United Nations | Department of Economic and Social Affairs

Sustainable Development Outlook 2021

From anguish to determination

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The *Sustainable Development Outlook 2021* is a report prepared by the Development Research Branch in the Economic Analysis and Policy Division of the United Nations Department of Economic and Social Affairs (UN DESA).

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Preface

This year's *Sustainable Development Outlook 2021: From anguish to determination* is the third issue of the *Sustainable Development Outlook* (*SDO*) report that the United Nations Department of Economic and Social Affairs (UN DESA) began publishing in 2019. The goal of this report is to provide in-depth analyses of the progress and challenges faced in achieving the Sustainable Development Goals (SDGs) and to draw relevant policy lessons from that experience. The distinctive feature of the *SDO* is its presentation of the future outlook in the form of alternative scenarios regarding the progress towards the SDGs, along with suggested policies that can help to translate the more desirable scenarios into reality.

Since it is difficult to address all SDGs in-depth at once, the *SDO* of a particular year focuses on some of the SDGs that are taken up in that year for review by the High-Level Political Forum for the SDGs. Accordingly, *SDO 2021* focuses on SDG 1 (poverty), SDG 2 (hunger), SDG 3 (health and well-being), SDG 8 (growth and employment), and SDG 10 (inequality). For each SDG, the experience of a select group of countries—that represent well both successes and challenges—is analyzed in-depth, and the insights thus gained are complemented by information and evaluations obtained from broader cross-sectional studies. This analysis then informs the scenarios, both optimistic and pessimistic, and the policy suggestions that can help a country to be on the more optimistic path.

Since the world is still very much under the impact of COVID-19, the effect of this pandemic on the progress toward different SDGs has been an important focus of the analysis of the *SDO 2021*, as has been the case for the *SDO 2020*, too. More people have died because of the virus and many more were infected in this year. The pandemic continues to restrict economic and social activities, causing significant setbacks in the progress toward SDGs. The *SDO 2021* captures these effects through its analyses and searches for ways to accelerate anew the progress toward the SDGs.

Another feature of the *SDO* is its emphasis on the interlinkages among the SDGs which generate the possibilities of synergy among policies directed toward achieving particular SDGs. The report seeks to identify policies that can help to achieve more than one, if not all, of the SDGs included in the analysis. Drawing upon these cross-cutting policies, the *SDO 2021* lays out *a way forward* to the SDGs based on efforts along the following seven directions: making COVID vaccines a public good; achieving universal healthcare; ensuring social protection for all; carrying out structural transformation aimed at growth with equity; raising international solidarity to a new level; sharing the earth more equitably with other species; and making use of the crisis as an opportunity for bringing about politically difficult changes. The policy messages of *SDO 2021* therefore resonate well with the calls that the United Nations Secretary-General has made in his recent report on *Our Common Agenda*.

The *SDO 2021* was prepared by the Development Research Branch of the Economic Analysis and Policy Division of UN DESA. I commend all the members of this Branch for their commitment and hard work. It also benefited from close cooperation with the Statistics Division and comments from the Division for Inclusive Social Development. I thank the colleagues of these Divisions for their cooperation. I hope that the policymakers of the Member States will find the analyses and recommendations contained in this report helpful for their efforts toward achieving the SDGs.

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Under the general guidance of Liu Zhenmin, Under-Secretary-General for Economic and Social Affairs, and Elliott Harris, Assistant Secretary-General for Economic Development and Chief Economist, S. Nazrul Islam, Chief of the Development Research Branch of the Economic Analysis and Policy Division (EAPD) in the United Nations Department of Economic and Social Affairs (UN DESA), led the team that drafted this report, comprising Hoi Wai Jackie Cheng, Kristinn Sv. Helgason, Nicole Hunt, Kenneth Iversen, Alex Julca, and Marcelo LaFleur.

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Explanatory notes

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The term "country" as used in the text also refers, as appropriate, to territories or areas. The designations of country groups are intended solely for statistical or analytical convenience and do not necessarily express a judgment about the stage of development reached by a particular country or area in the development process.

The views expressed in this publication are those of the authors' and do not necessarily reflect the opinions and policies of the United Nations.

The following abbreviations have been used:

ACT	Access to COVID-19 Tools
ART	antiretroviral treatment
CBHI	Community Based Health Insurance
COVAX	Vaccines Global Access
DALY	disability-adjusted life years
ECLAC	United Nations Economic Commission for Latin America and the Caribbean
ECOSOC	United Nations Economic and Social Council
EU	European Union
FAO	Food and Agriculture Organization
GDP	gross domestic product
GPW13	WHO Thirteenth General Programme of Work
HLPF	High-level Political Forum
ICT	information and communications technology
ICU	Intensive Care Unit
ILO	International Labour Organization
IMF	International Monetary Fund
IRP	International Resource Panel
LDCs	least developed countries
MNREGA	National Rural Employment Guarantee Scheme
MSMEs	micro, small and medium-sized enterprises
NCDs	non-communicable diseases
NZE	net zero emissions
OECD	Organisation for Economic Cooperation and Development
PSNP	Productive Safety Net Programme
RI	routine immunization
SDGs	Sustainable Development Goals
SDO	Sustainable Development Outlook
SIA	supplementary immunization activities
SIDS	small island developing States
SWIID	Standardized World Income Inequality Database
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UHC	universal health coverage
UN **DESA**	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
WEFM	World Economic Forecasting Model
WHO	World Health Organization

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Executive summary

The COVID-19 pandemic has inflicted significant setbacks upon the progress made towards achieving the Sustainable Development Goals (SDGs), leading to a profound shared distress in the international community. However, despite these setbacks, it is possible to convert anguish into determination and make the desired progress towards achieving the SDGs in the remaining years of the 2030 Agenda for Sustainable Development.

There were some shortfalls in the progress towards the SDGs in the years prior to the pandemic: The rate of poverty reduction slowed during 2016–2019, as compared with the previous years. The rate of malnutrition actually increased globally between 2015 and 2019. Of the 46 least developed countries (LDCs), only 6 managed to achieve a sustained gross domestic product (GDP) growth rate at or above 7 per cent per annum during 2013–2019. Additionally, the decrease in inequality has been less than required, with about half (45 per cent) of the world's population living in countries where inequality increased during 2010–2019.

The unexpected COVID-19 pandemic worsened the situation. More than 200 million people have been infected and more than 4 million have died. Many who recovered are likely to carry adverse health effects in the future. Global GDP declined by 4.9 percent in 2020 and pushed an additional 119–124 million people into extreme poverty and an additional 83–132 million people into chronic hunger. The number of people facing acute food insecurity almost doubled, from 135 million in 2019 to 265 million by the end of 2020, and the global rate of wasting increased by 15 per cent. The pandemic led to the disruption of education and health-care programmes, leaving many children and young people without the necessary education and immunization, endangering their futures. Many non-communicable diseases and other health issues did not receive the necessary attention.

However, it is possible to take lessons from the COVID-19 experience and reinvigorate efforts towards the SDGs. Like any cloud, COVID-19 has also had its silver linings. The overarching silver lining here is the renewed realization that we are all in this together. No nation can be safe unless safety can be ensured for other nations as well. Similarly, no part of a nation can be safe unless safety can also be ensured for other parts of the nation. COVID-19 has shown how important it is to have universal health care and universal social protection. These lessons can be used to move us forward. Indeed, sometimes crisis makes it possible to bring about changes that are not possible during normal times. It is now time to make use of the opportunities created by COVID-19 to bring about the changes needed for achieving the SDGs.

This year's *Sustainable Development Outlook (SDO 2021)* is aimed at aiding the process of reinvigorating efforts towards achieving the 2030 Agenda. It does so by focusing on several SDGs, reviewing their progress in the years preceding COVID-19, examining the impact of the pandemic on them, charting out more promising scenarios regarding achievement of these SDGs, and identifying policies that can help to implement those scenarios. The SDGs selected for this study are SDG 1 (poverty); SDG 2 (malnutrition); SDG 3 (health and well-being); SDG 8 (growth and employment); and SDG (inequality*). SDO 2021* uses the data presented in the *Sustainable Development Goals Progress Report 2021* (UN DESA 2021b) as the point of departure for this analysis.

SDO 2021 begins by re-emphasizing the interlinkages among the SDGs. These direct and feedback interlinkages can give rise to both virtuous and vicious cycles, and it is important to avoid the latter and facilitate the former. The interlinkages also create nodes that can be used to influence several SDGs simultaneously. An important feature of *SDO 2021* is that, in addition to offering policy recommendations aimed at making progress on particular SDGs, it draws upon the policies that have cross-cutting influence and charts a way forward to the SDGs based on the following seven tasks: (i) making COVID-19 vaccines

a public good; (ii) ensuring universal health coverage; (iii) ensuring universal social protection; (iv) combining growth with equity; (v) strengthening international solidarity; (vi) sharing the Earth more equitably with other life species; and (vii) making use of the crisis to bring about politically difficult changes.

SDO 2021 is divided into six chapters, with the first chapter providing an introduction to the report, explaining its structure, and presenting an overview of the contents of the rest of the chapters. It also presents a table showing the interlinkages among the SDGs selected for study. Chapter II focuses on SDG 1 and SDG 2 together, because of the particularly close linkages between the two. Chapters III, IV and V focus on SDGs 3, 8, and 10, respectively. In each case, the chapters lay out alternative scenarios and spell out policies needed to achieve the more desired scenarios. The last, chapter VI, offers a synthesis, focusing on cross-cutting recommendations.

Based on the data and projections in the World Economic Forecasting Model (WEFM) of the United Nations Department of Economic and Social Affairs (UN DESA), chapter II presents different scenarios regarding SDG target 1.1, deriving from alternative assumptions regarding GDP growth rate and income distribution. These projections show that growth alone will not be enough to reach SDG 1.1; instead, a significant reduction in inequality will be needed. The chapter notes that technological progress and globalization have opened up different possible routes to structural transformation. Countries need to choose judiciously from among these routes, depending on their current conditions and future prospects. However, the scenario analysis shows that no matter which particular route a country chooses, the transformation has to aim at both growth and equity if it is to achieve SDG 1.

Similarly, based on a study by the Food and Agriculture Organization, chapter II shows that greater progress on SDG target 2.1 can be achieved, with less impact on the environment, by promoting more equitable distribution of food and income; adoption of resource-conserving agriculture; reduction of food wastage; and adoption of a healthier diet (which can in turn help to achieve SDGs 3 and 8). The chapter draws upon in-depth studies of five countries and presents analysis and alternative scenarios for each of them. It also offers policy suggestions, some of which are of a cross-cutting nature, while others are more pertinent for SDG 2.

Surveying the progress in the years prior to pre-COVID-19, chapter III shows that, at the global level, only a few countries were on track to meet SDG 3, although there was significant progress regarding particular health indicators, such as maternal, child and neonatal mortality and incidence of several communicable diseases. There were, however, significant regional variations in this regard. The impact of different categories of disease differs across countries of the world, with communicable diseases accounting for a much greater share of deaths in low-income countries, while non-communicable diseases cause more deaths in high-income countries. The chapter shows that countries also vary widely regarding universal health coverage, with the rate of coverage varying between 20 and 70 per cent, even among countries with pooled health expenditure of less than $500 per capita.

Of all the SDGs, progress towards SDG 3 was obviously the hardest hit by COVID-19. Apart from deaths and the health damages caused to people infected by COVID-19, the pandemic also led to huge disruptions in immunization and other health-care programmes not related to the disease. The chapter presents impact scenarios extending to 2030, showing the likely increases in death rates due to several communicable diseases in several selected countries. In terms of policies, chapter III emphasizes the necessity for establishing universal health care, noting that even countries with low per capita income have the potential to

achieve it. For the immediate future, the chapter urges faster and more comprehensive vaccination by making vaccines a public good.

Economic growth and employment were also affected directly by the COVID-19 pandemic. Chapter IV provides details regarding the setbacks suffered in these areas, offering regional disaggregation. In terms of future outlook, it notes that much depends, on the one hand, on the progress in vaccination, which can be either slow or rapid. On the other hand, the outlook also depends on policy packages, which can be classified into two broad types—namely policies that aim at a return to a pre-crisis economy and those that aim at building new economic structure. In terms of scenarios, the chapter highlights two possibilities. The first is the undesirable scenario, which can arise from the combination of slow vaccination rates with a pre-COVID-19 economic structure policy package. By contrast, the desirable scenario may hold if rapid vaccination can be combined with a new economic structure policy package. The outlook for social inclusion will depend on policy reforms that build on the recent reduction of informality and promote a recovery centred on formal work for all.

The report repeatedly focuses on the new existential threat to humankind from the increased frequency of zoonotic epidemics and pandemics, such as COVID-19 itself. The root of the threat lies in the relentless deforestation and loss of wilderness that constricts animal habitats and increases the overlap between the animal and human worlds, making it easier for animal viruses to transfer to humans and trigger deadly diseases. One way to stop and reverse this process is to decouple economic growth from material resource requirement. Chapter IV shows that progress in this regard prior to the pandemic was checkered, and a much more determined effort is necessary in the coming years. The new economic structure policy package put forward by chapter IV can be helpful in this regard.

Reviewing the pre-COVID-19 situation, chapter V notes that, despite some reduction during 2010–2019, the levels of both within- and between-country inequality remained high. Across countries, on average, 13 per cent of the population still live below 50 per cent of the national median income, and the income gap between most developing countries and developed countries remains large. Economic transformation, globalization, environmental degradation and the climate crisis, growing rural-urban divide, rapid technological change, and regressive policies worked together to let inequality persist.

Unfortunately, COVID-19 triggered a vicious cycle, whereby initially disadvantaged people suffered more, making inequality worse. In view of this vicious cycle, chapter V expresses apprehension that going forward there may be further exacerbation of inequality unless bold measures are taken. Drawing upon the work by Furceri and others (2021), the chapter presents three outlook scenarios based on different assumptions regarding the end year of the pandemic, namely 2020, 2021 and 2022. The cumulative increase in inequality by 2027, measured by the Gini coefficient, would be 0.4, 0.9 and 1.3 Gini points, respectively. Which of these scenarios will hold depends crucially on the progress in vaccination. Unfortunately, large gaps are seen in the vaccination rate both between and within countries; and, given the current trends, the gap in vaccination rates between high-income countries, on the one hand, and the low- and middle-income countries, on the other, is likely to increase from about 13 percentage points in April 2021 to about 20 percentage points in April 2022. The chapter concludes by emphasizing the need for policies that can accelerate vaccine production and distribution, encourage a whole-of-government approach, bridge across-country gaps in fiscal space and data capabilities, and address political barriers to reducing inequality.

Drawing upon the policies of overarching significance and cross-cutting impact on SDGs, *SDO 2021* puts forward the following seven-point program of action as the way forward for moving past the COVID-19 pandemic and moving towards the SDGs.

(i) *Make the COVID-19 vaccine a public good in order to accelerate vaccination*

Rapid, comprehensive vaccination is the key to containing the disease and resuming progress towards achieving the SDGs. The vaccine should therefore be made a public good by, inter alia, (a) sharing licenses through the COVID-19 Technology Access Pool, initiated by the World Health Organization; (b) waiving intellectual property rights on COVID-19 vaccines through a World Trade Organization agreement that levels the playing field in vaccine production and distribution; and (c) having countries with vaccine-producing firms compensate these firms for sharing vaccine formulas with firms in other countries having the necessary vaccine manufacturing capability.

(ii) *Strengthen access to quality and affordable universal health coverage*

All countries, irrespective of per capita income level, should put in place universal health coverage based on the principle of universality, not on residence requirements or other such restrictions.

(iii) *Put in place universal social protection that is flexible and not tied to residence*

All countries, irrespective of per capita income level, should put in place a system of social protection based on the principle of universality, not on residence requirement or other such restrictions.

(iv) *Choose the path to structural transformation aimed at growth, equality and protection of the environment*

Developing countries should make the best use of the opportunity opened up by globalization and technological revolution for choosing from alternative paths to structural transformation and aim to achieve both growth and equality.

(v) *Raise international solidarity to a higher level*

All nations should make use of the COVID-19 experience—which has shown that the well-being of one depends on the well-being of others—to raise international solidarity to a new level, to make vaccines a public good, and to achieve other goals as well, such as ensuring adequate fiscal space for all to undertake COVID-19 mitigation and recovery efforts.

(vi) *Share the Earth equitably with other species*

All nations should stop further encroachment on animal habitats and restore some of what has already been impacted, so as to allow animals adequate space and put enough distance between animal and human habitats, thus preventing the recurrence of zoonotic epidemics and pandemics, such as COVID-19.

(vii) *Make use of the crisis to overcome political barriers to difficult policy changes*

All nations should make use of the COVID-19 crisis to bring about changes that are politically difficult to implement during normal times, but become feasible when the ephemeral character of life and the interdependence of all beings—and nations—become glaringly clear.

Chapter I
Introduction

Background

More than one third of the Sustainable Development Goals (SDGs) reference period is now over, and great resolve is needed if the SDGs are to be achieved as planned by 2030. The challenge is formidable; however, with energetic and concerted efforts, it is still possible to achieve the desired progress. The COVID-19 pandemic has caused considerable anguish, which needs to be converted into determination. Along with its wide-ranging negative effects, the pandemic has also offered many positive lessons. First and foremost, it has highlighted the fact that we are all in this world together, with common and urgent goals. The world community needs to make the best use of this renewed revelation of our common fate to mobilize concerted efforts at the national, regional and global levels towards achieving the 2030 Agenda for Sustainable Development.

Several disconcerting trends were developing even before the COVID-19 pandemic: the rate of poverty reduction slowed during 2016–2019, as compared with the previous years; the rate of malnutrition actually increased globally; of the 46 least developed countries (LDCs), only 6 managed to achieve a sustained gross domestic product (GDP) growth rate at or above 7 per cent per annum during 2013–2019; and the decrease in inequality has been less than required, with about half (45 per cent) of the world's population living in countries where inequality increased during 2010–2019.

The unexpected COVID-19 pandemic worsened the situation. As of 11 August 2021, about 4.32 million people have died from the disease, and 204 million people have been infected. Many of the people who recovered are likely to carry adverse health effects in the future. Global GDP declined by 4.9 percent in 2020 and pushed an additional 119 to 124 million people into extreme poverty and an additional 83 to 132 million people into chronic hunger. The number of people facing acute food insecurity almost doubled from 135 million in 2019 to 265 million by the end of 2020, and the global rate of wasting increased by 15 per cent. The pandemic led to the disruption of education and health-care programmes, leaving many children and young people without necessary education and immunization, endangering their future. Many non-communicable diseases and other health issues did not receive the necessary attention. Overall, COVID-19 caused very serious setbacks to the progress made towards achieving the SDGs.

In September 2019, the United Nations launched the Decade of Action (2021–2030), aimed at accelerating progress towards achieving the SDGs. The importance of this initiative has increased due to the setbacks caused by COVD-19. Instead of anguishing in despair, an energetic and concerted effort is needed to overcome these setbacks and push ahead towards the SDGs with renewed commitment. It is necessary to convert the COVID-19 crisis into an opportunity. As the saying goes, every cloud has its silver linings. The overarching silver lining of the COVID-19 cloud is the renewed global awareness that we are all in this world together. No part of the population of a country can be safe unless reasonable safety can be ensured for the entire population. Similarly, no single nation can secure its well-being without ensuring the same, to a reasonable extent, for the rest. Other silver linings exist as well, of a more concrete nature: First, quality and affordable universal health care and social protection may no longer be considered "luxuries" of rich countries; instead, all countries should aim for these systems, knowing that they can actually create them for themselves, customizing the systems to their specific conditions.

Second, protecting the environment is necessary and urgent if we are to save the human race from yet another existential threat—namely frequent recurrence of zoonotic epidemics and pandemics, such as COVID-19 itself.

Illuminated by these silver linings, it is now possible to see the task of achieving the SDGs in a new light and use that knowledge for reinvigorating efforts to accomplish this task. It is with that goal that the 2021 issue of the *Sustainable Development Outlook* (*SDO 2021*) is presented.

Objectives, scope and method

In July 2021, the United Nations Department of Economic and Social Affairs (UN DESA) published its annual *Sustainable Development Goals Report* (United Nations, 2021b), providing an up-to-date statistical account of the progress made towards the SDGs and showing the achievements and shortfalls. The *SDO 2021* aims at providing in-depth analyses of recent experiences in the realm of sustainable development—both successes and challenges—and deriving policy recommendations that States Members of the United Nations can find useful in accelerating their progress towards the SDGs.

To keep its scope manageable, *SDO 2021* focuses on those SDGs that were taken up for review by the 2021 High-level Political Forum (HLPF) for SDGs. This year's HLPF, conducted under the auspices of the United Nations Economic and Social Council (ECOSOC), included the following SDGs for review: SDG 1 (poverty eradication), SDG 2 (zero hunger), SDG 3 (good health and well-being), SDG 8 (decent work and economic growth), SDG 10 (reduced inequalities), SDG 12 (responsible consumption and production), SDG 13 (climate action), SDG 16 (peace, justice and strong institutions), and 17 (partnerships). Of these, *SDO 2021* selected SDGs 1, 2, 3, 8 and 10 for analysis, leaving other SDGs to be examined by future issues of the *SDO*.

