sustainable and prosperous future.



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## Annex I: *Development Push* scenario interventions

Table 18 below provides detailed information on the scenarios and interventions used for the *Development Push* scenario assessed in this report. The scenario was built and assessed using the International Futures (IFs) forecasting tool, with interventions built on top of the projections already expected in the *Current Path* (business-as-usual) scenario.

Table 18: List of interventions in the *Development Push* scenario.

Intervention	Description
<b>Governance</b>	
<b>Improved security and reduced conflict</b>	The probability of continued internal war in future years falls by half over five years and 75% by 2050. Conflict magnitude falls to near-0 by 2030.
<b>Improved government transparency</b>	Corruption reduces (transparency increases), according to Transparency International's Corruption Perception Index, from a score of roughly 1.5 today to 3 by 2050, compared with a <i>Current Path</i> projection around 2.
<b>Agriculture and food security</b>	
<b>Improved crop productivity</b>	Crop yields increase from roughly 2 metric tons per hectare to roughly 2.5 over 10 years, reflecting improved inputs, irrigation, and more resilient crop types.
<b>Increase in cropland</b>	Cropland roughly reaches 1.5 million hectares in the development push as compared to about 1.4 following the current path
<b>Increase in fisheries production</b>	An increase in the ratio of fishing to reach around 0.6 following the development push as opposed to about 0.2 in the current path
<b>More equal distribution of calories</b>	The coefficient of variation – measure of inequality of access to calories – falls by nearly one-third by 2050.
<b>Economic development</b>	
<b>Increased foreign direct investment (FDI)</b>	An increase of annual FDI inflows from about \$1 billion in 2024 to about \$3 billion in 2050, as opposed to a projected \$1.5 billion in the <i>Current Path</i> .
<b>Inflow of remittances</b>	An increase of remittances as a percent of GDP to over 9%, by 2050, compared to under 3% in the <i>Current Path</i> .
<b>Cash transfers</b>	Welfare transfers to poor households double (roughly \$4 billion total) by 2050 compared with the <i>Current Path</i> (under \$2 billion).
<b>Improved income inequality</b>	Income inequality, per the Gini index, improves by 20% compared with the <i>Current Path</i> .
<b>Increased female labor participation</b>	Women's participation in the labor force grows from 10% today to more than 26% by 2050, compared with a projected 17% along the <i>Current Path</i> .
<b>More equitable wages for women</b>	Women receive nearly equal wages for equal work by 2050, compared with a wage ratio of 0.9 projected in the <i>Current Path</i> .
<b>Increased production of renewable energy</b>	The cost of producing renewable energy falls more rapidly than projected, reflecting technological advancement, and a push toward energy transition triples the projected production of renewable energy above the <i>Current Path</i> projection by 2050.
<b>Human capabilities</b>	

<b>Improved survival rate of students in primary education</b>	The survival rate of students in primary education (the percent of students starting primary who complete it) grows to 100% by 2050, compared with 90% in the <i>Current Path</i> .
<b>Improved transition rate of students from primary to lower secondary school</b>	The transition rate for students completing primary reaches 100%, compared to just 90% in the <i>Current Path</i> .
<b>Improved transition rate of students from lower to upper secondary school</b>	The transition rate for students completing lower secondary reaches nearly 100% by 2050, compared to less than 90% in the <i>Current Path</i> .
<b>Improved graduation rate of students from upper secondary school</b>	The graduation rate of students from upper secondary school grows to 50% by 2050, a more than 10% improvement above the <i>Current Path</i> projection.
<b>Reduced fertility rate</b>	The total fertility rate falls by one-third by 2050, compared with the <i>Current Path</i> projection.
<b>Improved access to water services</b>	An improvement in basic and safely managed access levels to drinking water of 14% and 38% above the <i>Current Path</i> , respectively.
<b>Improved access to sanitation services</b>	An improvement in basic and safely managed access levels to sanitation of 40% and 42% above the <i>Current Path</i> , respectively.
<b><i>Infrastructure</i></b>	
<b>Improved rural access to electricity</b>	An increase in the percent of the population with access to electricity in rural areas from roughly 40% in 2024 to 80% by 2050, compared to around 50% in the <i>Current Path</i> .
<b>Improved access to mobile broadband</b>	An accelerated increase in mobile internet subscriptions by as much as 40% above the <i>Current Path</i> by 2035.
<b>Improved access to fixed broadband internet</b>	An accelerated increase in fixed broadband subscriptions to more than 21 subscriptions per 100, a 20% increase over the <i>Current Path</i> projection.