In each case, the analysis begins by using the findings of the *Sustainable Development Goals Report 2021* to identify particular targets and issues for investigation. Much of the analysis is based on in-depth study of country experiences. The *SDO 2021* uses the information presented in *Sustainable Development Goals Report 2021* to identify countries that stand out as examples of either success or remaining challenge. The country studies are complemented by reviews of relevant studies conducted by various United Nations agencies and programmes, other organizations, and academics. Apart from incorporating their informational and analytical points in the main text of the chapters, the country studies, in some cases, are also presented as separate boxes to offer more details.

A particular feature of the *SDO 2021* is its effort to present alternative scenarios regarding SDG progress in the coming years. In some cases, these scenarios are based on quantitative projections. In other cases, the scenarios are more qualitative in nature, because relevant quantitative information is difficult to obtain. In all cases, at least two scenarios are presented, with one reflecting business as usual, referring to the outcomes that can be anticipated if the current trends continue into the future. The other is the more optimistic scenario, which is likely to result if some additional policy measures, such as those suggested in this report, are undertaken. These scenario analyses also help to establish a clearer connection of the outcomes with policies and to bring the latter into sharper focus. Needless to say, the optimistic scenarios are more desirable from the viewpoint of achieving the SDGs.

Interlinkages among SDGs

It is widely acknowledged that the SDGs are interlinked. Many scholars (Le Blanc, 2017, for example) have studied these interlinkages in order to identify potential complementarities and trade-offs. The complementarities can create the possibility of both virtuous and vicious cycles. They can also give rise to nodes—or points of convergence—which can be used to influence several SDGs simultaneously. Accordingly, the interlinkages create the possibility of synergies among policies. Meanwhile, knowledge about the trade-offs can help in avoiding efforts that might undercut one other.

The interlinkages are particularly strong for the SDGs reviewed in this report. For example, poverty (SDG 1) is a major cause of malnutrition (SDG 2), which adversely affects economic growth (SDG 8), deprives low-income people from the income necessary to access health care (SDG 3), and thus perpetuates, and even aggravates, inequality (SDG 10). Table I.1 presents the interlinkages among the five SDGs chosen for study in this report at the more disaggregated level of SDG targets.

Awareness of these interlinkages helps in understanding and explaining the outcomes regarding progress towards different SDGs. Understanding these interlinkages also helps to identify the policies that may be cross-cutting in nature. Emphasis on the interlinkages is therefore an important feature of this report.

Preview of *Sustainable Development Outlook 2021*

The *SDO 2021* is organized by SDG, with SDGs 1 and 2 considered together in chapter II, in view of their close connection. Chapters III, IV and V are devoted to discussion of SDGs 3, 8 and 10, respectively. All of these chapters follow a similar format, beginning with a review of the progress in pre-COVID-19 years and then examining the consequences of the pandemic. Next, the chapters consider how the future may unfold under business-as-usual scenarios and policies that are more conducive to achieving the SDGs. The chapters conclude by suggesting policies than can help countries to achieve the SDGs. Chapter VI brings the important cross-cutting policies together to chart out a way forward to achieving the SDGs. The following provides a preview of the chapters that follow.

Chapter II: SDG 1 (poverty) and SDG 2 (hunger)

Chapter II considers SDGs 1 and 2 together, because of their particularly strong interlinkages. It focuses on SDG target 1.1 (eradicate extreme poverty for all people everywhere) and SDG target 2.1 (end hunger and ensure access by all people). Reviewing the progress made in pre-COVID-19 years, it notes the slowdown in the progress in reduction of poverty and the disturbing trend of increasing malnutrition. The chapter then shows how COVID-19 aggravated the situation in regard to both these Goals. The chapter proceeds by offering a scenario analysis regarding SDG target 1.1, using the data and projections based on the Working Economic Forecasting Model (WEFM) of UN DESA. These projections show that growth alone will not be enough to reach SDG 1.1; instead, a significant reduction in inequality will be needed. The chapter notes that globalization and the technological revolution have opened up different routes to structural transformation. However, no matter which route a country chooses, the transformation has to aim simultaneously at growth and equity in order to achieve SDGs 1 and 2. The chapter shows examples of several countries that have been successful in doing so. For scenarios regarding SDG 2.1, chapter II relies on

Table I.1

Interlinkages among targets of SDGs 1, 2, 3, 8 and 10

	Impacts of an SDG on the other SDGs				
	SDG 1	**SDG 2**	**SDG 3**	**SDG 8**	**SDG 10**
SDG 1	Positive impact Negative impac SDG targets are in parentheses	Secure tenure rights to land (1. 4) enables better agriculture (2.3, 2.4) Financial constraints of the poor limit access to safe, sufficient and nutritious food (2.1, 2.2) Poverty compromises nutrition and consumption of vitamins and minerals (2.1, 2.2)	Poverty reduction can support good health and well-being (3.4) Poverty is a major cause of ill health and a financial barrier to accessing health care (3.8)	Lower poverty reduces informality and unemployment for women and young people (8.3)	Poor households cannot make investments to lead them out of poverty, resulting in persistent inequality (10.1, 10.2, 10.3) Rural households with limited access to economic opportunities and productive technologies cannot catch up, resulting in persistent inequality (10.1, 10.2, 10.3).
SDG 2	Malnutrition (2.1, 2.2) reduces productivity, reinforcing poverty (1.1, 1.2)		Better nutrition can reduce non-communicable diseases and enhance well-being (3.4) Agriculture production diversity (2.5) contributes to dietary diversity and good health (8.3.4) Chronic hunger (proteins intake) and/or hidden hunger (micronutrients intake) lead to higher health risks (3.4) Irregular food supply along with low quality food (2.1, 2.2) can compromise immunity (8.3.4)	Improved nutrition increases productivity, contributing to economic growth (8.1, 8.2) Malnutrition adversely affects physiological and mental capacity (3.4), lowering productivity (8.2) Malnutrition and slow growth early in life (2.2) impact economic performance later in life (8.2) Inadequate nutrition (2.1, 2.2) decreases human capital and threatens economic stability (8.1, 8.2)	People facing food insecurity have their physical capacities weakened and struggle to mobilize resources for investing in education, limiting economic options and further exacerbating inequality (10.1, 10.2).
SDG 3	Good health and well-being support income earning and security (1.1.1, 1.2.1, 1.4.1) Higher health risks can be fatal for populations living under extreme poverty (1.1.1, 1.2.1) Income loss due to sickness and out-of-pocket spending on health care (3.8.2) pushes vulnerable groups into poverty (1.1.1, 1.2.1) Increased populations with large household health expenditure as a proportion of income (3.8.2) can exacerbate poverty (1.1, 1.2), hunger and malnutrition (2.1, 2.2)	A health-care system that provides immunization, early diagnosis and treatment (3.8, 3.b.1) reduces malnutrition (2.2.2)		Access to universal health care (3.8) supports formal employment and productivity (8.3, 8.6.1) Good health and well-being strengthen productive capacities, reduce fiscal spending, and contribute to economic growth (8.1, 8.2)	Higher health inequality can exacerbate overall inequalities (10.1.1, 10.2.1)
SDG 8	Faster economic growth reduces poverty (1.1, 1.2) More inclusive growth reduces poverty in the most vulnerable groups (1.4)	Improved resource efficiency reduces pressures on land, water and other natural resources and makes food production more sustainable (2.1, 2.2)	Economic growth can enable countries to increase public health spending (3.7, 3.8) Inclusive growth with less informality leads to improved access to health care services (3.8)		Faster economic growth raises wages and increases job opportunities (10.1) Decent work can support lower inequality (10.2) Economic crises disproportionately hit vulnerable firms and households, exacerbating inequality (10.1, 10.2)
SDG 10	Income disparity allows the malnutrition-poverty cycle to persist (1.1, 1.2, 1.4)	Reducing gender inequity in education and employment decreases child malnutrition (2.2) Income inequality increases the likelihood of food insecurity, undercutting the positive effect of economic growth (2.1, 2.2)	Economic inequality and disparity in access to public health resources and technologies leave disadvantaged households more vulnerable to the pandemic and other health risks (3.7, 3.8)	Lower income inequality boosts effective demand and fosters inclusive economic growth Pervasive prejudice and discrimination undermine access to decent work (8.5, 8.8) Income inequality erodes economic growth by reducing education opportunities for disadvantaged children, social mobility and the propensity to consume (8.1)	

Source: UN DESA.

Note: For a description of SDG targets, see https://unstats.un.org/sdgs/indicators/indicators-list/.

a recent study by Food and Agriculture Organization (2018), which shows that progress on SDG target 2.1 can be achieved with less impact on the environment, provided progress can be made in (i) promotion of more equitable distribution of food and income; (ii) adoption of resource-conserving agriculture; (iii) reduction of food wastage; and (iv) acceptance of healthier diet (which can in turn help to achieve SDG 3 and SDG 12, among others). The chapter draws upon in-depth studies of five countries and presents analysis and alternative scenarios for each of them. The chapter concludes by offering policy suggestions, some of which can promote progress towards both SDGs 1 and 2, while others are more pertinent for progress towards SDG 2.

Chapter III: SDG 3 (health and well-being)

Surveying the progress in pre-COVID-19 years, chapter III shows that, at the global level, only a few countries were on track to meet SDG 3. Although there was significant progress regarding particular health indicators, such as maternal, child and neo-natal mortality and incidence of several communicable diseases. There were, however, significant regional variations in this regard. The chapter draws attention to the fact that the impact of different categories of diseases differs across countries of the world, with non-communicable diseases accounting for a much greater share of deaths in rich countries than in low-income countries. The chapter shows that countries also vary widely regarding universal health coverage (UHC), with the rate of coverage varying between 20 and 70 per cent, even among countries with per capita pooled health expenditure of less than $500.

SDG 3 was obviously hardest hit by COVID-19, with millions dying and hundreds of millions being infected. The chapter draws particular attention to the disruption in immunization and other health-care programmes due to COVID-19. It presents scenarios extending to 2030, showing the possible impact of the lapses in immunization for several diseases and their likely impact on death rates in several selected countries. In terms of policies, the chapter emphasizes the necessity for establishing UHC, noting that even countries with low per capita income have the potential to achieve it. For the immediate future, it urges faster and more comprehensive vaccination by making vaccines a public good.

Chapter IV: SDG 8 (growth and employment)

Chapter IV proceeds by noting the slowdown in growth in the years immediately preceding COVID-19, and also the failure of most LDCs to achieve the GDP growth rate of 7 per cent or higher, as stipulated by SDG target 8.1. It also notes limited progress in formalization of labour (SDG target 8.5) and in decoupling growth from environmental impact (SDG 8.4). Economic growth and employment were directly hit by the pandemic, and the chapter provides details regarding the setbacks suffered in these areas, along with regional analyses. In terms of scenarios, the chapter notes that, on the one hand, much depends on the progress in vaccination, which can be either slow or rapid. On the other hand, the future outcomes will depend on policy packages, which can be classified into two broad types—namely policies that aim at a return to pre-crisis economy and policies that aim to build new economic structure. A combination of rapid vaccination and a new economic structure policy package will produce the best outcome, while the combination of slow vaccination with a pre-COVID-19 economic structure policy package will produce the worst outcome. The outlook for social inclusion will depend on policy reforms that build on the recent reduction of informality and promote a recovery centred on formal work for

all. The chapter offers policy suggestions by grouping them according to which aspect(s) of growth the policies address.

Chapter V: SDG 10 (inequality)

Reviewing the pre-COVID-19 situation, chapter V notes that, during 2010–2019, the world saw some improvement in within-country inequality, with more people (55 per cent) living in countries where inequality decreased. Similarly, between-country inequality also decreased, largely driven by rapid growth of emerging economies in Asia. However, within-country inequality was still at a high level. Across countries, on average, 13 per cent of the population still live below 50 per cent of the national median income, and the income gap between most developing countries and developed countries remains sizeable. Economic transformation, globalization, environmental degradation and the climate crisis, growing rural-urban divide, rapid technological change, and regressive policies worked together to let inequality persist. Turning to COVID-19, the chapter notes the vicious cycle, with disadvantaged groups suffering more loss of work and income and higher health risks, thus experiencing a worsened situation, leading to exacerbation of inequality. Meanwhile, COVID-19 is also inflicting long-term damages—disproportionately shouldered by the vulnerable members of society—and accelerating uneven economic structural changes, which could plant the seeds for a worsening of inequality in the long run. In terms of future outlook, the chapter notes that, in view of the vicious cycle above, without bold and concerted policy efforts, inequality is likely to increase in the coming years. Based on Furceri and others (2021), the chapter presents three scenarios in this regard, based on different assumptions regarding the end year of the pandemic, namely 2020, 2021 and 2022. The cumulative increase in inequality by 2027, measured by the Gini coefficient, would be 0.4, 0.9 and 1.3 Gini points, respectively. Which of these scenarios will hold clearly depends on the progress in vaccination. Unfortunately, large gaps are seen in the vaccination rate both between and within countries, and, given the current trends, the gap in vaccination rates between high-income countries and the low- and middle-income countries is likely to increase from about 13 percentage points in April 2021 to about 20 percentage points in April 2022. The chapter concludes by emphasizing the need for policies that can (i) accelerate vaccine production and distribution, (ii) encourage a whole-of-government approach, (iii) bridge across-country gaps in fiscal space and data capabilities, and (iv) address political barriers to reducing inequality.

Chapter VI: the way forward

The final chapter draws upon the interlinkages among the SDGs and presents a way forward to achieving them, based upon policies that are likely to have cross-cutting, wide-ranging effects in accelerating the progress. In this regard, it offers the following seven-point programme of action:

➤ Make the COVID-19 vaccine a public good in order to accelerate vaccination

Rapid, comprehensive vaccination is the key to containing the disease and resuming progress towards achieving the SDGs. The vaccine should therefore be made a public good, by inter alia (i) sharing licenses through the COVID-19 Technology Access Pool, initiated by the World Health Organization; (ii) waiving intellectual property rights on COVID-19 vaccines through a World Trade Organization agreement that levels the playing field in

vaccine production and distribution; and (iii) having countries with vaccine-producing firms compensate these firms for sharing vaccine formulas with firms in other countries having the necessary vaccine manufacturing capability.

➤ Strengthen access to quality and affordable universal health coverage

All countries, irrespective of per capita income level, should put in place universal health coverage based on the principle of universality, not on residence requirements or other such restrictions.

➤ Put in place universal social protection that is flexible and not tied to residence

All countries, irrespective of per capita income level, should put in place a system of social protection based on the principle of universality, not on residence requirement or other such restrictions.

➤ Choose the path to structural transformation aimed at growth, equity and protection of the environment

Developing countries should make the best use of the opportunity opened up by globalization and technological revolution for choosing from alternative paths to structural transformation and aim to achieve both growth and equity.

➤ Raise international solidarity to a higher level

All nations should make use of the COVID-19 experience—which has shown that the well-being of one depends on the well-being of others—to raise international solidarity to a new level, to make vaccines a public good, and to achieve other goals as well, such as ensuring adequate fiscal space for all to undertake COVID-19 mitigation and recovery efforts.

➤ Share the Earth equitably with other species

All nations should stop further encroachment on animal habitats and restore some of what has already been impacted, so as to allow animals adequate space and put enough distance between animal and human habitats, thus preventing the recurrence of zoonotic epidemics and pandemics, such as COVID-19.

➤ Make use of the crisis to overcome political barriers to difficult policy changes

All nations should make use of the COVID-19 crisis to bring about changes that are politically difficult to implement during normal times, but become feasible when the ephemeral character of life and the interdependence of all beings—and nations—become glaringly clear.

Annex I

Sustainable Development Goals selected for study in the report and their targets

The following presents the list of the Sustainable Development Goals and their targets selected for study in this report.

Goal 1
End poverty in all its forms everywhere

1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day

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

1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable

1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance

1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters

1.a Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions

1.b Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions

Goal 2
End hunger, achieve food security and improved nutrition and promote sustainable agriculture

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

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 adolescent girls, pregnant and lactating women and older persons

2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment

2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed

2.a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries

2.b Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round

2.c Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility

Goal 3
Ensure healthy lives and promote well-being for all at all ages

3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births

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

3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents

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 programmes

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

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate

3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all

3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States

3.d Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks

Goal 8
Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

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

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

8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services

8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead

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

8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training

8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms

8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products

8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all

8.a Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade related Technical Assistance to Least Developed Countries

8.b By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization

Goal 10
Reduce inequality within and among countries

10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average

10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard

10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality

10.5 Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations

10.6 Ensure enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions in order to deliver more effective, credible, accountable and legitimate institutions

10.7 Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies

10.a Implement the principle of special and differential treatment for developing countries, in particular least developed countries, in accordance with World Trade Organization agreements

10.b Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island developing States and landlocked developing countries, in accordance with their national plans and programmes

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

Chapter II

Eradicating poverty and ending hunger

Introduction

The eradication of poverty (Sustainable Development Goal (SDG) 1) and ending hunger (SDG 2) are at the heart of the 2030 Agenda for Sustainable Development. The success of both directly affects the ability of countries to achieve many other Goals of the 2030 Agenda, as noted in chapter I.

The global picture on progress in eradicating poverty and ending hunger is complex, and the most commonly used indicators tell varying stories. While the extreme poverty headcount (SDG target 1.1) has declined in recent years, the poorest among us have not experienced much progress. The simple metric of an international poverty line may not be enough to understand what is happening, as progress also depends on how poverty is defined. The number of undernourished people (SDG target 2.1), at the same time, has stagnated and even risen slightly in recent years. Surveys of peoples' perceptions of food insecurity also suggest that this problem is affecting a rising share of the global population. Stunting (low height for age) in children under the age of five (SDG target 2.2) has remained at high levels. The complexity of the situation poses a steep challenge to policymaking.

This chapter attempts to provide a more disaggregated analysis of the global progress in achieving both SDGs 1 and 2. Considering both SDGs together is important, as hunger and poverty are closely related. Poverty is the principal cause of hunger and malnutrition, and malnutrition reinforces conditions of poverty by reducing the economic potential of individuals and countries. Ever since Amartya Sen (1983) observed that famines are not caused by the shortage of food, but rather by lack of access and affordability, there has been a growing belief that efforts to eradicate poverty and end hunger need to progress together. Many countries have been successful in following this general pattern, but a different trajectory has been observed in others. Even at the global scale, the relationship between poverty and hunger has changed.[1]

The eradication of poverty and ending hunger is a moral imperative. To live a life free from poverty and hunger is one of the human rights and fundamental freedoms enshrined in the Universal Declaration of Human Rights. Article 25 (1) of the Declaration states that "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing, and medical care and necessary social services". There is also a growing recognition that poverty is a multidimensional phenomenon that extends beyond the economic arena to encompass factors such as the ability to participate in social and political life. Poverty, in short, is the deprivation of one's ability to live as a free and dignified individual with the full potential to achieve one's goals in life.

Poverty and inequality are also closely related. A basic lesson to be drawn from successful development experiences is that sustained poverty reduction depends on a fast pace of economic growth. However, the link between poverty and growth is not linear, and the way in which additional income is distributed matters for poverty outcomes. The same growth rate can cause different levels of poverty reduction in countries with different levels of inequality. Evidence shows that countries with a more equal distribution of assets and income often grow faster than countries with a higher degree of inequality.

Within SDGs 1 and 2, this chapter focuses on particular targets. In the case of SDG 1, the focus is on three targets, namely 1.1 (ending extreme poverty, as defined internationally), 1.2 (reducing by half

1 It is difficult to assess whether variations in data measurement methods have a role in the observed divergence of trends regarding poverty and hunger reduction.

the number of people living below the national poverty line) and 1.3 (implementation of national social protection systems, including floors). As for SDG 2, the focus is on two targets, namely 2.1 (ending hunger) and 2.2 (ending malnutrition, stunting and wasting).

The chapter first provides a brief synopsis of the global and regional progress in achieving SDGs 1 and 2 prior to COVID-19 and assesses the likely impact of the pandemic on the prospects for achieving the two Goals by 2030. The chapter then briefly discusses the importance of capitalizing on the potential of the interlinkages that exist among different SDGs in order to achieve the poverty and hunger Goals by 2030. This includes the presentation of a business-as-usual scenario for both SDG 1 and SDG 2 that can be predicted on the basis of current trends, along with alternative scenarios which can result from the implementation of different policies. The chapter also reviews the strategies that have been adopted by five developing countries—El Salvador, Ethiopia, India, Kyrgyzstan and Viet Nam—that have been successful in eradicating poverty and reducing hunger in the SDG period, including their policies to address the negative impact of the COVID-19 pandemic. Finally, on the basis of scenario analysis and the review of successful country experiences, the chapter draws policy lessons that other countries could consider as they attempt to accelerate their progress in eradicating poverty and ending hunger by 2030.

Progress during the pre-COVID-19 years

Pre-pandemic progress towards achieving SDG 1 (ending poverty)

Considerable progress towards SDG 1 was achieved during pre-COVID-19 years. According to the *Sustainable Development Goals Report 2021* (United Nations, 2021b), the share of the world's population living in extreme poverty declined from 15.7 per cent in 2010 to 8.4 per cent in 2019. It also notes that the share of the world's *workers* living in extreme poverty fell from 14.3 per cent in 2010 to 7.1 per cent in 2019, although the pace of progress slowed after 2013. The share of young workers living in extreme poverty globally also declined, from 19.8 per cent in 2010 to 12.8 per cent in 2019. Of particular note is that eight out of ten "new poor" reside in middle-income countries. An encouraging development was that the global gender gap in working poverty was closed by 2019.

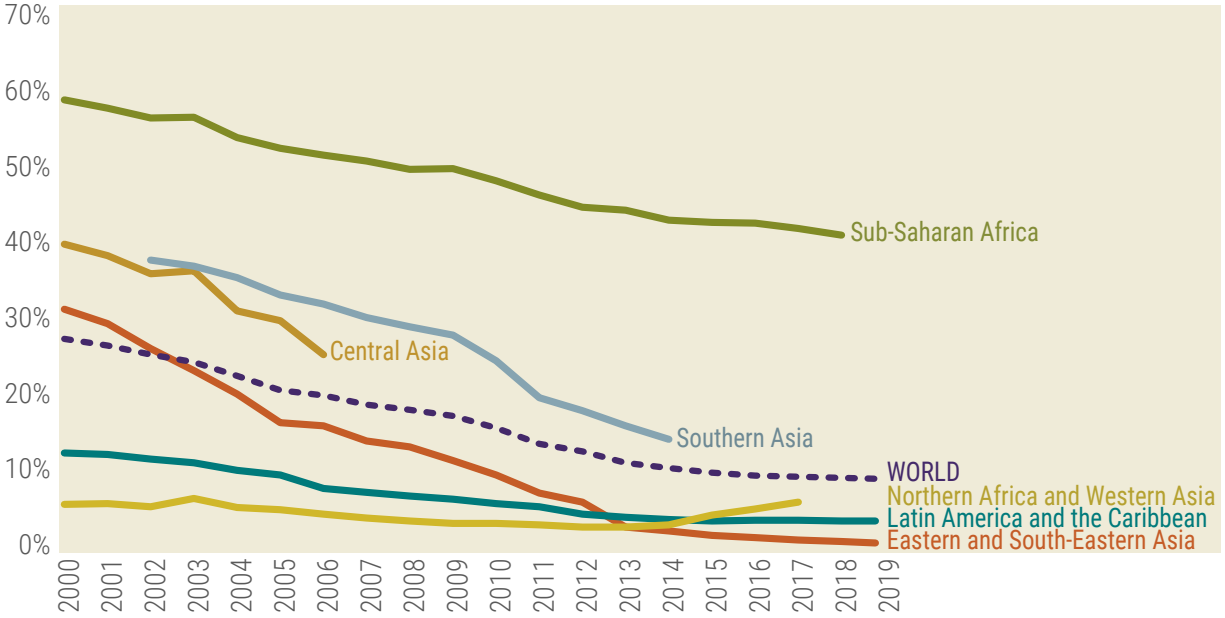
Progress regarding other SDG 1 targets was slower. In 2016, some 4 billion people, or 55 per cent of the world's population, did not benefit from any form of social protection (SDG target 1.3). Globally, only 25 per cent of vulnerable populations received social assistance cash benefits in that year and 22 per cent of unemployed workers were covered by unemployment benefits. As of February 2020, only 87 countries had unemployment programmes anchored in national legislation, with only 34 of those countries covering the self-employed. The coverage of unemployment protection varied widely across regions. While in Australia and New Zealand, half of unemployed people receive unemployment benefits, and 44 per cent in Europe and North America, only 3 and 12 per cent of the people in sub-Saharan Africa and Latin America and the Caribbean receive such payments, respectively.

The Eastern, South-Eastern, and South Asia subregions have been the driving force behind the progress in eradicating extreme poverty in the past decade (figure II.1). Poverty declined in sub-Saharan Africa too, although remaining at a high level. In Latin America and the Caribbean, on the other hand, progress in eradicating extreme poverty (SDG target 1.1) stagnated in the last few years before the pandemic, and in Northern Africa and

Western Asia, extreme poverty actually increased in the last few years before COVID-19. As per the progress and trends during pre-COVID-19 years, the East, South-East, South, and Central Asia subregions, as well as member countries of the Organisation for Economic Cooperation and Development, were on track to eradicate extreme poverty by 2030. Other regions, however, faced significant challenges in reaching this target. Low-income countries saw their poverty eradication progress stagnate. Upper-middle-income and high-income countries, on the other hand, were on track to reach this target by 2030. Lower-middle-income countries were moderately improving their prospects of eradicating extreme poverty by 2030, but challenges remained (Sustainable Development Solutions Network, 2020).

Figure II.1

Extreme poverty headcount ratio (SDG target 1.1), by region, 2000–2019



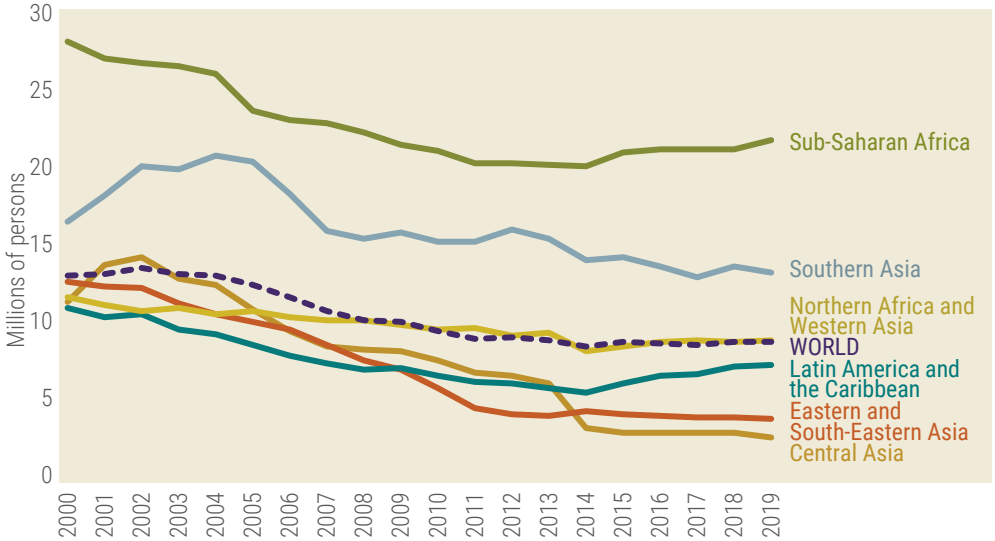
Source: UN DESA, based on data from UNSD Global SDG Indicators Database.

Pre-pandemic progress towards achieving SDG 2 (ending hunger)

Prior to the COVID-19 period, progress regarding SDG 2 was relatively slow. It is estimated that some 690 million people, or 8.9 per cent of the world's population, suffered from undernourishment (SDG target 2.1) in 2019, as compared to 653 million in 2015. In Latin America and the Caribbean and sub-Saharan Africa, the rate of undernourishment even increased during the years immediately preceding COVID-19 (figure II.2).

Similarly, the number of people suffering from food insecurity increased in the years immediately preceding the pandemic. An estimated 25.9 per cent of the world's population, or 2 billion people, were affected by moderate or severe food insecurity in 2019, as compared to 22.4 per cent in 2014. Among them were about 750 million people, who faced *severe* food insecurity, meaning they tended to run out of food and, at worst, go days without eating. The estimates for the 2016–2019 period also suggest that food insecurity was higher among women than men in every region.

Figure II.2
Number of people suffering from undernourishment (SDG target 2.1), by region, 2000–2019



Source: UN DESA, based on data from UNSD Global SDG Indicators Database.

About 144 million children under the age of five, or 21 per cent of the total, suffered from stunting in 2019, as compared to 23 per cent in 2015 and 32 per cent in 2000 (United Nations, 2021b). Although this presented progress, it was insufficient in view of the goal of reducing this number to 99 million by 2025 and 82 million by 2030. About three quarters of children under the age of five suffering from stunting in 2019 lived in Southern Asia (39 per cent) and sub-Saharan Africa (36 per cent). The progress in reducing wasting (low weight for height) or acute undernutrition (a condition caused by limited nutrient intake or infection) achieved during pre-COVID-19 years was also not sufficient. In 2019, 6.9 per cent of children under the age of five globally, or 47 million, were affected by wasting—well above the 5 and 3 per cent global target set for 2025 and 2030, respectively. More than half of the children suffering from wasting in 2019 lived in Central and South Asia, the only subregions where the rate of wasting was more than 10 per cent.

Impact of COVID-19 on SDGs 1 and 2

The COVID-19 pandemic worsened the already problematic situation regarding SDGs 1 and 2. The pandemic led to significant economic contraction and increased unemployment in both developing and developed countries, leading to the worst economic situation the world has faced in 90 years (see chapters I and IV). In 2020, the world economy shrank by 3.6 per cent, significantly more than during the global financial crisis. The latest estimates show that real gross domestic product (GDP) per capita may have declined by 4.6 per cent in 2020. The projected cumulative output losses during 2020 and 2021, nearly $8.2 trillion, could wipe out almost all output gains over the preceding four years (UN DESA, 2021b). This economic contraction has severely impacted the global progress to eradicate poverty, pushing somewhere between 119 million and 124 million additional people into extreme poverty.

Pre-existing systems of social protection helped to mitigate the impact of COVID-19 on poverty and hunger in many other countries. In Ethiopia, the impact on food insecurity could have been more significant had it not been for the Productive Safety Net Programme

(PSNP), which played an important role in protecting the neediest households in rural areas during the pandemic. A recent study showed how participation in the PSNP virtually offset the adverse effects of the pandemic on food insecurity (Abay and others, 2020). The Government of India also used its Public Distribution System, reaching about 800 million people, to quickly scale up and distribute almost double the quantity of food grains between April and November 2020. However, in addition to highlighting its responsiveness, COVID-19 has also exposed several weaknesses in this system. For example, for people staying away from their area of residence, the lockdown created a hurdle in claiming their entitled food grains, as benefits were tied to place of origin (Roy and Pradhan, 2020).

In most countries, pre-existing social protection systems were not sufficient to deal with the sudden economic shock caused by the pandemic. As a result, Governments of 209 countries and territories introduced more than 1,500 social protection measures (mostly short term) to deal with the shock between 1 February and 31 December 2020 (United Nations, Economic and Social Council, 2021). The Government of Viet Nam, for example, issued a $2.6 billion social protection package for cash support to the most vulnerable people and workers in April 2020. This made some headway in mitigating the economic impact on the most vulnerable people in Viet Nam. However, the social protection support policy also faced several challenges in its design and implementation. The support package was based on lists of the poor and near-poor approved prior to the pandemic; as a result, many poor households that would have qualified did not receive adequate support (United Nations, 2020c).

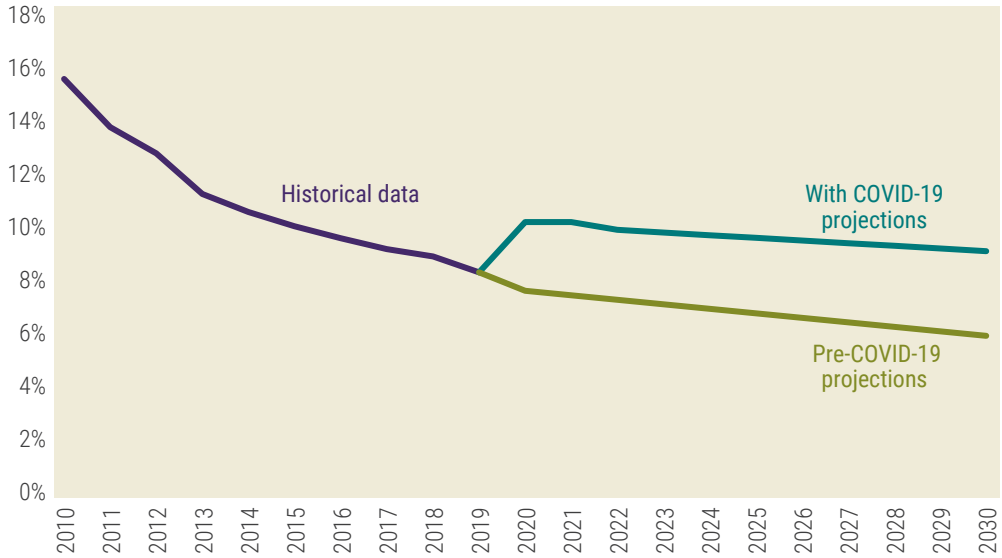
The COVID-19 pandemic has also intensified the vulnerabilities and inadequacies of the global food systems and has increased food insecurity by (i) causing a fall in income; (ii) affecting supply chains and trade; (iii) reducing food availability; (iv) increasing food losses due to transportation challenges; and (v) interrupting school meals. It is therefore possible that its cumulative effect will be to add many more millions of people to the chronically undernourished (SDG target 2.2). According to the World Food Programme (2020), the number of people facing acute food insecurity doubled to about 265 million by the end of 2020, up from 135 million in 2019. The pandemic has also pushed an additional 83–132 million people into chronic hunger in 2020 (United Nations, Economic and Social Council, 2021). In particular, wasting is projected to be one of the conditions most impacted by COVID-19 in the short-term, and the number of children under the age of five suffering from wasting may have increased by 15 per cent in 2020. Continued difficulties in accessing nutritious diets and essential services during the pandemic have also triggered a rise in both stunting and being overweight among children.

Future outlook

Baseline scenarios: future outlook based on pre-pandemic trends

Prior to COVID-19, the United Nations Department of Economic and Social Affairs (UN DESA) had projected that the extreme poverty headcount would reach 7.7 per cent in 2020 and 6.0 per cent in 2030, well short of reaching the global target of ending poverty. According to projections reflecting the impact of the COVID-19 pandemic and presented in the mid-year update of the *World Economic Situation and Prospects 2021*, the global poverty rate in 2020 could jump to 10.3 per cent and decline to only 9.2 per cent by 2030 (figure II.3). This would mean that as many as 785 million people could find themselves in extreme poverty by 2030 (United Nations, 2021c).

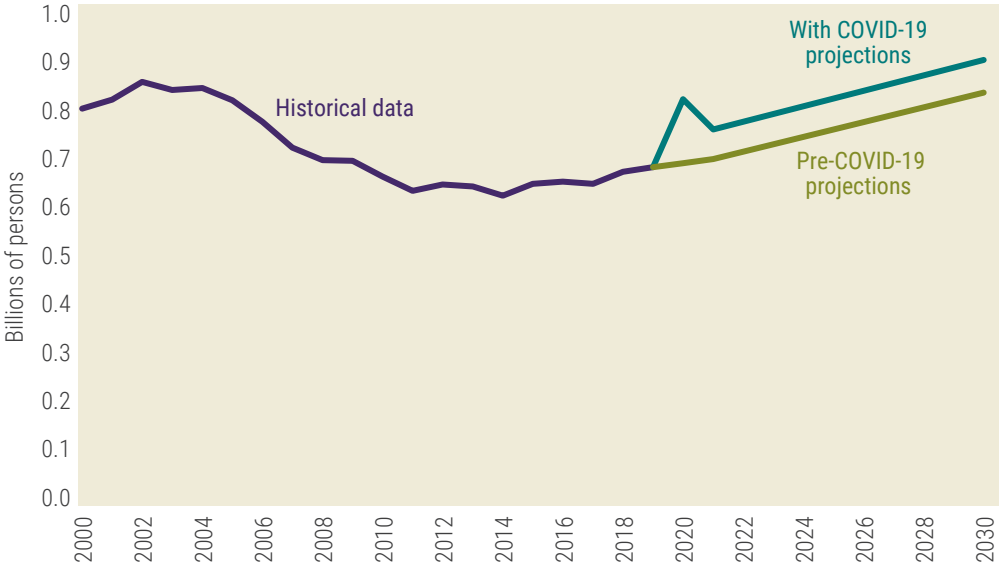
Figure II.3
Extreme poverty headcount (SDG target 1.1), pre-COVID-19 and with COVID-19, 2010–2019 and projections to 2030



Source: UN DESA calculations, based on data from United Nations (2021c).

Projections made before COVID-19 estimated that the number of undernourished people would reach 695 million in 2020 and 841 million in 2030 (figure II.4). However, due to the pandemic, the number of undernourished people could jump to 827 million in 2020. The factors in these projections suggest that while some of this jump could be reduced, the number of undernourished people—assuming the pre-COVID trends—could increase to 909 million people in 2030 (Food and Agriculture Organization, 2020).

Figure II.4
Number of undernourished persons (SDG target 2.1) pre-COVID-19 and with COVID-19, 2000–2019 and projections to 2030



Source: UN DESA calculations, based on data from FAO (2020).

Towards more optimistic scenarios

The baseline scenarios based on pre-COVID-19 trends are obviously not satisfactory. It is necessary to strive for better outcomes regarding both SDGs 1 and 2. To see how this can be achieved, it is important to take a closer look at the interlinkages of these SDGs with the others.

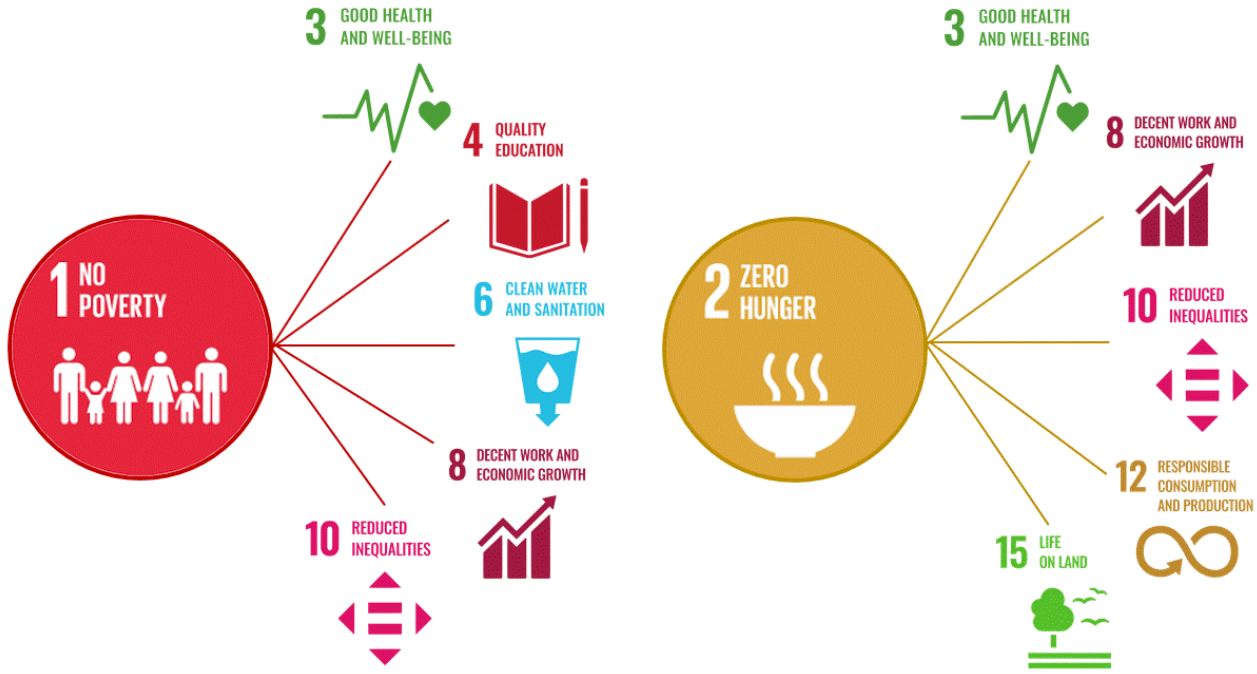
Using SDG interlinkages to end poverty and hunger

From the discussion of the interlinkages in chapter I, it is clear that success in achieving SDG 1 and SDG 2 is directly related to progress on a number of other SDGs, as shown in figure II.5. Poverty reduction is determined by both growth (SDG 8) and changes in the distribution of income (SDG 10). Quality education (SDG 4) directly impacts poverty reduction by increasing the skills and productivity of poor households and indirectly by supporting the fulfilment of basic needs, such as better health (SDG 3) and access to clean and safe water (SDG 6), which in turn can help people rise out of poverty and break the intergenerational pattern of poverty.

Similarly, the achievement of SDG 2 is directly linked to several other SDGs. For example, a good health-care system (SDG 3) that provides immunization, diagnosis and proper treatment can reduce malnutrition. Persistent poverty (SDG 1), inequality (both within and between countries) (SDG 10), and lack of decent employment (SDG 8) constrain access and affordability of food. Agricultural production is also limited by the increasing scarcity and diminishing quality of land (SDG 15), while a reduction in food loss and waste (SDG 12) could reduce the burden of malnutrition without requiring a large increase in food production. Progress on SDG 2 also benefits from the presence of additional factors such as women's empowerment (SDG 5).

Figure II.5

Accelerating poverty (SDG 1) and hunger (SDG 2) reduction by fostering interlinkages across other goals of the 2030 Agenda



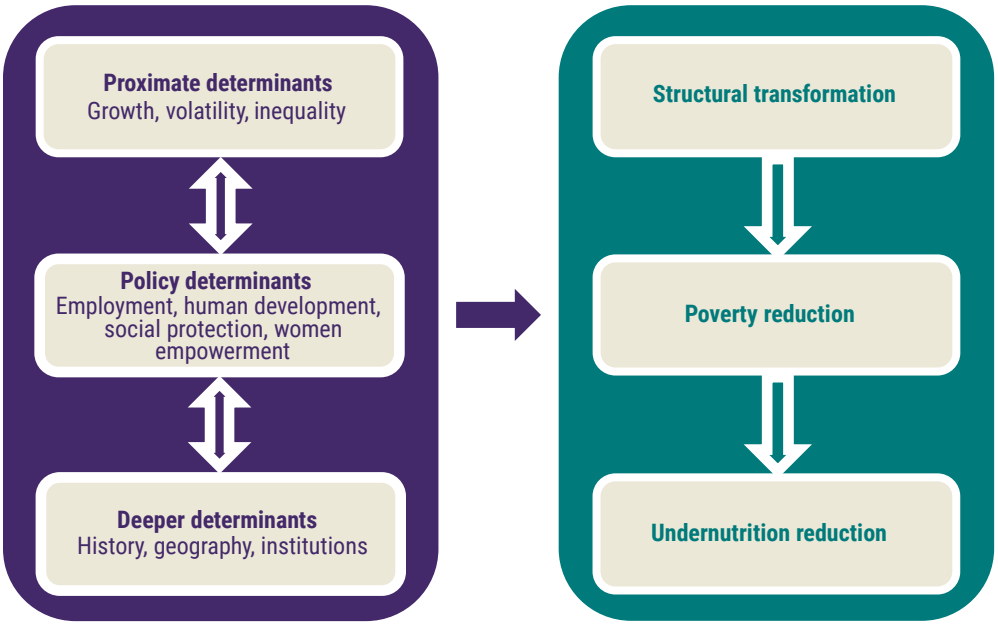
Source: UN DESA.