## Annex II: VNR preparation teams

### **The Supreme Supervisory Committee**

1. Minister of Planning and International Cooperation - Chairman
2. Minister of Finance - Member
3. Minister of Agriculture, Irrigation, and Fisheries - Member
4. Minister of Higher Education and Technical and Vocational Training - Member
5. Minister of Interior - Member
6. Minister of Water and Environment - Member
7. Minister of Industry and Trade - Member
8. Minister of Civil Service and Insurance - Member
9. Minister of Local Administration - Member
10. Minister of Social Affairs and Labor - Member
11. Minister of Public Health and Population - Member
12. Minister of Education - Member
13. Minister of Electricity and Energy - Member
14. Minister of Public Works and Roads - Member
15. Secretary-General of the Council of Ministers – Member

### **Steering and Direct Guidance Team for the Technical Team**

1. Dr. Waed Abdullah Badhib, Minister of Planning and International Cooperation - Chairman
2. Dr. Nazar Abdullah Basuhaib, Deputy Minister of Planning and International Cooperation - Deputy Chairman

### **Technical Team for Preparing the VNR**

1. Dr. Mohammed Ahmed Al-Hawiri, Deputy Minister Planning and International Cooperation for Economic Studies and Forecasting Sector - Team Leader
2. Omar Abdul Aziz, Deputy Minister of Planning and International Cooperation for International Cooperation Sector - Member
3. Wazirah Al-Shurmani, Deputy Minister of Planning and International Cooperation for Project Sector - Member
4. Shuaib Al-Sagheer, Head of the Technical Office at the Ministry of Planning and International Cooperation - Member
5. Mohammed Musaед Al-Amir, Deputy Minister of Interior for Security and Police Sector - Member
6. Mu'adh Hammoud Aqlan, Deputy Minister of Higher Education and Technical and Vocational Training for Technical Sector - Member
7. Hussein Awad Al-Aqrabi, Deputy Minister of Public Works and Roads for Works Sector - Member
8. Mohsen Qasim Ali, Director of the Economic Administration at the General Secretariat of the Council of Ministers - Member
9. Tariq Al-Azani, Deputy Minister of Justice for Financial and Administrative Affairs Sector - Member
10. Faizah Abdul Hameed Mohammed, Acting Deputy Minister of Social Affairs and Labor for Social Development Sector - Member

11. Khaled Mohammed Al-Houthari, Assistant Deputy Minister of Finance for Planning Sector - Member
12. Abdul Ghaffar Al-Eisai, Assistant Deputy Minister of Local Administration for Financial and Administrative Affairs Sector - Member
13. Ahmed Saeed Al-Wahsh, Technical Advisor to the Ministry of Agriculture, Irrigation, and Fisheries - Member
14. Awadh Abdullah Nabhan, National Advisor and Coordinator for Sustainable Development at the Ministry of Education - Member
15. Mohammed Al-Humaidi, Director General of the Minister's Office at the Ministry of Industry and Trade - Member
16. Abdullah Ahmed Abdul Qawi, Director General of Planning, Follow-up, and Evaluation at the Ministry of Agriculture, Irrigation, and Fisheries - Member
17. Abdul Qawi Ali Mohsen, Director General of Planning, Policies, and International Cooperation at the Ministry of Water and Environment - Member
18. Wagdi Mohammed Abdullah, Director General of Budget at the Ministry of Civil Service and Insurance - Member
19. Mansour Mohammed Abdullah Hizam, Director General of Health Policies Unit at the Ministry of Public Health and Population - Member
20. Mohammed Fahd Al-Ariqi, Director General of Foreign-Funded Projects at the Ministry of Electricity and Energy - Member
21. Essam Al-Shaeri, Director General of Organizations Administration at the Ministry of Legal Affairs and Human Rights - Member
22. Ansam Salem Hussein Haydarah, Director General of the General Administration for Development at the National Committee for Women – Member

#### **Logistical Support and Communication Team**

1. Ruba Abdullah Abdurabu Al-Awadhli, Director General of the Minister's Office Secretariat - Team Leader
2. Gubran Mohammed Qaid Al-Amrani, Director General of Population Studies and Human Resources at the Studies Sector

#### **International Futures Forecasting Team**

1. Taylor Hanna, Associate Director of Development Analysis, Frederick S. Pardee Institute for International Futures
2. Abdelrahman Ibrahim, Fellow, Frederick S. Pardee Institute for International Futures
3. Jonathan D. Moyer, Director, Frederick S. Pardee Institute for International Futures