In addition, the causality runs both ways, and progress on SDGs 1 and 2 also contributes to progress on other SDGs. For example, poverty is a major cause of ill health and a barrier to accessing health care when needed (SDG 3), while improved nutritional status is vital to increased productivity levels which in turn contribute to higher economic growth (SDG 8).

Understanding the determinants of poverty and malnutrition

Addressing the effects of poverty and malnutrition also requires proper understanding of their determinants. In this regard, three strands of development thinking leading to three types of policy determinants may be distinguished. These are (i) the growth-distribution literature that gave rise to a set of "proximate determinants"; (ii) the growth/human development/social protection discourse that gave rise to a set of "policy determinants"; and (iii) the institutional drivers that gave rise to "deeper determinants" (Islam, 2008; Sen, 2021). The scheme in figure II.6 shows the role of these three types of determinants, the interrelationships among them, and their channels of influence on poverty and malnutrition. Statistical analysis of partial correlation shows that, among the policy determinants, reduction of inequality plays an important role in reduction of poverty (box II.1).

Figure II.6
Conceptual approach: role of proximate, policy and deeper determinants



Source: Adapted from Sen (2021).

Scenarios of poverty reduction by combining inequality reduction with growth

To illustrate the importance of reduction of inequality in reaching the poverty targets, this section presents alternative scenarios showing how inequality reduction combined with robust growth can help the world to reach or get closer to the SDG 1 targets. These scenarios are constructed using the World Economic Forecasting Model (WEFM) of

Box II.1

Cross-country analysis of determinants of poverty

A cross-country analysis of about 60 developing countries with sufficient data availability offers helpful insights into the determinants of poverty and hunger reduction. The most common model postulates a relationship between the annual growth rate of gross domestic product per capita and the pace of poverty reduction during the same period. Past studies have indeed found a positive long-term relationship between economic growth and poverty reduction (Ravallion and Chen, 1997). However, a different approach to the growth-poverty nexus considers the effects of past economic performance on *subsequent* well-being outcomes in the areas of poverty, malnourishment and child nutrition. Regressions were run with subsequent poverty levels as the dependent variable, and initial levels of income and inequality and the rate of growth and its volatility between the initial and subsequent years as the explanatory variables. The results show that initial level of inequality has significant independent effect on subsequent poverty, even after controlling for the effects of the other variables (table II.1.1). These results confirm the policy conclusion that reduction of inequality is an important component of reducing poverty.

Source: UN DESA.

Table II.1.1

Poverty headcount and prevalence of undernourishment, past and present growth, 2005–2015

Model	Dependent variable (percentages)			
	Latest poverty headcount index (national poverty line)	Latest poverty headcount index (international $1.90 poverty line)	Latest poverty headcount index (international $3.20 poverty line)	Latest prevalence of undernourished population
Log of initial GNIpc, 2005	-7.448***	-11.300***	-16.340***	-4.653***
	(1.917)	(1.716)	(1.722)	(1.049)
GNIpc growth, 2005–2015	-2.541***	-0.982	-1.517**	0.050
	(0.542)	(0.593)	(0.672)	(0.435)
Growth volatility, 2005–2015	0.755***	0.744	1.139	0.617***
	(0.213)	(0.519)	(0.744)	(0.154)
Initial Gini, 2005	0.364	0.568***	0.529***	0.069
	(0.250)	(0.188)	(0.171)	(0.115)
East Asia and the Pacific	3.931	4.666	-4.374	3.805
	(4.976)	(5.350)	(9.001)	(2.813)
Europe and Central Asia	2.155	4.351	-10.870	-2.173
	(4.933)	(6.012)	(8.625)	(2.879)
Latin America and the Caribbean	11.770**	3.698	-11.040	3.304
	(5.627)	(4.551)	(7.180)	(2.537)
Middle East and Northern Africa	3.057	–	–	0.246
	(4.477)			(3.972)
Sub-Saharan Africa	11.290***	21.510***	14.680**	7.238**
	(3.044)	(4.232)	(6.706)	(2.879)
Constant	68.780***	70.760***	136.600***	38.960***
	(18.940)	(13.590)	(14.650)	(7.501)
Observations	59	67	67	63
R-squared	0.638	0.787	0.852	0.561

Source: Adapted from Sen (2021).

Notes: * p < 0.1 ** p < 0.05 *** p < 0.01 Log of initial GNIpc and initial Gini (from Solt database) refer to the level at the start of the growth period (2000–2015). "Current poverty" refers to the latest poverty figure in the decade 2010–2020. Volatility is measured in terms of the standard deviation of GNI per capita growth rate within the 2005–2015 period. Robust standard errors are presented in parentheses.

UN DESA, which can produce forecasts under alternative assumptions regarding rate of per capita GDP growth and rate of reduction of income inequality. Altogether, six scenarios, going forward to 2030, are constructed based on different assumptions (table II.1). The outcomes of this exercise are presented in figures II.7 and II.8.

Table II.1

Assumptions for GDP per capita and income inequality under different scenarios, 2022–2030

Number	Scenario	Average annual GDP per capita growth	Annual income inequality reduction	Compounded inequality reduction (2022–2030)	Poverty rate in 2030	Number of people in poverty in 2030 (million)
1	Baseline	4.7%	-	-	9.2%	785
2	Only growth	6.7%	-	-	7.3%	625
3	Only inequality (modest) *	4.7%	-1.0%	-9.0%	7.8%	668
4	Only inequality (moderate) **	4.7%	-2.0%	-17.0%	6.7%	575
5	Optimistic	6.7%	-3.1%	-25.0%	4.5%	383
6	Poverty miracle	10.7%	-7.4%	-50.0%	2.5%	217

Source: UN DESA calculations.

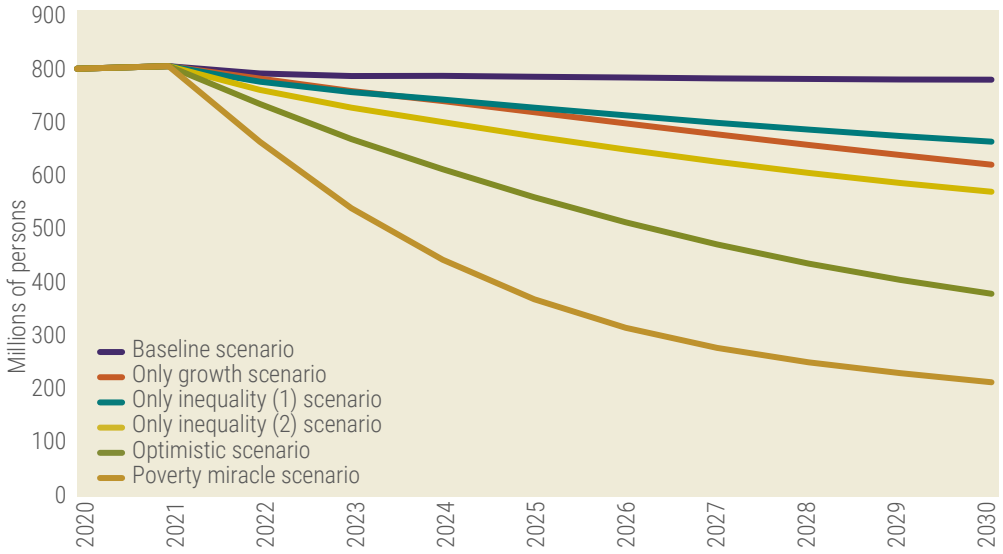
Notes: Income inequality is measured as the standard deviation of log income. An annual decrease of 1 per cent would result in a compounded inequality reduction of 9 per cent by 2030 in the standard deviation of log income. This would result in a similar (but not exactly the same) reduction in the GINI coefficient. For example, a country with a GINI coefficient of 42.6 in 2020 would see it reduced to 39.2 in 2030.

* An average reduction of 1 per cent annually would be similar to the progress achieved by Kyrgyzstan between 2010 and 2020, which recorded a 1.1 per cent average annual reduction in income inequality. In terms of the Gini coefficient, this resulted in a reduction from 30.1 in 2010 to 26.2 in 2020.

** A reduction of 2 per cent annually would be similar to the experience of El Salvador, which reduced income inequality annually, on average, by 1.7 per cent between 2010 and 2020, reducing the Gini coefficient from 43.5 to 37.1.

Figure II.7

Global projections for number of people living in poverty, by scenario, 2020–2030



Source: UN DESA calculations.

The *baseline scenario* assumes continuation of the most recent UN DESA forecast of 4.7 per cent average annual growth in GDP per capita in developing countries in the 2022–2030 period, with no change in income inequality (United Nations, 2021c). In this scenario, about 9.2 per cent of the world's population—or 785 million people—would remain in extreme poverty (SDG target 1.1) by 2030. Of that number, about 26.7 per cent would live in Africa and 37.3 per cent in the least developed countries (LDCs) (figures II.8 and II.9).

The *only growth* scenario assumes a rise in the average annual growth in GDP per capita in developing countries to 6.7 per cent in the remaining SDG period (2022–2030), with income inequality remaining unchanged. In this scenario, the share of world population living in extreme poverty by 2030 would decline to about 7.3 per cent, or 625 million people. The two *only inequality* scenarios demonstrate the impact of inequality reduction on poverty reduction, while keeping the baseline average annual GDP per capita growth rate in developing countries the same, at 4.7 per cent. Under the modest inequality reduction of 1 per cent per annum, the poverty rate would decline by 2030 to 7.8 per cent, translating into 668 million people in poverty. With moderate inequality reduction (2 per cent annually), poverty can be reduced to 575 million people by 2030.

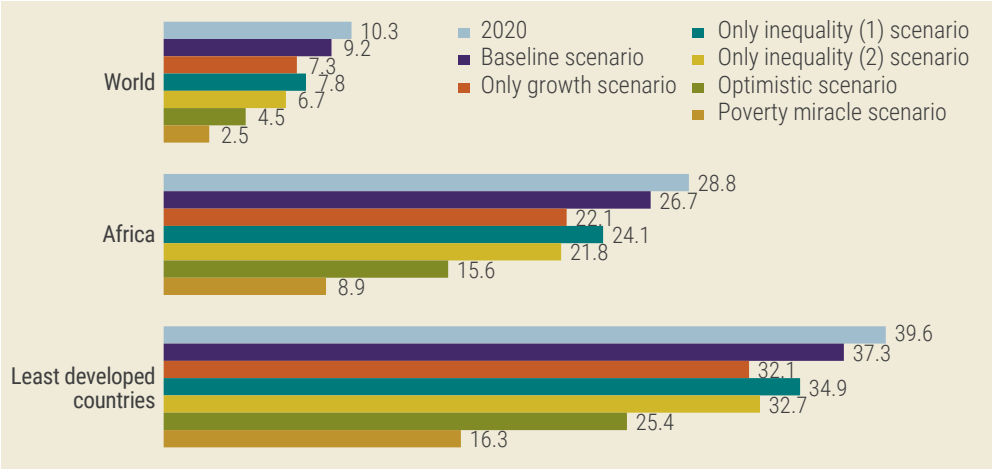
The *optimistic* scenario is based on the increased growth rate of 6.7 per cent per annum and an annual reduction of inequality by 3.1 per cent. Under this scenario, the extreme poverty rate would decline to 4.5 per cent, meaning 383 million people living in poverty (figure II.8). Finally, if the annual per capita GDP growth rate can be raised to 10.7 per cent and inequality reduced by 7.4 per cent per annum, the rate of poverty by 2030 will be reduced to 2.5 per cent, implying only 216 million people will be living in extreme poverty. Given the very ambitious assumption that this scenario relies on, it has been called the *poverty miracle* scenario.

In general, the exercise above shows that inequality reduction can be a potent driver of poverty reduction, and, combined with robust growth, can produce optimistic if not miraculous results.

Figure II.8

Extreme poverty headcount ratio for Africa, LDCs and the world, by scenario, 2020 and projections for 2030

Percentage



Source: UN DESA calculations.

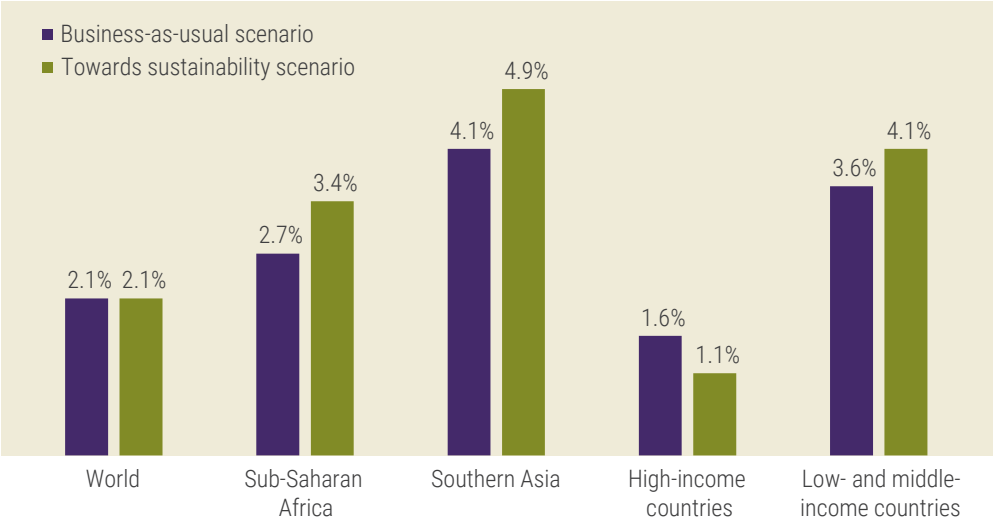
Scenarios for ending hunger by shifting to sustainable food and agricultural systems

During pre-COVID-19 years, the rates of malnutrition were stagnating at the global level and increasing in many regions. However, there are ways in which these disconcerting trends may be changed and greater progress made towards SDG 2. This can be seen in a scenario analysis conducted recently by the Food and Agriculture Organization (FAO) (2018). It involves modelling of a wide range of key variables with a view to better understanding the likely evolution of food and agricultural systems up to 2030 and 2050. In this study, the possibility of achieving a better outcome regarding SDG 2 is captured through an optimistic (*towards sustainability*) scenario, which is contrasted with a *business-as-usual* scenario.

The scenarios obviously depend on certain assumptions. The average global GDP per capita growth rate is assumed to be the same in both scenarios; however, this rate for high-income countries was assumed to be lower under the *towards sustainability* scenario as compared to that under the *business-as-usual* scenario. The opposite situation holds in low- and middle-income countries and in countries of South Asia and sub-Saharan Africa (figure II.9).

Figure II.9

Assumptions regarding annual GDP per capita growth rates in 2030, by region and scenario



Source: UN DESA calculations, based on data from FAO (2018).

In the *business-as-usual* scenario, there is limited innovation in production processes and little progress towards sustainability, including hardly any changes in the energy mix. Fossil fuels remain the main energy source, with renewables only slowly emerging. Lifestyle and diet changes are also minimal. Agriculture remains much less capital intensive in low- and middle-income countries than in high-income countries. In the *towards sustainability* scenario, on the other hand, production processes experience a shift towards less resource-intensive technologies in response to changing consumer preferences. This results in higher prices paid for natural resources and commodities imported from low- and middle-income countries. Agriculture capital intensity in low- and middle-income countries

converges towards that of high-income countries. There is also a significant increase in research, development and innovation globally, including the use of environmentally sound technologies, as well as precision technologies and applied robotics, in the agricultural sector.

Furthermore, food preferences in this scenario are expected to shift towards less consumption of animal-based foods and oils and fats, and food loss is reduced from 3.1 per cent of daily energy supply at the retail level in the *business-as-usual* scenario to 1.6 per cent in the *towards sustainability* scenario. International trade also takes on a strategic role in moving food and agricultural systems towards economic, social and environmental sustainability in the *towards sustainability* scenario. More bilateral trade agreements are in place and both tariff and non-tariff barriers are lower than in the *business-as-usual* scenario.

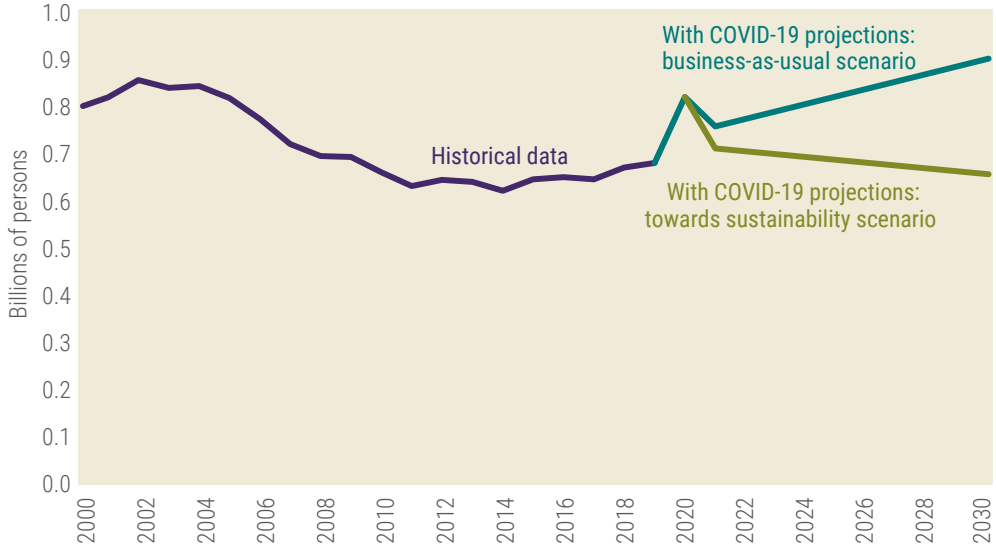
Also, in the *towards sustainability* scenario, low- and middle-income countries invest more in enhanced water efficiency, implement land conservation practices, and develop cropping methods that together contribute to improved quality of soils, increase cropping intensity, and progressively lower the use of chemicals. The boosted investment in these directions also ensures the transition towards a more sustainable use of natural resources and climate change mitigation and a shift to circular agriculture. In the *towards sustainability* scenario, investments in renewables move the energy mix towards renewable energy sources. By 2050, more than 50 per cent of energy is coming from renewable sources.

The analysis shows that, while under the COVID-19-adjusted *business-as-usual* scenario, as many as 909 million people could suffer from undernourishment in 2030, this number could be reduced to 664 million under the post-COVID-19 *towards sustainability* scenario (figure II.10).

It is also important to note that the towards sustainability scenario demonstrates the possibility of achieving greater reduction in undernourishment with decreased land requirement and reduced CO_2 emissions. Global CO_2 emissions are projected to increase by 16 per cent by 2030 in the business-as-usual scenario, while the emissions are reduced by 3 per cent in the towards sustainability scenario by 2030. Almost no additional arable

Figure II.10

Global number of undernourished persons under COVID-19 business-as-usual and towards sustainability scenarios, 2000–2019 and projections to 2030



Source: UN DESA calculations, based on data from FAO (2018) and FAO (2020).

Note: Business-as-usual scenario is based on FAO (2020). Towards sustainability scenario is based on FAO (2018) and assumes that a towards sustainability scenario would have similar impact post-COVID-19 as was estimated pre-COVID-19.

land is required in the towards sustainability scenario (as compared with 2012), as the required growth in agricultural output comes mainly from sustainable crop intensification and moderate yield increases. The changes in food consumption patterns and more equal distribution of calories help to make progress towards SDG targets 2.2 (ending malnutrition) and 3.4 (reducing non-communicable diseases and enhancing well-being).

Outlook for individual countries and territories

While the above section considered outlook scenarios regarding SDGs 1 and 2 at the global and regional levels, this section analyses the situation for individual countries and territories. However, the relevance of structural transformation and policy variables on reduction of poverty and malnutrition can be better described by examining the gradual evolution of country-specific trends. To this end, this section presents the experiences of some developing countries that have proved to be relatively more successful in reducing both poverty and hunger.

Countries and territories selected for this analysis differ greatly in terms of their initial conditions regarding population density, physical capital and human capital endowments, outward orientation, level of industrialization, vulnerability to natural shocks, and exposure to conflicts. However, the analysis in this section aims at identifying the common factors contributing to their success despite their differing initial conditions. Altogether, the concrete experiences of 17 countries and territories were studied: five in East and South-East Asia (China, Malaysia, Indonesia, Philippines and Viet Nam); three in South Asia (Bangladesh, India and Sri Lanka); four in Latin America (Chile, Dominican Republic, El Salvador, and Honduras); two in Africa (Ethiopia and Tunisia); one in Central Asia (Kyrgyzstan); and two in Europe (Greece and Kosovo). The following provides an overview based on the analysis of the experience of the 17 countries.

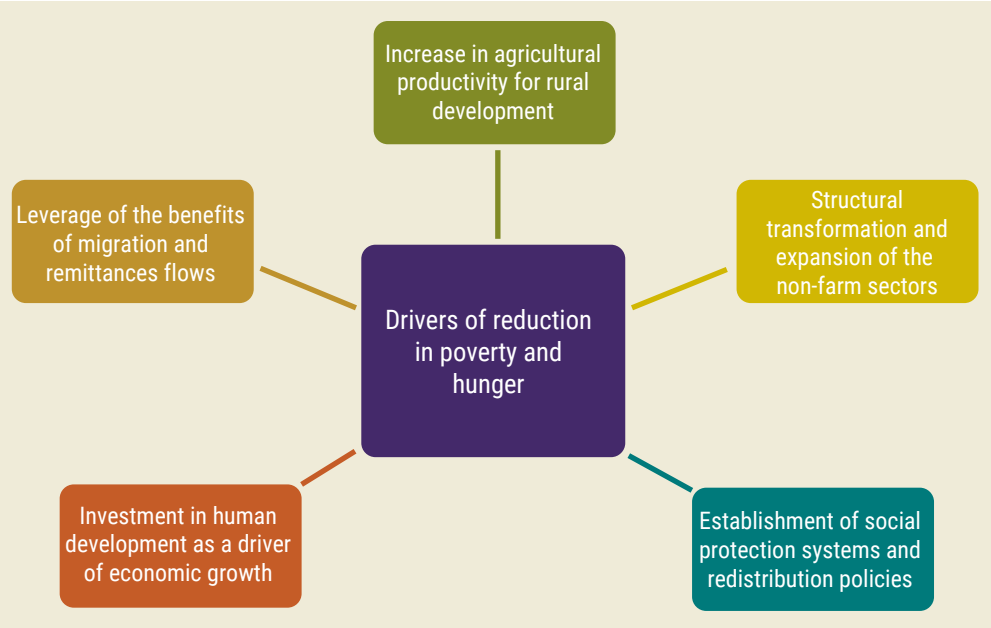
The statistical (regression) analysis based on a wider sample of countries (presented in the previous section) pointed to the initial level of inequality as an important determinant of subsequent progress in reduction of poverty and malnutrition. The detailed country-level analysis, however, helps to identify a broader range of determinants that play an important role in this regard and to follow the ways in which they interact to produce the desired outcomes. The analysis points to the five categories of determinants, as shown in figure II.11. Some of these, such as structural transformation, are clearly of long-term nature, while others are of short- and medium-term nature.

The discussion below presents some highlights of the experiences of countries selected for in-depth study. The details for each country—El Salvador, Ethiopia, India, Kyrgyzstan and Viet Nam—are presented below in individual boxes. These boxes also include projections regarding the progress of these countries on SDGs 1 and 2 going forward to 2030.

Raising agricultural productivity for rural development

Since three fourths of the world's poor live in rural areas, it is not surprising that improving agricultural productivity has traditionally proved to be the most important driver of reduction of poverty and improvement of food security. However, improved agricultural productivity alone does not necessarily lead to broad-based and rapid poverty reduction, since much of the benefits may be captured by small-scale commercial farmers who live above the poverty line. Therefore, ensuring that agricultural development drives poverty reduction, other complementary efforts are necessary, including promotion and protection

Figure II.11
Key policy determinants for reducing poverty and hunger



Source: UN DESA, based on Sen (2021).

of ownership and user rights of smallholders on land; ensuring their access to various inputs, including credit, technology, and extension services; provision of institutional support, such as facilitating their cooperative efforts regarding both procuring inputs and marketing of output; and provision of necessary information regarding opportunities provided by global markets and the risks they pose. Among the countries studied, Ethiopia provides a notable example of transforming the agricultural sector as a central strategy to reducing rural poverty and hunger in the country (box II.2).

Structural transformation and expansion of the non-farm sectors

The long-run success in the reduction of poverty and hunger depends on carrying out effective structural transformation leading to higher levels of aggregate productivity. Traditionally, structural transformation generally meant the reallocation of labour from agriculture to manufacturing, where labour productivity was higher. This reallocation was also generally associated with urbanization, because of the concentration of manufacturing in urban centres. However, while the income level may rise for the urban poor after coming to the cities, the non-income dimensions of well-being, such as nutrition, do not necessarily improve. This explains the divergence of SDG 1 and SDG 2 dynamics in some economies among the successful performers. Most of the successful poverty reducers (except for China, Chile and Greece) still have a high stunting rate among children. Hence, additional measures are needed to translate poverty reduction into lower malnutrition. Meanwhile, agricultural development by itself is seldom sufficient to eradicate poverty in rural areas and generally needs to be complemented by growth in non-farm activities. In rural communities, the growth in non-farm activities is thus often an important driver of poverty reduction. Structural change without significant and sustained productivity growth in the non-farm

sectors would be self-limiting (UN DESA, 2021c). Among the countries studied, Viet Nam provides a notable example of successful structural economic transformation away from strong reliance on agriculture to rapid expansion of manufacturing capacity (box II.3). India, on the other hand, has pursued a structural transformation strategy based more on rapid expansion of the services sector (box II.4).

Establishing social protection systems and redistribution policies

The strengthening of national social protection systems has been an important driver of poverty and hunger reduction in many developing countries. Countries that have performed well in reducing extreme poverty and undernourishment have spent noticeably more over the last two decades on social protection for the poorest and most vulnerable. The COVID-19 pandemic has further highlighted the critical role that such systems play as a risk-mitigation strategy to address temporary shocks such as those created by pandemics, natural disasters or economic crises. Poor households are the primary beneficiaries of effective social protection systems as they are often locked in the trap of low income and limited economic opportunities. Among the countries studied, El Salvador and Kyrgyzstan offer notable examples of relying on social protection systems to achieve the Goals of eradicating poverty and hunger during periods of low average annual economic growth (see boxes II.5 and II.6, respectively).

Investing in human development as a driver of economic growth

Human development has two main aspects: education and health. For most of the East Asian countries, investment in human development has been an important driver of success in achieving more equitable economic growth and major reduction in poverty and hunger. Better health through proper nutrition is a pre-condition for better outcomes for education, so that policies in these two areas have considerable potential for synergy. Furthermore, prevention of health shocks via effective public investments can have immediate effects on the economic lives of the poor by reducing potential income losses due to illness. The recent experience of Viet Nam illustrates well the importance of investing in education and human capital to achieve progress towards SDGs 1 and 2 (box II.3).

Leveraging the benefits of migration and remittance flows

Remittances are a significant financial resource for households in many developing countries and have proven to be a powerful tool for the reduction of poverty and hunger. Remittances can also reduce the risk of uncertainty, allowing recipients to invest in assets, which increases the demand for food and enables better nutrition and education in a society. The flow of remittances was found to be an important macroeconomic tool for building foreign exchange reserves in several successful countries. The experiences of El Salvador (box II.5) and Kyrgyzstan (box II.6) illustrate how migration and remittances can be leveraged for poverty and hunger reduction.

Box II.2

Ethiopia

Progress in achieving SDGs 1 and 2

Ethiopia has been successful in reducing poverty and hunger. Prior to COVID-19, Ethiopia was on track to become the first low-income sub-Saharan African country to achieve SDG target 1.1 (extreme poverty) by 2030. The country has also made significant progress towards SDG target 2.1 (end malnutrition) by 2030. Extreme poverty has been reduced from 37 per cent in 2004, to 31 per cent in 2015, and to 19.5 per cent in 2019. There has been similar progress in terms of reducing the prevalence of malnutrition (SDG target 2.1), which has declined from 47.1 per cent in 2001 to 21.5 per cent in 2015 and to 19.7 per cent in 2018.

Key policies contributing to the reduction in poverty and hunger

The progress on SDG 1 and SDG 2 is part of a broader national development strategy, with a multitude of policies contributing to the eradication of poverty and hunger during the SDG period, with two key elements being agricultural development and the expansion of social protection.

Agricultural development

Since 1994, four development plans have been launched under a generic strategy to promote agriculture-led industrialization. The predominantly rural character of Ethiopia means that agricultural growth has been critical for progress on both SDG 1 and SDG 2; indeed, growth in the agricultural sector accounted for an estimated two thirds of national poverty reduction in Ethiopia between 2011 and 2016 (Bundervoet and others, 2020). Increased agricultural output has been driven by government efforts to increase the productivity of smallholder farmers through investments in research and development. This includes efforts to promote the adoption of high-quality inputs, such as better fertilizers and seeds, in the agricultural sector. The agricultural extension and seed marketing system has also played an important role in this regard.

Expansion of social protection

Given the vulnerable nature of rural communities and the recurrence of droughts and other unpredictable weather patterns, Ethiopia has invested heavily in strengthening the resiliency of its rural communities. These efforts include the Productive Safety Net Programme (PSNP), which aims to move rural people suffering from severe food insecurity away from recurrent humanitarian food assistance to a more secure, predictable, largely cash-based form of social protection. The coverage of the PSNP has increased from 4.8 million people in 2004 to 8.0 million in 2016, accounting for about 9 per cent of the rural population. It is the largest social protection programme in Africa and has reduced poverty by an estimated 0.9 percentage points every year since its launch in 2005 (Hirvonen, Taffesse and Hassen 2016). One of the key innovations of PSNP is the integration of unconditional cash transfers and public works employment.

Impact of COVID-19 and the effectiveness of policy measures adopted

The pandemic's negative impact in Ethiopia has resulted in reduced employment and household incomes. More than half of households reported in April 2020 that their incomes declined and about 8 per cent lost their jobs at the beginning of the outbreak (Dione, 2020). Market closures, food price increases and loss of income have been the most important channels through which the pandemic impacted employment and livelihoods in Ethiopia. A decrease in imports of strategic capital goods, such as fertilizer, fuel, machinery, and other production inputs, has also impacted food security in the country. However, the impact on food insecurity could have been more significant had it not been for the PSNP, which played an important role in protecting the neediest households in rural areas during the pandemic. Participation in the PSNP virtually offset these adverse effects of the pandemic (Abay and others, 2020).

continued >>

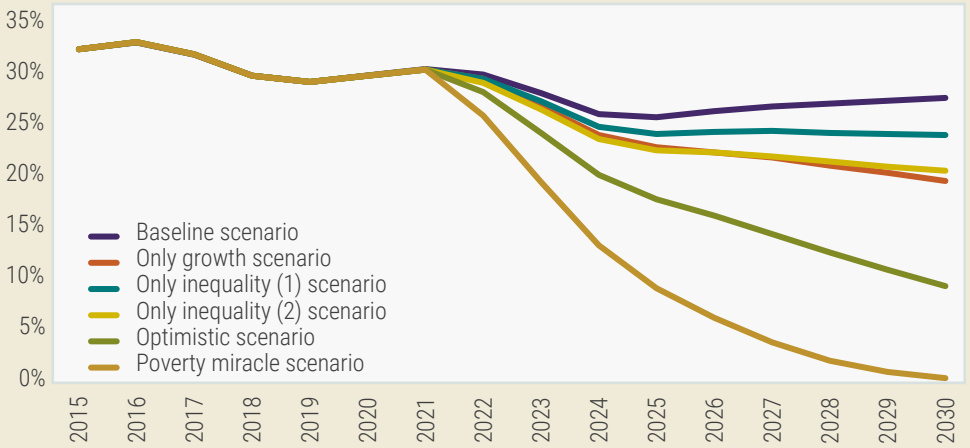
Box II.2
continued

The likely 2030 scenario for SDGs 1 and 2

Poverty and food insecurity is projected to increase in 2020 and 2021, and it will take a few years to get back to the pre-pandemic level. The extreme poverty headcount rate (SDG target 1.1) is projected to increase from 29.4 per cent in 2019 to 30.0 per cent in 2020 and 30.6 per cent in 2021. In the business-as-usual scenario the extreme poverty headcount rate would only be reduced to 27.8 per cent in 2030 (figure II.2.1). However, with improvements in economic growth and reduction in income inequality, it could be reduced further. In the optimistic scenario, the extreme poverty headcount rate would reach 9.4 per cent in 2030.

Figure II.2.1

Extreme poverty headcount ratio (SDG target 1.1) in Ethiopia, by scenario, 2015–2020 and projections to 2030



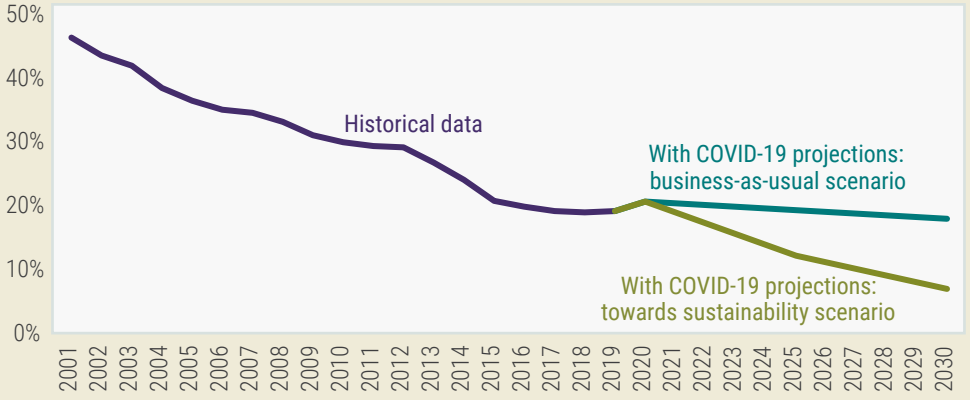
Source: UN DESA calculations.

Similarly, in terms of malnutrition (SDG target 2.1), scenario analysis shows how the share of undernourished people in Ethiopia could be reduced despite the impact of the COVID-19 pandemic. In the COVID-19 business-as-usual scenario, the share of people suffering from undernourishment is projected to reach 18.7 per cent in 2030. However, based on the FAO towards sustainability scenario, the number of undernourished people could be reduced to 7.7 per cent people in 2030 (figure II.2.2).

Source: UN DESA.

Figure II.2.2

Prevalence of undernourishment (SDG target 2.1) in Ethiopia under COVID-19 business-as-usual and towards sustainability scenarios, 2001–2019 and projections to 2030



Source: UN DESA calculations, based on data from FAO (2018), FAO (2020) and Conti, Cafiero and Sánchez (2020).

Box II.3

Viet Nam

Progress in achieving SDGs 1 and 2

Viet Nam has made the transition from a low- to middle-income country in recent decades. The extreme poverty rate (SDG target 1.1) fell from 52 per cent in 1992, to 14 per cent in 2008. With less than 2 per cent living on less than $1.90 a day since 2016, extreme poverty (SDG target 1.1) is all but eliminated. Poverty reduction has been broad based, with minority groups experiencing significant decline in poverty rates and the poorest regions contributing the most to this effort between 2014 and 2016 (World Bank, 2018). There has been similar progress in terms of reducing the prevalence of undernourishment (SDG target 2.1), which has declined from 19.8 per cent in 2001, to 8.2 per cent in 2015, and to 6.4 per cent in 2018.

Key policies contributing to the reduction in poverty and hunger

Policies to reduce poverty and hunger have been comprehensive and Viet Nam has incorporated the 2030 Agenda in a national SDG Action Plan with 115 specific targets aligned with domestic conditions and the country's development priorities. An inclusive economic growth model has been driven by the government's strategy to develop labour-intensive export sectors while investing heavily in human capital development.

Structural economic transformation, particularly the expansion of the manufacturing sector

Viet Nam's accelerating structural transformation has changed the economy, with broad-based benefits for the reduction of poverty and hunger. Rapid job creation and a transition to wage employment have driven gains in poverty reduction in Viet Nam. A booming export sector and rising domestic demand from the emerging middle class have contributed to creating more than 3 million jobs between 2014 and 2016. Nearly 50 per cent of these jobs were created in the manufacturing, absorbing a large part of net outflow of 2 million workers from agriculture. The growth of average wages per worker accounted for half of the total reduction in poverty observed between 2014 and 2016 (World Bank, 2018).

Investment in human capital development with an emphasis on equity

Over the last decade, Viet Nam has consistently spent more than 20 per cent of the public budget on education, prioritizing investment in primary schools and basic literacy education. Education has been viewed as strongly linked to economic growth and the government's strong commitment to education has led to significant progress in human capital development. After an initial focus on enrolment rate, the attention over time has shifted away from strong emphasis on the quantity of education to its quality. As a result, Viet Nam has achieved higher test scores than many high-income countries in recent global learning assessments (OECD, 2018). A focus on equity has also been an important factor contributing to Viet Nam's high learning outcomes, with convergence in school quality within the country a major component of its human capital development strategy (World Bank, 2020).

Impact of COVID-19 and the effectiveness of policy measures adopted

Early action mitigated the impact of COVID-19 in Viet Nam, which has maintained relatively low numbers of both cases and deaths. However, there has been a significant economic impact, especially in the tourism, transportation, retail, trade and manufacturing sectors. In the garment industry, the share of workers below the national poverty line was estimated to have doubled from 14 per cent in the beginning of 2020 to 28 per cent by the end of 2020. In an effort to reduce the impact of the pandemic, the Government issued a $2.6 billion social protection package for cash support to the most vulnerable people and workers in April 2020, which made some headway in mitigating the economic impact on the most vulnerable peo-

continued >>

Box II.3
continued

ple in Viet Nam. However, the Government's social protection support policy faced several challenges in its design and implementation. The support package was based on lists of the poor and near-poor approved prior to the pandemic. As a result, many poor households who would have qualified did not receive adequate support (United Nations, 2020c).

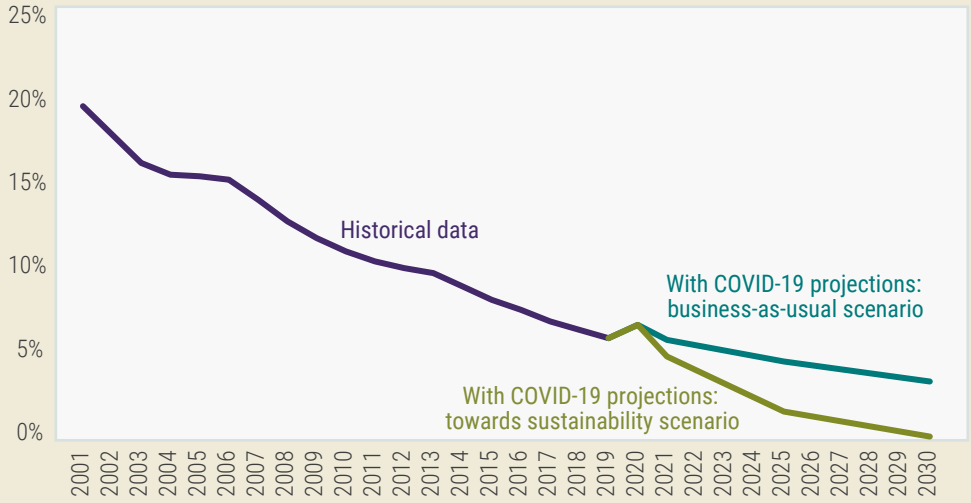
The likely 2030 scenario for SDGs 1 and 2

COVID-19 resulted in a temporary surge in income poverty, but Viet Nam is still on track to eradicate extreme poverty (SDG target 1.1) by 2030 as well as most other targets under SDG 1. In terms of SDG 2, more effort is still needed to achieve all targets by 2030. Broad-based economic growth and progress in reducing poverty have not been enough to address the problem of undernourishment (SDG target 2.1). In the COVID-19 business-as-usual scenario, 3.3 percent would be undernourished in 2030, while in the towards sustainability scenario, undernourishment would be eliminated by 2030 (figure II.3.1).

Source: UN DESA.

Figure II.3.1

Prevalence of undernourishment (SDG target 2.1) in Viet Nam under COVID-19 business-as-usual and towards sustainability scenarios, 2001–2019 and projections to 2030



Source: UN DESA calculations, based on data from FAO (2018), FAO (2020) and Conti, Cafiero and Sánchez (2020).

Box II.4

India

Progress in achieving SDGs 1 and 2

India has seen a dramatic decline in the number of people in extreme poverty (SDG target 1.1) in the past three decades. In 1993, 46 per cent of the population lived in extreme poverty, but this share fell to 30 per cent in 2009 and to 21 per cent by 2011, and is now estimated at 6 per cent, or 86 million people. India has also experienced significant reduction in malnutrition (SDG target 2.1) in recent decades, or from nearly 250 million people in 2004–2006—or 21.7 per cent of the country's population—to an estimated 189 million in 2019.

Key policies contributing to poverty and hunger reduction

Three complementary policies have been particularly influential in contributing to India's success in reducing poverty and hunger since economic reforms began in the early 1990s:

Structural economic transformation, particularly the rapid expansion of the services sector

India has seen an extraordinary growth in the services sector since economic reforms began in the early 1990s, which now accounts for more than 60 per cent of gross domestic product (GDP), compared to 15 per cent in 1950, and nearly one third of total employment in 2020. Over 60 per cent of poverty reduction in India since the early 1990s is attributed to growth in services, and about one quarter to manufacturing and industry (Datt and others, 2019).

Social security and welfare spending

An important driver of reduction in poverty and hunger in India in the past two decades has also been the expansion of social welfare and poverty reduction programmes. The combined social sector expenditures of States and the central Government increased between 2014–2015 and 2019–2020 from 6.2 to 7.7 per cent of GDP.

Investment in human development

Another important driver of poverty reduction in India has been the growth in human development of the population. India´s Human Development Index, as measured by the United Nations Development Programme, grew by more than 50 per cent between 1990 and 2019.

Impact of COVID-19 and the effectiveness of policy measures adopted

The number of poor people in India is estimated to have increased by 75 million because of the economic recession caused by the COVID-19 pandemic. A study on the impact of the pandemic in the first half of 2020 in 12 States in India, found that 77 per cent of households were consuming less food than before (Lahoti and others, 2020). The main response to the food insecurity caused by the pandemic has been through the Public Distribution System, a programme that covers about 800 million people, which was quickly scaled up to distribute almost double the quantity of food grains from April to November of 2020. However, COVID-19 has also exposed several weaknesses of the system. For example, for people staying away from their area of residence, the lockdown created a hurdle in claiming their entitled food grains, as benefits are tied to place of origin (Roy and Pradhan, 2020).

The likely 2030 scenario for SDGs 1 and 2

Although India was considered on track to eradicate extreme poverty (SDG target 1.1) by 2030 prior to COVID-19, the negative impact of the pandemic is likely to have made the achievement of that goal more challenging. The business-as-usual scenario projects that the number of people living in extreme poverty in India could be 6.8 per cent of the population in 2030 (figure II.4.1).

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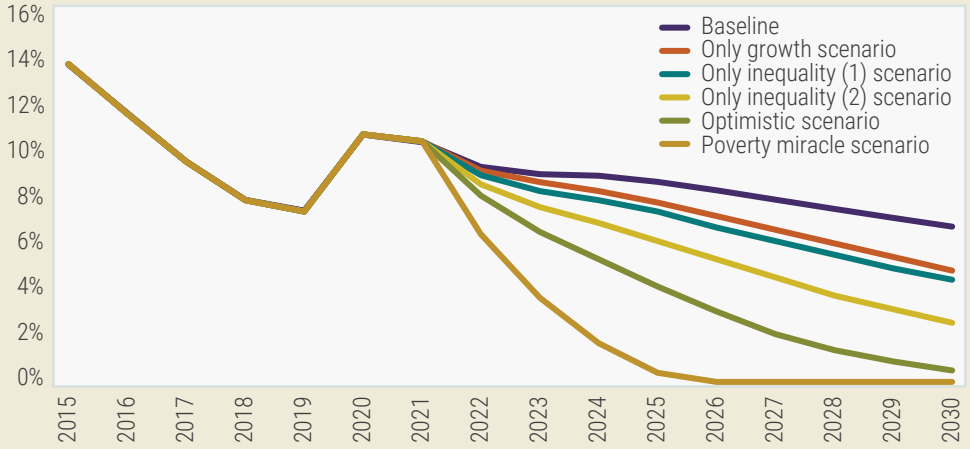
Box II.4
continued

In the *only growth* scenario in figure II.4.1, the extreme poverty headcount would drop to 4.9 per cent, while in the only inequality scenario 2, the extreme poverty headcount would be reduced below 3.0 per cent. In both the *optimistic* and *poverty miracle* scenarios, extreme poverty would be all but eliminated in India by 2030.

Figure II.4.1

Extreme poverty headcount ratio (SDG target 1.1) in India, by scenario, 2015–2020 and projections to 2030



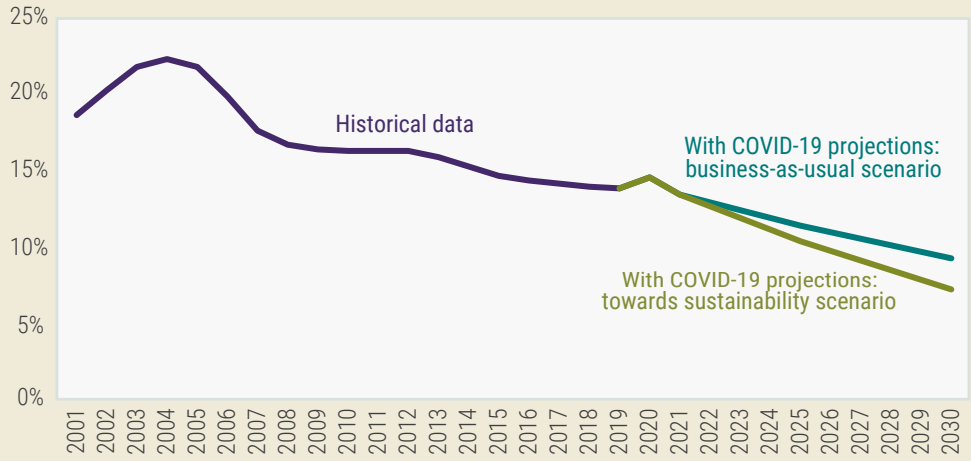
Source: UN DESA calculations.

The number of undernourished people in India (SDG target 2.1) is also likely to have increased because of the COVID-19 pandemic (figure II.4.2). As a result, the share of undernourished people in India may have increased to 14.6 per cent in 2020. Figure II.4.2 examines two scenarios for the likely prevalence of undernourished people by 2030. In a COVID-19 *towards sustainability* scenario, it is possible to reduce the share to 7.4 per cent in 2030, compared with 9.4 per cent in the business-as-usual scenario.

Source: UN DESA.

Figure II.4.2

Prevalence of undernourishment (SDG target 2.1) in India under COVID-19 business-as-usual and towards sustainability scenarios, 2001–2019 and projections to 2030



Source: UN DESA calculations, based on data from FAO (2018), FAO (2020) and Conti, Cafiero and Sánchez (2020).

Box II.5

El Salvador

Progress in achieving SDGs 1 and 2

El Salvador was close to eradicating extreme poverty (SDG target 1.1) in 2016 at the outset of the Sustainable Development Goals (SDG) period. The rate was then 2.3 per cent, but is estimated in 2021 at 1.8 per cent of the population. The proportion of the population living below the nationally defined poverty line of $5.5 (SDG target 1.2) per day in 2019, however, was much larger, or 22.3 per cent. The country has made significant progress towards ending hunger as well. In 2019, 8.2 per cent of the population were undernourished (SDG target 2.1), compared to 10.1 per cent in 2016, at the outset of the SDG period. Furthermore, the rate of stunting in children (SDG target 2.2) has fallen substantially, from 20.8 per cent in 2012 to 13.6 per cent in 2016.

Key policies contributing to poverty and hunger reduction

Social protection and welfare spending

The growth in social protection programmes and welfare spending has been an important driver in reducing poverty and hunger in El Salvador. The country has invested in socioeconomic infrastructure, such as roads, water and sanitation facilities in rural areas, while urban centres have benefited from rising labour income, particularly in the services sector. Between 2007 and 2012, social spending as a percentage of GDP grew faster than gross domestic product (GDP) itself, increasing from 10.0 to 12.4 per cent of GDP. In 2009, El Salvador created a social protection floor, which has been further strengthened in the ensuing years. In addition, pro-poor reforms to the health sector and increasing pension payments have contributed to lifting people out of poverty (Economic Commission for Latin America and the Caribbean, 2015).

Leveraging remittances for development

El Salvadoran migrants, particularly in the United States of America, and the remittances they send back home, have contributed significantly to alleviating poverty. In 2016, remittances to El Salvador were equivalent to 17.1 per cent of its GDP, which by 2020 had reached 23 per cent. This rapid growth in remittances has boosted household income and been a significant driver of poverty reduction, particularly in rural areas. In addition, policies have been established to funnel diaspora remittances towards local development projects, and the Government has been active in liaising with the diaspora, building a relationship for long-term productive investment.

Impact of COVID-19 and the effectiveness of policy measures adopted

The COVID-19 pandemic is estimated to have pushed up to 0.5 million additional people into poverty in El Salvador in 2020. This was mostly the result of substantial employment losses (with the unemployment rate reaching at least 16.0 per cent, compared to 11.3 per cent in October 2019) and a fall in remittances. The government took substantial steps to limit the pandemic's impact on households and businesses, including cash transfers to approximately 60 per cent of households; food distribution to low-income households; payment deferrals for basic utilities, mortgages, personal loans and some personal and business taxes; and relaxed lending conditions. To mitigate the impact of reduced inflow of remittances, the Government, in cooperation with four money transfer services, agreed to waive remittance fees for several months in 2020.

continued >>

Box II.5
continued

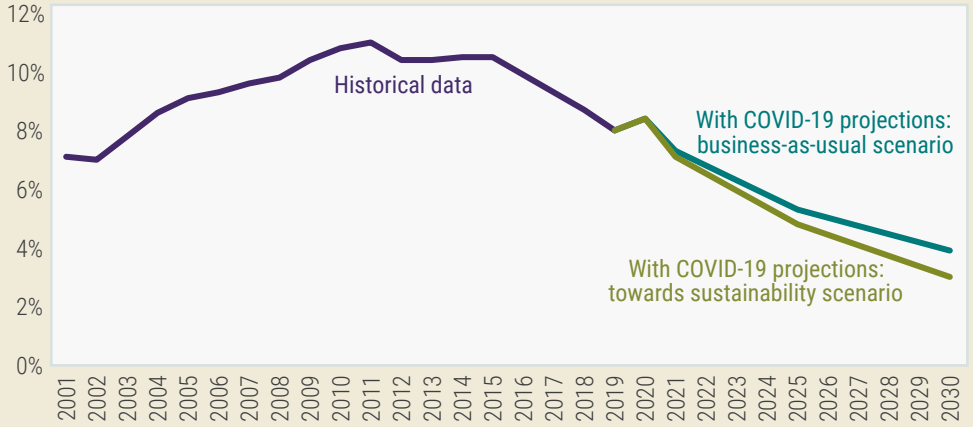
The likely 2030 scenario for SDGs 1 and 2

Despite the impacts of the pandemic, El Salvador is still on track to achieve SDG 1 by 2030; the pandemic caused a slight increase in the rate of extreme poverty (to 2.1 per cent in 2020), but it is expected to fall back down to 0.6 per cent by 2030. However, the country is slightly behind on SDG 2. The pandemic similarly caused a slight increase in the rate of undernourishment (from 8.2 per cent in 2019 to 8.6 per cent in 2020). In the *business-as-usual* scenario this share is projected to decline to 4.1 per cent by 2030, but with additional policy effort it can be reduced to 3.2 per cent in the *towards sustainability* scenario (figure II.5.1).

Source: UN DESA.

Figure II.5.1

Prevalence of undernourishment (SDG target 2.1) in El Salvador under COVID-19 business-as-usual and towards sustainability scenarios, 2001–2019 and projections to 2030



Source: UN DESA calculations, based on data from FAO (2018), FAO (2020) and Conti, Cafiero and Sánchez (2020).

Box II.6

Kyrgyzstan

Progress in achieving SDGs 1 and SDG 2

Between 2013 and 2018, the share of the population of Kyrgyzstan living below the national poverty line decreased from 37.0 to 22.4 per cent, and the extreme poverty level (SDG target 1.1) fell from 2.8 to 0.6 per cent and to 0.1 per cent in 2019, prior to the COVID-19 pandemic. It is estimated that prior to the COVID-19 pandemic, about 6.4 per cent of the population was suffering from undernourishment (SDG target 2.1). The prevalence of stunting, wasting and malnutrition among children under the age of 5 (SDG target 2.2) was also 11.8, 2.0 and 6.9 per cent, respectively.

Key policies contributing to the reduction in poverty and hunger

Three types of policies appear to have driven progress in reducing poverty and hunger in Kyrgyzstan in this period: economic growth with equity, social security and welfare, and remittances.

Economic growth with equity

Between 2015 and 2019, the Kyrgyzstani economy grew cumulatively by 22.7 per cent. Economic growth has been the most significant driver of reduction in extreme poverty and more influential than redistribution policies (World Bank Group, 2015). The post-Soviet land reform programme undertaken by the country over the course of the 1990s and the early 2000s has also made farm ownership more egalitarian. The redistribution of land assets meant that economic growth in Kyrgyzstan resulted in more equitable sharing of income and expenditures, compared to other countries in the subregion.

Social security and welfare spending

Social protection has played a key role in Kyrgyzstan's transition to a market economy. The Government has not only maintained the sizeable social insurance system that existed prior to independence, but also introduced several new social assistance and labour market policies. Social protection is the largest component of public spending, accounting for more than the expenditures on health and education combined. Growth in the real value of pensions has been particularly important in this regard. As a result, old-age poverty is low in Kyrgyzstan.

High volume of remittances

The increase in remittances has been the third most influential factor in reducing poverty in Kyrgyzstan. Starting in the mid-2000s, Kyrgyzstan has experienced an explosion of migration, principally to the Russian Federation. The massive outflow of labour and corresponding financial inflows has profoundly reshaped the domestic economy, with tangible short-term gains but also monetary challenges. Remittances accounted for about 30 per cent of gross domestic product prior to the COVID-19 pandemic (World Bank, 2017). The country has taken steps in order to increase the formality of transfers, which has been important to leverage remittances for development and poverty reduction.

Impact of COVID-19 and the effectiveness of policy measures adopted

The economy of Kyrgyzstan registered the steepest economic decline in 2020 of the Central Asian economies because of the lockdowns leading to business closures, sharp decline in private consumption caused by the fall in remittances, and low investment. It is estimated that the COVID-19 pandemic may have led to about 13 per cent of the working population being unemployed, bringing the total unemployment rate in Kyrgyzstan to nearly 20 per cent (World Food Programme, 2021).

continued >>

Box II.6
continued

The government strategy to respond to the impact of the COVID-19 pandemic included measures aimed at stabilizing the prices of important food items and products for the population, particularly the most vulnerable members of society. The plan also included other measures to address economic and social stability through the provision of social support, particularly to vulnerable groups, to address food security, to support business entities and to stabilize the state budget. About two thirds of the migrants from Kyrgyzstan have reported losing their jobs, which resulted in reduction in remittances. In response, the country implemented some measures to assist the return of stranded migrants, and adopted specific labour market actions to involve and retrain the returning migrants in seasonal agricultural and other temporary works.

The likely 2030 scenario for SDGs 1 and 2

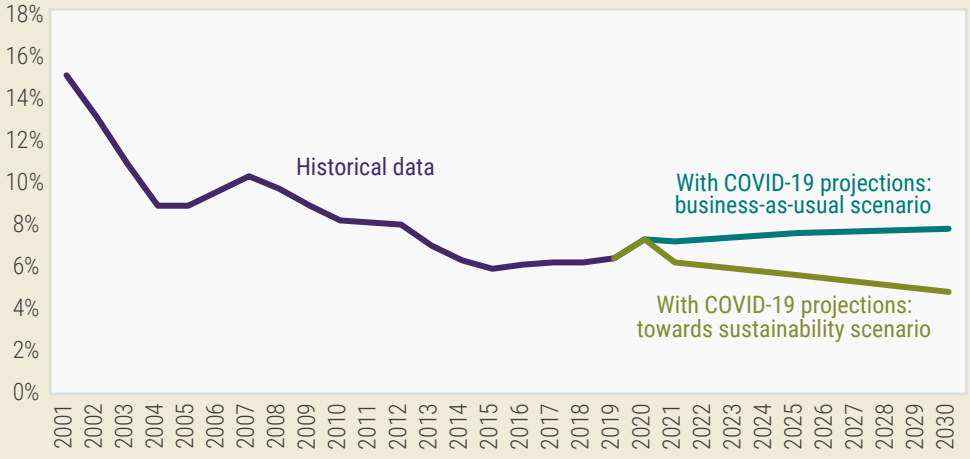
While extreme poverty (SDG target 1.1) prior to the pandemic was below 1 per cent in 2018, it had begun to slightly increase in 2019 because of rising food prices, volatility in remittance flows, and declining labour income. In 2020, because of the impact of the pandemic, it increased further, and is estimated to have reached 3.9 per cent in 2020. However, extreme poverty is projected to decline, falling back to 1.3 per cent by 2030, as the effects of the pandemic recede, with the economy returning to growth and remittances rebounding.

Similarly, the prevalence of undernourishment (SDG target 2.1) was already on the rise prior to the pandemic. In 2020, the prevalence is projected to have reached 7.5 per cent. By 2030, the prevalence of undernourishment is projected to remain about 8 per cent in the business-as-usual scenario, well short of the goal of eliminating undernourishment (SDG target 2.1). In the towards sustainability scenario, the prevalence can be reduced to 5 per cent by 2030 (figure II.6.1).

Source: UN DESA.

Figure II.6.1

Prevalence of undernourishment (SDG target 2.1) in Kyrgyzstan under COVID-19 business-as-usual and towards sustainability scenarios, 2001–2019 and projections to 2030



Source: UN DESA calculations, based on data from FAO (2018), FAO (2020) and Conti, Cafiero and Sánchez (2020).

Policy implications

A key observation noted in this chapter is that global progress towards SDG 1 and SDG 2 had already slowed prior to the COVID-19 pandemic; the world was not on track to achieve both Goals by 2030. The prospect of achieving the two SDGs is further dimmed by the pandemic, which has created new short- and long-term risks that could even wipe out the progress made prior to COVID-19. The success in achieving SDG 1 and SDG 2 by 2030, especially in the aftermath of the COVID-19 pandemic, will require extraordinary efforts by countries, both individually and collectively. Building on the lessons learned from a scenario analysis as well as the five country case studies discussed in this chapter, a three-pronged strategy is proposed to eradicate poverty and end hunger by 2030. While the five country case studies have shown that certain policies are equally important for the eradication of both poverty and hunger because of the strong interlinkages that exist between the two Goals, policies more specifically directed towards SDG 2 are also needed. The policy suggestions offered below are therefore classified into two categories.

Policies for both SDG 1 and SDG 2

➤ Promote both growth and equity in national economic policies

Countries must adopt different strategies to promote structural economic transformation, depending on their national context and resources endowments. The most successful structural transformation strategies have generally been those that have furthered more equal distribution of assets and income, sometimes referred to as "economic growth with equity," where the eradication of poverty and hunger is anchored in both strong economic growth and income redistribution. The analysis presented in this chapter suggests that the global success in achieving SDGs 1 and 2 by 2030 will particularly depend on a commitment to reducing income inequality within and across countries.

In countries where agriculture accounts for a large share of employment and livelihoods, especially for the poor, the farming sector holds the key for successful poverty reduction in the short- and medium-term. However, higher agricultural productivity does not automatically translate into the expansion of the local non-farm sector, and it is thus important to put in place policies that encourage smallholder farmers to increase their non-farm income. Agricultural extension systems can play a key role in this regard.

➤ Rethink social protection and health-care systems to promote greater resilience to shocks as well as the requirements of the new digital economy

The COVID-19 experience demonstrates the value of having social protection programmes in place prior to the onset of shocks in order to protect households from food insecurity and poverty. Even low-income countries cannot leave the establishment of robust social protection and health-care systems as goals to be achieved in the distant future. The focus should be on accelerating efforts to achieve universal, nationally appropriate social protection floors; making social protection systems shock-proof; and adapting social protection to the new digital economy. The application of digital technologies also offers new opportunities for Governments to extend social protection coverage as well as more efficiently disburse financial support (Kind and Lee, 2021). The adoption of a universal social protection system based on citizenship rather than locality of residence registration could also be important in the COVID-19 recovery effort as well as in response to future emergencies.

The strengthening of health-care systems in developing countries could particularly focus on the following: increasing public spending on the health sector; emphasizing primary and preventive health care; ensuring hygienic housing and living conditions for all; shock-proofing health-care systems against future epidemics and pandemics; and making use of technologies to ensure affordable health care for all, including those living in remote and inaccessible areas.

➤ Invest in human development, and seize the opportunity to reimagine education, including by making greater use of digital tools

Providing equal access of all children to quality education is critical to reversing the cycle of poverty. After an initial focus on raising the school enrolment rate, countries must shift the attention away from strong emphasis on the quantity of education to its quality. Key strategies include attracting and supporting qualified teachers through adequate incentives and continuous professional development. As economies develop, countries also need to invest more in higher education and lifelong learning in order to better translate foundational knowledge and skills into those relevant to the labour market. Furthermore, making quality education available to all is critically important to national efforts to eradicate poverty and hunger, which implies that the convergence in school quality within countries should be a major component of national human capital development strategies.

The massive efforts made in a short time during the pandemic to respond to the shocks to education systems remind us that change is possible. Countries should seize this opportunity to reimagine education and find new ways to address the learning crisis, and consider solutions previously considered too difficult to implement.

Specific policies pertaining to SDG 2

Despite the strong interlinkages between SDGs 1 and 2, the policies discussed above need to be augmented with interventions targeted specifically at SDG 2. It is a sobering fact that countries who are fast reducers of poverty are not necessarily fast reducers in child undernutrition. The analysis of the FAO (2018) showed that the following policy approaches, in particular, will be needed to achieve the optimistic scenario regarding SDG 2:

➤ Raise agricultural productivity

National policies should aim to promote the convergence of agriculture capital intensity in low- and middle-income countries towards that of high-income countries. This would require significant increase in research, development and innovation. However, efforts must be made to ensure that investment priorities to achieve agricultural productivity growth are economically, socially and environmentally sustainable. Greater application of innovative technologies and systems, along with economic incentives, is particularly needed to increase agricultural productivity without compromising the natural resource base. Sustainable agricultural practices—such as circular, organic and conservation agriculture, and agroforestry—may boost the productivity of the farming sector in the long run, but this requires research and investment to adapt such technologies to the local context as well as making them more accessible for smallholder farmers.

➤ Reduce food waste, improve diets, and ensure more equitable distribution of food

Policies could be adopted to reduce food loss and waste and to promote a shift in diets from animal-based foods and vegetable oils and fats. This would require raising the awareness of consumers to the imperative of sustainable food production and consumption

in response to the growing threat of climate change and the ongoing destruction of the natural environment. Available food must also be more equitably distributed within and across countries, using both price mechanisms and direct distribution to those who lack the necessary purchasing power. Nutrition-sensitive social protection could be leveraged to achieve better nutrition outcomes of vulnerable groups and to accelerate progress on SDG 2. In particular, child undernutrition is an outcome of different factors and cannot be addressed by income or growth acceleration alone. Child undernutrition is closely related to gender inequality. To improve child nutrition outcomes, specific policies must address the state of delivery of maternal and child health-care services, access to nutritional knowledge, micronutrient production, household dietary diversity, and women's empowerment.

➤ Ensure sustainability of agricultural production

In response to changing consumer preferences and the growing risk of climate change, policies need to encourage a shift towards less resource-intensive technologies, including the use of environmentally sound technologies as well as precision technologies and applied robotics in the agricultural sector. Low- and middle-income countries could increase investment to enhance water-use efficiency; implement land conservation practices; and develop cropping methods that contribute to improved quality of soils, greater land-use intensity, and progressive lowering of the use of chemicals. Countries could give high priority to promoting circular agriculture as a strategy to foster economic development and social inclusion in rural areas (UN DESA, 2021c).

Chapter III

Health and well-being

Introduction

The COVID-19 pandemic has caused deep disruptions to the health systems, economies and societies of many countries, revealing the depth and scope of health-care and development gaps within and between countries. Insufficient preventive and preparedness measures, delayed reactions, and uncoordinated responses worsened the spread and impact of the disease in some countries. In most countries, the pandemic has had a greater impact on the vulnerable and poor segments of the population, many of whom have insecure jobs, limited or no health and social protection, and often lack basic services, such as sanitation, electricity and adequate water supply. The pandemic has also shown that the good health and well-being of a country depends not only on the level of wealth and income, but more crucially on their distribution and management. Finally, the zoonotic origin of the COVID-19 virus brought into focus the need for protecting nature, so that the likelihood of such major threats to global public health can be reduced.

This chapter analyses strategies and policies put in place by different countries, both before and during the COVID-19 pandemic, that helped them stave off its incidence and spread. It assesses the global progress in providing effective universal health coverage (UHC) (Sustainable Development Goal (SDG) 3, target 3.8), which was found to be a key policy tool in fighting against the pandemic.

The chapter asseses progress across countries in various health indicators, including life expectancy; maternal, neonatal and child mortality; and communicable diseases such as HIV/AIDS, tuberculosis and malaria. It assesses how the insufficient and uneven progress in achieving SDG 3, target 3.8 in the pre-COVID-19 period, combined with the global rise of non-communicable diseases (NCDs), amplified the direct and indirect impacts of the pandemic. The reversal of progress in infectious diseases, exacerbation of NCDs, and deepening of health inequalities have highlighted the gaps in countries' provision of quality and affordable UHC.

The chapter takes note of the two-way linkages that exist between SDG 3 and other SDGs examined in this report, and uses individual country experiences to illustrate the reinforcing effects of these links at the policy level.

Based on the in-depth examination of the COVID-19 experiences of individual countries, the chapter identifies the main lessons for building resilient health systems in the future. In particular, it calls for strengthening preventive and integrated approaches, while scaling up investment for quality and affordable UHC. It also emphasizes the need for strong coordination of stakeholders at the national level and enhanced global cooperation.

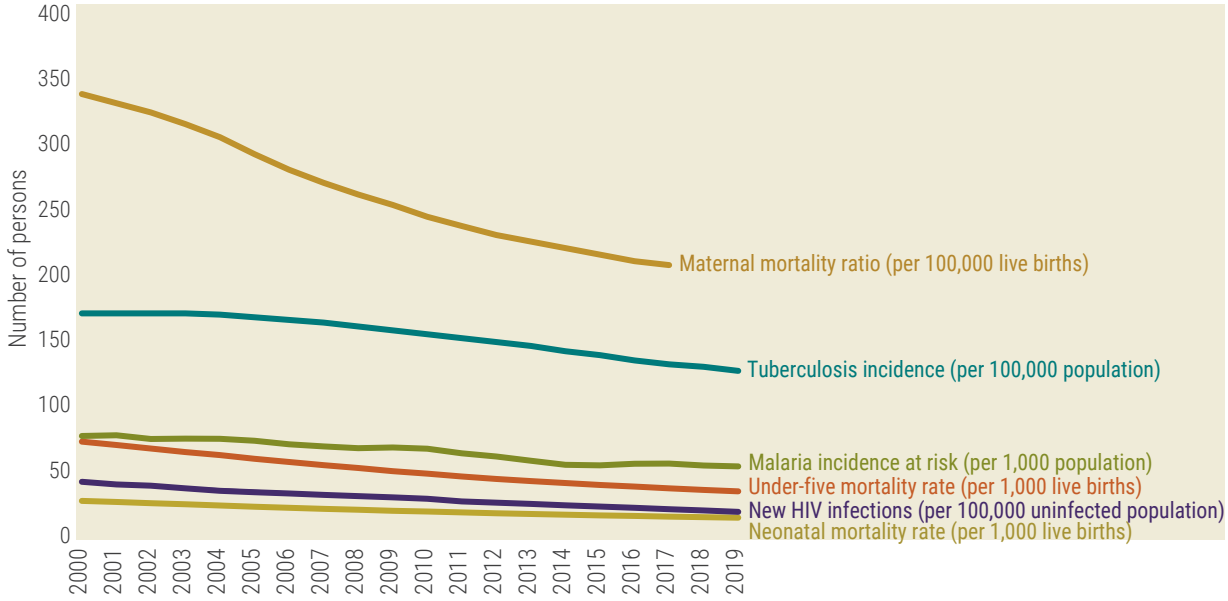
Pre-COVID-19 progress towards SDG 3

Highlights of the success regarding SDG 3 in pre-COVID-19 years

Global and regional health steadily improved during the two decades preceding COVID-19, in particular in reducing the impact of long-standing and widespread health scourges. The progress has been fastest in the past decade, especially for lower-income countries. *The Sustainable Development Goals Report 2021* (United Nations, 2021b) informs that the global average life expectancy at birth rose from 67.2 years in 2000 to 73.5 years in 2019. In 202 of 204 countries and territories reviewed, healthy life expectancy also

increased. In 21 countries, healthy life expectancy at birth increased by more than 10 years between 1990 and 2019, with gains in some countries of up to 19 years. Maternal, child and neonatal mortality rates decreased (*The Lancet, 2020a)*. For example, the estimated number of deaths in children under 5 years of age decreased from 9.6 million in 2000 to 5.0 million in 2019. Rates of incidence of such diseases as tuberculosis, malaria and HIV/AIDS also fell (figure III.1).

Figure III.1
Pre-COVID-19 global trends of major communicable diseases and maternal, neonatal and infant mortality, 2000–2019



Source: UN DESA, based on data from UNSD Global SDG Indicators Database.

Uneven and insufficient progress towards SDG 3

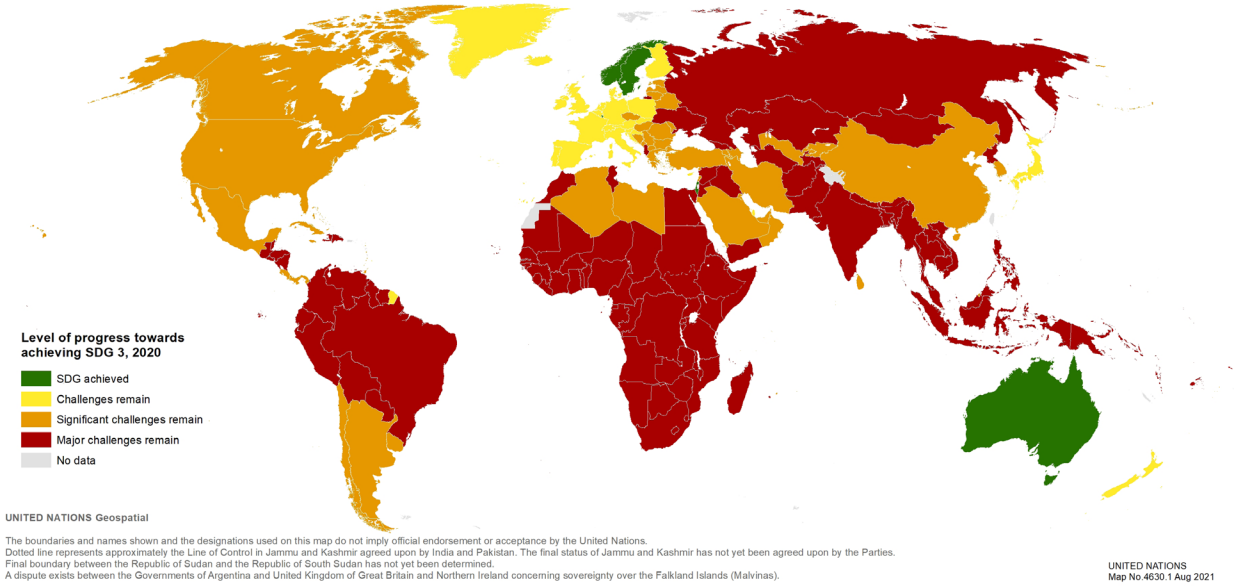
Despite the successes above, the progress regarding many SDG 3 targets has been uneven across regions and countries and across different types of diseases. According to the SDG 3 Index, prepared by the Sustainable Development Solutions Network and the Bertelsmann Stiftung, few countries were on track to achieve SDG 3 by 2030 (figure III.2) (Sachs and others, 2020).[1] Many developing countries in Africa, Asia and Latin America and economies in transition face "major challenges," with the rest of both developed and developing countries facing "significant challenges" or "challenges" to overcome in order to achieve SDG 3 (van Zanten and van Tulder, 2020).

The progress towards SDG 3 targets has been uneven across different types of diseases, too.[2] While immunization is a cost-effective health intervention, and the vaccination rate among infants rose from 72 per cent to 85 per cent during 2000–2019, an estimated 20 million children did not receive the essential vaccines during the first year of life. The

1 A detailed methodology estimating a country-specific SDG Index can be found in Sachs and others (2020), pp.67–73.

2 All communicable diseases are infectious, but not all infectious diseases are communicable (e.g., tetanus, food poisoning).

Figure III.2
Progress towards SDG 3 across countries, 2020



Source: Recreated from van Zanten and van Tulder (2020).

global coverage levels of pneumococcal conjugate vaccine, with the potential to reduce pneumonia, have not yet reached 50 per cent. Although the coverage of the two-dose measles vaccine reached 71 per cent in 2019, it was insufficient to prevent measles outbreaks. Similarly, although the burden of disease of tuberculosis has been falling, large gaps in detection and treatment persist and the current pace of progress is not enough to meet SDG indicator 3.3.2 (elimination of tuberculosis by 2030) (UN DESA, 2021b).

The geographical unevenness of progress on SDG 3 is considerable. This can be observed by comparing the share of diseases in disability-adjusted life years (DALYs).[3] For example, the highest burdens of diseases in DALY (more than 20 per cent) are experienced in the countries of sub-Saharan Africa. Similar high burdens are also seen in Afghanistan, several northern States in India, Pakistan, Papua New Guinea and Yemen. Disease burden rates between 10 and 20 per cent are seen in Brazil, Myanmar, Tajikistan, Uzbekistan, Central American countries, several Indonesian provinces and some regions of the Philippines. The lowest disease burden rates, between 0 and 2 per cent, are mainly observed in North American and European countries as well as in Australia and East Asia (*The Lancet*, 2020a).

Similarly, the global decline in neonatal disorders for children younger than 10 years of age was slower than for major infectious diseases, thus increasing the share of neonatal disorders in total DALYs in 2019. The main reasons for this increase have been limited access to health services; low use of rapid diagnostic tests; failure of antenatal clinics to screen or treat when a woman is tested positive for COVID-19; and global shortage of necessary medications. Sustaining the global pace of progress may become even more challenging because a growing proportion of global births is occurring in sub-Saharan Africa, a region with the highest rates of disease burden in this age group (The Lancet,

3 The burden of disease represents the impact of diseases on populations, measured in DALYs (disability-adjusted life years), which is the equivalent of losing one year of good health because of *premature death, disease or disability*.

2020b). For those between 25 and 49 years of age, HIV/AIDS was the second leading cause of DALYs in 2019, despite a drop since 2005 when antiretroviral treatment (ART) became more widely available.

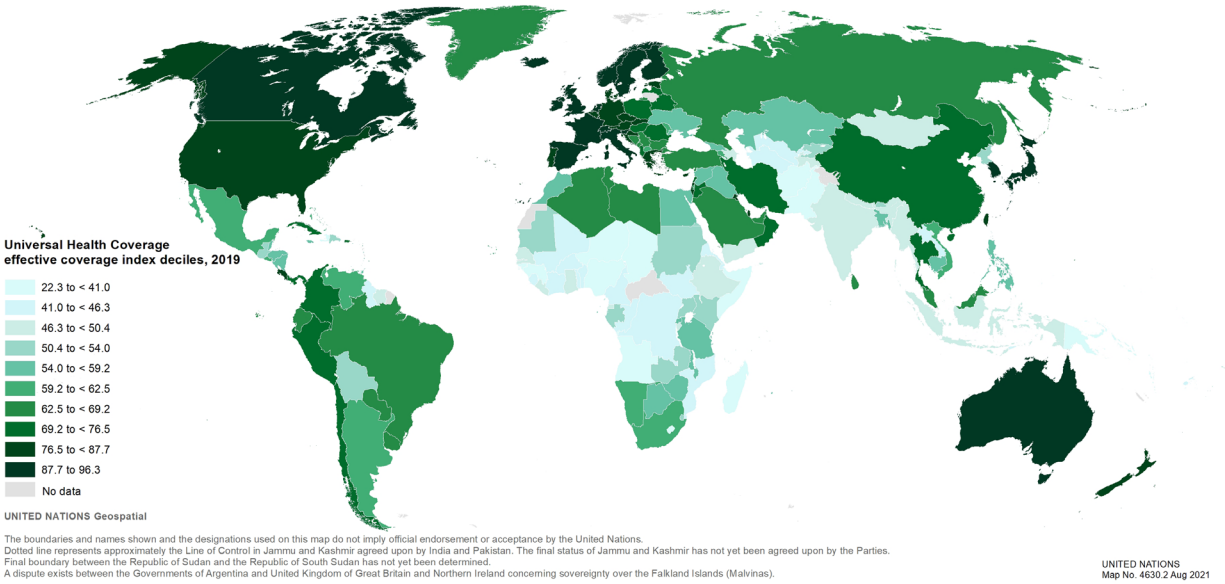
Pre-COVID-19 progress in health-care coverage

Progress in health depends on the health-care system. The unsatisfactory level of success regarding many SDG 3 indicators, and the regional variation in these levels, is directly related to a health-care system's weaknesses, including its coverage and its marked variation across regions and countries.

SDG target 3.8 calls for achieving "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". There has been progress in increasing the number of people brought under health-care coverage of various types. A recent survey shows that improvements in essential health services increased from a global average of 45 (of 100) in 2000 to 66 in 2017 (GBD 2019 Universal Health Coverage Collaborators, 2020). Low-income countries experienced the greatest progress, driven mainly by interventions aimed at infectious diseases. Nonetheless, the pace of progress in UHC did slow down since 2010. As of 2019, 11 per cent of the world population did not have any type of health insurance (World Health Organization, 2019). The countries with lowest incomes and those affected by conflict lagged behind the most.[4] The large divide in UHC coverage is illustrated by a few developed countries achieving 95 or higher (on the 0–100 scale), while low-income, fragile States scored closer to 25 (figure III.3). Clearly, the COVID-19 pandemic has compounded the challenges faced by countries with weaker health systems.

Figure III.3

UHC effective coverage index, by decile, 2019[5]



Source: Recreated from GBD 2019 Universal Health Coverage Collaborators (2020).

4 Peiris and others (2021).

5 Deciles are based on the distribution of universal health coverage (UHC) effective coverage index values in 2019.

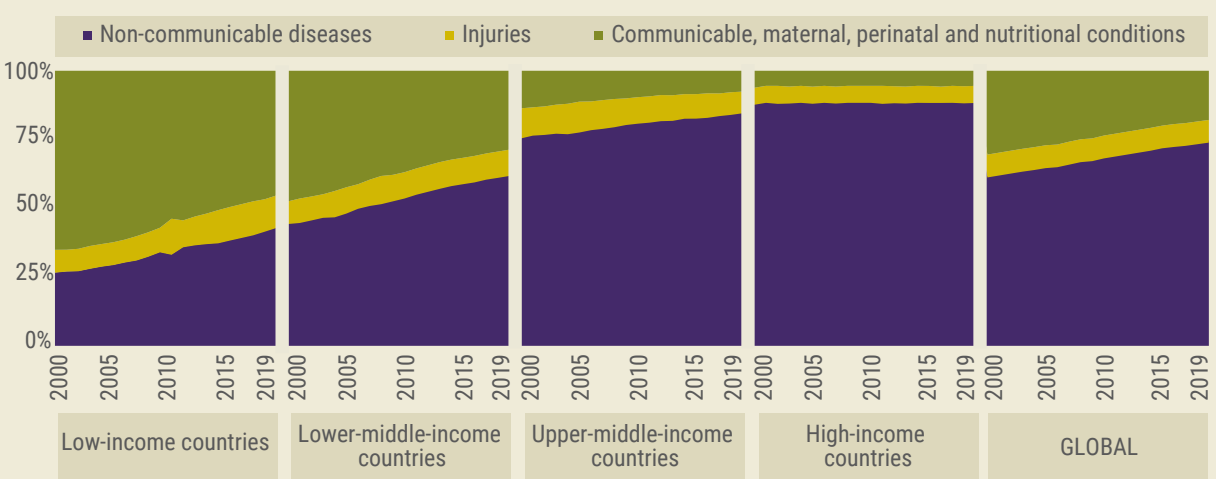
At the level of individual countries, Australia, Canada, Iceland, Japan, Norway, Republic of Korea, Singapore, and Sweden comprised the decile with the highest index of the UHC effective coverage performance, followed by a geographically diverse group in the ninth decile (e.g., Costa Rica, Israel, New Zealand, Portugal and the United States of America). Most sub-Saharan African countries had a range of UHC effective coverage indexes below 54, with only 2 countries ranking in the sixth decile (Rwanda and South Africa), and 11 countries in the lowest decile, including Angola, Lesotho, Madagascar and Somalia. Outside of sub-Saharan Africa, 10 countries, including Afghanistan, Haiti, Pakistan and Papua New Guinea, were also in the lowest decile. In East, Southeast, and South Asia, countries performances were between the eighth (China and Thailand) and second deciles (Lao People's Democratic Republic), with India and Indonesia occupying the third decile. Within Latin America, various countries scored in the seventh or eighth deciles (e.g., Brazil, Chile, Colombia and Peru), while others had indexes within the fourth to fifth deciles (e.g., Bolivia, Guatemala and Nicaragua).

The looming crisis of non-communicable diseases

A particular challenge to achieving SDG 3 is posed by the four major types of NCDs, namely cardiovascular diseases, diabetes, cancer and chronic respiratory diseases, which are linked to progress on SDG indicator 3.4.1.[6] According to the World Health Organization (WHO) (2021), the broad range of NCDs[7] has caused the death of 15 million people between the ages of 30–70 in 2019, and 74 per cent of all deaths were caused by NCDs (World Health Organization, 2021). Figure III.4 shows that the share of deaths caused by NCDs increased steadily in pre-COVID-19 years in low- and and lower-middle income countries. In upper-middle-income countries, the pace of increase slowed down, while in high-income countries, this share remained relatively stable, although at a high level of more than 85 per cent.

Figure III.4

Relative importance of different causes of death in countries of different income levels, 2000–2019



Source: Recreated from World Health Organization (2021).

6 A broad range of NCDs includes cardiovascular disease, cancer, obesity, diabetes, mental health disorders, chronic respiratory diseases (e.g., air pollution, tobacco smoke) and alcohol and drug use.

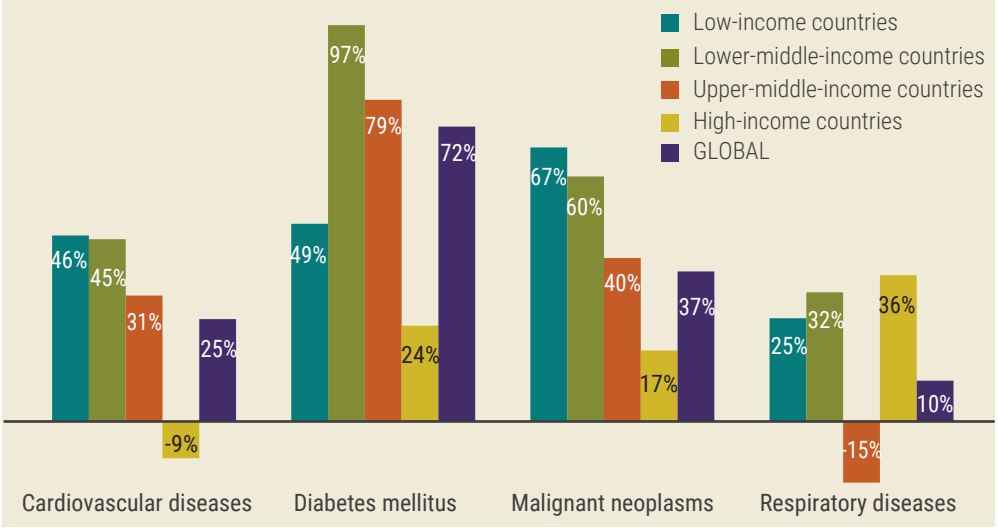
7 Besides the above-mentioned types, NCDs include the Parkinson's disease, autoimmune diseases, strokes, chronic kidney disease, osteoarthritis, osteoporosis, Alzheimer's disease, cataracts, and others.

Figure III.5 shows a higher rate of growth of fatalities in lower-income than in high-income countries due to three of the four above-mentioned types of NCDs between 2000 and 2019. The only exception was respiratory diseases.

Overall, four fifths of NCDs occur in low-income and middle-income countries (LMICs), and a third of deaths affect people younger than 60 years. Niessen and others (2018) illustrates the links between growth of NCDs and socioeconomic status, using experiences from such countries as China, Pakistan and Sri Lanka. Within the NCDs, the importance of mental disorders, affecting both young and older persons, increased during the pre-COVID-19 years. This was largely due to the behavioural changes that populations experienced during the past twenty years, and also due to the increase in mental health awareness. Overall, mental health disorders accounted for 13 per cent of the global burden of disease by 2019 (World Health Organization, 2019). While the level of spending on mental health care has risen in member countries of the Organisation for Economic Cooperation and Development over the past decade, the share of total health spending directed to mental health has not increased, and has even declined in some countries, and many suffering from mental diseases have no access to treatment and care.[8]

Figure III.5

Changes in deaths for major noncommunicable diseases, by type of disease and income group, 2000–2019



Source: Adapted from World Health Organization (2021).

Impact of COVID-19 on health and well-being

It is in the above context that COVID-19 swept the globe. While it affected all the SDGs, its most direct impact was on the health conditions of people across the world. This section highlights some of the major ways in which the pandemic affected progress towards the SDG 3 targets.

8 Only eight countries regularly collect information on people's experiences and outcomes from mental health care. Some countries report having only one psychologist per 10,000 population. All countries are trying to collect a more comprehensive set of mental health performance indicators (Organisation for Economic Cooperation and Development, 2021).

Scale of fatalities from COVID-19

As of 26 August 2021, more than 214 million confirmed COVID-19 cases and 4.6 million related deaths have been reported to WHO. In 2020, the number of COVID-19 cases was concentrated in vulnerable populations residing in high-income countries, with the 20 most highly impacted countries representing nearly half of the world's COVID-19 cases (45 per cent), even though they only represent one eighth of the global population (12.4 per cent). In 2021 the pandemic has also reached devastating levels in populous countries of the South. Currently, India, a lower-middle-income country with a population of 1.366 billion people, has over 33 million COVID-19 confirmed cases and 437,000 fatalities, which represents nearly 10 per cent of the global number of deaths. The fatality rate has been even higher in Brazil, an upper-middle-income country, amounting to 577,000 deaths, equivalent to 12.5 per cent of the current global figures. In fact, COVID-19 has become one of the top causes of human death in 2020 and 2021 (with 1.8 and 2.8 million, respectively), just below cardiovascular and chronic respiratory diseases, two of the deadliest NCDs. Even those who have survived COVID-19 infection suffer the risk of health damages for the rest of their lives. Empirical evidence suggests that the pandemic reduced life expectancy in many countries (World Health Organization, 2021). While the development of vaccines and getting people vaccinated hold out the hope for bringing the pandemic under control soon, the ongoing mutations and emergence of more deadly variants of the virus continue to cloud the future.

Reversal of progress on infectious diseases and aggravation of the burden of NCDs

A decade of progress in maternal, reproductive and child health was stalled or reversed by COVID-19. Advances made in reducing deep-rooted diseases (e.g., measles, meningococcal A, yellow fever, malaria, tuberculosis) are vanishing because of the transfer of resources to control the spread of the pandemic. Services for a variety of diseases and health-related issues—such as neglected tropical diseases, HIV/AIDS, tuberculosis, hepatitis B and C, family planning and contraception, malnutrition, immunization and malaria—have been severely curtailed due to the changes in priorities caused by COVID-19. Despite efforts by countries to maintain essential services in the midst of the pandemic, 90 per cent of them experienced disruptions to the provision of these services (United Nations, 2021a). In fact, about half of the countries reported one or more disruptions to essential services related to NCDs by early 2021. Many low-income and lower-middle-income countries face acute financial and technical challenges to manage multiple health-related risks.

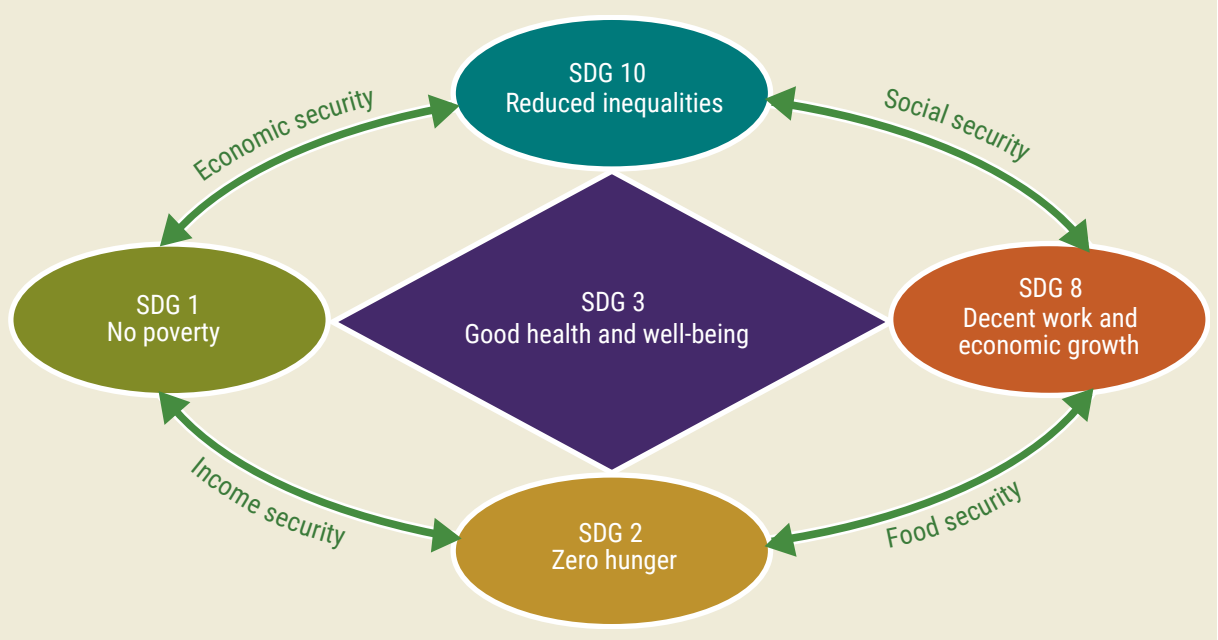
The acceleration of mental disorders

COVID-19 has exacerbated the problem of mental health. The loss of jobs and income; closing down of schools; social distancing and confinement; disconnection from relatives and friends; uncertainty of the pandemic duration; and the emergence of new and deadlier variants of the virus have all weighed upon the mental state of people, doubling the prevalence of mental anxiety and depression in some countries. An in-depth study of 312 people who survived the pandemic found that 1 out of 3 had long-term mental consequences, including memory loss, lack of mental concentration, and fatigue (Blomberg and others, 2021).

Transmission of COVID-19 impact through interlinkages of SDG 3 with other SDGs

The SDGs are interrelated—as emphasized in chapter I, which showed the interlinkages among all five SDGs studied in this report. Figure III.6 presents a scheme illustrating the interlinkages from the viewpoint of SDG 3. It shows that the interlinkages can be grouped into two sets. The first set of interlinkages is between SDG 3 and the remaining SDGs (1, 2, 8 and 10). The second set of interlinkages is among SDGs 1, 2, 8 and 10.

Figure III.6
Interlinkages of SDG 3 with SDGs 1, 2, 8 and 10



Source: UN DESA.

The first set of linkages arises from the fact that better health can help people to find employment, be productive, have more income (SDG 8) and rise above poverty (SDG 1), resulting in less inequality (SDG 10). The second set of interlinkages captures the fact that poverty reduction can allow people to spend more on nutritous food and health care, leading them to have better health, in turn enabling them to find decent jobs and be more productive, which leads to less inequality.[9]

These linkages can work in the reverse direction, too. For example, inclusive growth and employment (SDG 8), alleviation of poverty (SDG 1), and reduction of inequality (SDG 10) can increase income of low-income people, allowing them to spend more on their health needs and thus achieve better health. The link is more direct with reduction of malnutrition (SDG 2), which is a pre-condition for improved health. (See other chapters of this report for more detailed discussions of these linkages).

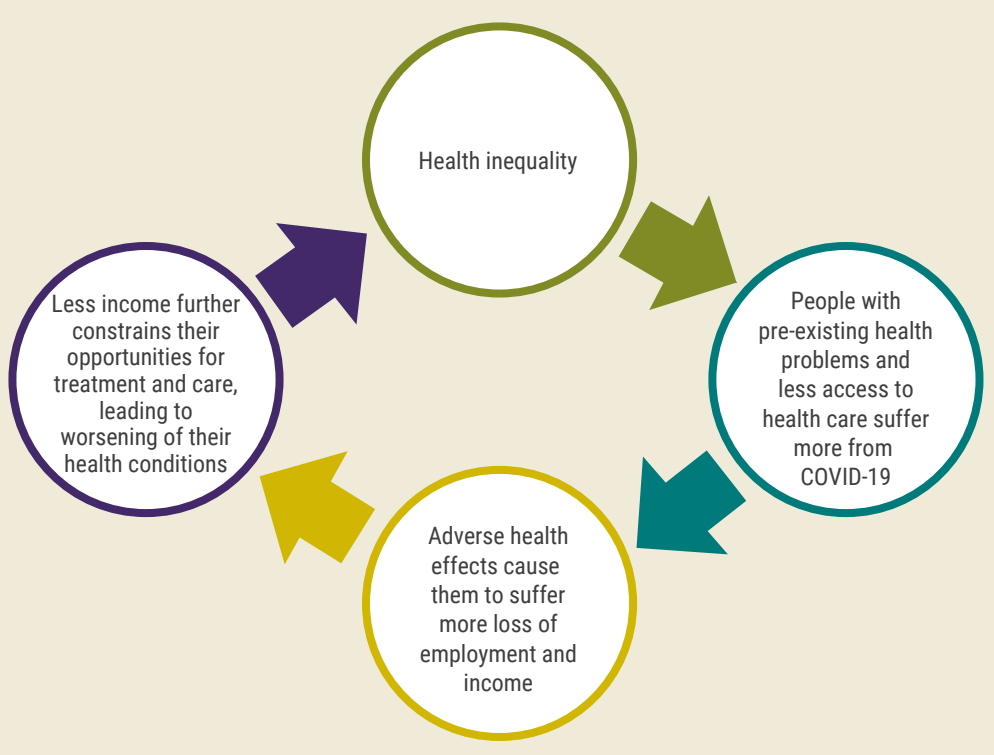
9 Atkinson (2015) argued that generating employment, which creates greater social security, is one of the best ways to reduce inequalities.

The COVID-19 experience helped to reveal these interlinkages more clearly. The adverse effects of COVID-19 on SDG 3 had cascading effects on the other four SDGs under study. They exacerbated socioeconomic insecurity, substantially increasing the number of people unemployed (SDG 8) and those living under extreme poverty (SDG 1). The latter condition aggravated food insecurity and hunger (SDG 2) that was made worse by the disruption in global food supplies and trade, which in turn triggered crop price spikes, unemployment and underemployment in both rural and urban areas alike (SDG 8). The closures of businesses have accentuated unemployment and health insecurities, particularly for low-skilled workers in many parts of the world (Filho and others, 2021). Higher health risks often proved fatal for people living under extreme poverty and populations with inadequate access to water and sanitation, thus compounding livelihood insecurities and widening health inequalities (SDG 10). Ongoing higher prevalence and mortality from COVID-19 have overburdened most countries' public health systems (SDG 3).

Deepening of health inequality

The direct and feedback relationships between SDG 3 and other SDGs can give rise to a vicious cycle, aggravating health inequality, as shown in figure III.7. The actual experience of COVID-19 provides considerable evidence of such vicious cycles and their ramifications.[10]

Figure III.7
Vicious cycle of health inequality caused by COVID-19



Source: UN DESA.

10 Chapter V focuses on SDG 10 by providing in-depth analysis of inequalities before and during the pandemic.

Given the discussion of the interlinkages above, it is not too difficult to see how such a vicious cycle may arise. Initial, pre-existing inequalities in health conditions and access to health care can cause disadvantaged people to suffer more from COVID-19. They may get more infected and get less care once infected. Consequently, they may suffer greater employment income losses, which may further restrict their ability to protect their health and obtain health care, leading to a situation of greater inequalities in health than in the beginning.

As noted in the previous section, initial inequalities in health and the conditions to be in good health were already high before COVID-19. For example, inequalities were glaring regarding access to safe drinking water and opportunities to practice social distancing, regular hand washing, quarantining in case of necessity (United Nations, 2021b). Also, disadvantaged people had to continue to work in risky circumstances, as they had neither adequate savings nor social protection. These inequalities caused disadvantaged people to get infected at higher rates. In contrast, population groups performing remote work and able to afford health care and use telemedicine have had less risk of economic insecurity and been better protected against the pandemic (Sirleaf and Clark, 2021; World Health Organization, 2021; UN DESA, 2020b). Meanwhile, because they were lacking adequate health-care coverage, the disadvantaged often could not receive the necessary care and treatment once they were infected. They suffered greater health damages as a result, which further made it difficult for them to work and earn income. The result was deterioration of the conditions to be in good health and to get health care, leading to a situation of even greater health inequality than at the beginning of the process.

The initial inequalities regarding health, health care, and the conditions for remaining healthy can be illustrated by examining the situation that prevailed in Peru before the onset of COVID-19. The public health-care system in Peru typically does not cover informal workers, who represent nearly three quarters of the total employment. During the lockdown in 2020, nearly half of those engaged in informal work stopped receiving income entirely, compared with only 16 per cent of those in formal employment. Meanwhile, little more than half of the informal workers in Peru were reached by the emergency cash transfer programmes implemented during the pandemic (Carreras and others, 2021).

Disadvantaged people also suffered in terms of the health care they could receive. Most hospitals and specialized institutes in Peru are concentrated in a few cities located along the Pacific coast. While Lima, the capital city, has 19 beds per 10,000 inhabitants, in Amazonian and Andean provinces (e.g., Huancavelica and Loreto) the average is about half of that. As a result of these challenges, the COVID-19 vaccination rate in rural and hinterland regions remained less than half of what it was in Lima and other coastal cities. Ethnic inequalities in access to insurance were also prominent in Peru. On average, 20 per cent of the Peruvian population do not have any form of insurance; the majority of them reside in rural and hinterland regions with few to no medical resources. For instance, 19 per cent of the population whose mother tongue is Quechua and 33 per cent of people speaking Aymara did not have any type of health or social insurance (Gianella and others, 2020).

Seeking protection against COVID-19 infection has often represented a financial burden for the poor, who faced difficulties in practicing necessary masking, sanitation, social distancing, etc. Furthermore, when infected, they had diffculty in getting the necessary treatment (Shek, 2021). Measures to contain COVID-19, such as curfews, closures, lockdowns, and reduced public transportation, proved to be a heavier financial burden for the Peruvian poor, worsening their situation even further (Shriwise, 2021).

COVID-19 country experiences[11]

To provide a detailed understanding of the impact of COVID-19 on the health and well-being in developing countries, the way they tried to deal with the crisis, and the lessons that emerge, this section presents the experiences of four countries, namely Rwanda, Oman, Cuba and Viet Nam, in boxes III.1, III.2, III.3 and III.4, respectively. The highlights of these country experiences and the lessons that emerge can be summarized as follows.

A robust primary health-care system, if not comprehensive UHC, including investment in prevention and preparedness strategies, is of paramount importance. Readiness and capacity to mount coordinated action from central to local levels aimed at providing health-care services proved to be very important as well (Cuba, Oman, Viet Nam). The country experiences also underline the key role of public trust in government legitimacy (Rwanda, Viet Nam) and the significance of past experiences that have led to better public health emergency preparedness (Cuba, Viet Nam). High degrees of adaptive governance capabilities to create, amend and deploy new policies across sectors and to respond to the changing pandemic in a timely manner also proved important (Cuba, Rwanda, Viet Nam).

Concrete experiences of other countries are also illuminating. For example, the study by Safitri and others (2021) on Indonesia's experience underlines the importance of a whole-of-society approach, encompassing increased funding for social protection, and for credit and input subsidies to small and medium-sized enterprises; lessons learned from past epidemics regarding health-care and surveillance systems; and flexible operational measures of implementation, including the targeting of new areas of infection. Further, the national integration of social and income programmes and the capacity-building of medical personnel have been key for improving efficiency and resilience in responding to the COVID-19 pandemic and likely future shocks.

Synergies among policies

The interlinkages between SDG 3 and the other SDGs examined in this report, as well as the interlinkages among the latter, have already been identified above. As noted there, these linkages create the opportunity for synergies among policies aimed at achieving them. To illustrate these opportunities, this section reviews the synergies and trade-offs that exist between policies directed at SDG 3 and those directed at other SDGs. A matrix showing these policy linkages in detail appears at the end of this chapter. Some highlights are presented below.

(i) Programmes to support populations with large expenditures on health as a share of total household expenditure or income by extending health-care coverage to them (SDG target 3.8) can be helpful in achieving achieve SDG 2 targets associated with the reduction or elimination of food insecurity and undernutrition (Food and Agriculture Organization of the United Nations, International Fund for Agricultural Development, United Nations Children's Fund, World Food Programme, and World Health Organization, 2020);

(ii) "Drive-thru" pharmacy services, introduced by some countries as part of the effort towards achieving SDG target 3.8, also proved helpful, by lowering the cost for procuring medication for achieving SDG 1 indicators 1.1.1, 1.2.1, 1.3.1 and 1.4.1;

(iii) Policies supporting affordable UHC helped to reduce the proportion of people living below 50 per cent of median income (SDG 10, indicator 10.2.1) (Salas and others, 2020);

11 The analysis largely draws from the background paper "Policy lessons for SDG 3 from country-based experiences with COVID-19" (Tozan, 2021).

(iv) Preventive health safety measures to boost UHC have helped farmers in Nepal to be more successful in practicing smallholder agriculture, a practice conducive to achieving SDG 2, and also SDGs 8 and 10 (Adhikari and others, 2021). Similar experiences were seen in Burundi, Cameroon, Democratic Republic of the Congo, Kenya, Mozambique, Uganda, United Republic of Tanzania, Zambia and Zimbabwe (Nchanji and others, 2021);

(v) In the Indian State of Uttar Pradesh, the extension of health-care facilities (SDG 3, target 3.8) helped to mitigate the rising spatial inequality (SDG 10) resulting from restrictions on movement that led to surplus of labour in areas where labour could not leave and a paucity of labour in areas where such labour was needed.

Box III.1

Rwanda: prevention, innovation, and public trust in health authorities

Over the past ten years, Rwanda has made significant strides against the incidence of HIV/AIDS, decreased maternal and child mortality, and increased its universal health coverage (UHC). Rwanda is the African country with the most progress towards UHC, with many of the UHC prerequisites already having been reached by 2019. The public Community Based Health Insurance (CBHI) provides coverage for all non-insured citizens, including the rural populations and those who work in the informal sector. As of 2019, Rwanda achieved 59.4 per cent effective UHC coverage, a quite rapid increase of 14 percentage points since 2010. Yet, health-related challenges persist such as chronic malnutrition, lack of access to water and sanitation, education, and hygiene infrastructure. The country has also experienced an increased rate of mortality and morbidity attributed to non-communicable diseases.

Response to COVID-19

A couple of months before the first confirmed case in mid-March 2020, the Government of Rwanda started to take key preventive and preparedness measures to reduce the chances of a pandemic outbreak. It deployed medical staff to the Kigali International Airport, and to land borders, to screen travelers; transformed the Kanyinya health center into a COVID-19 treatment center with 75 floor beds and 8 ICU beds to assist patients in isolated units; and transformed a hotel into a treatment centre with 126 floor beds and 8 ICU beds. Each of the 80 public hospitals set aside two beds for isolation of patients with COVID-19. The Government also formed a Joint Task Force that developed a detailed six-month Coronavirus National Preparedness and Response Plan. Rwanda also used robots for patient monitoring and care documentation in order to protect health-care staff working with suspected COVID-19 cases. Other measures included the establishment of a WhatsApp number to report suspected cases, the recruitment of college students, and the appointment of police officers and medical staff to serve as contact tracers.

Notably, the trust between the people and the Government has played a critical part in the country's response to COVID-19. A 2019 study from the Wellcome Trust found that 97 per cent of Rwandans have confidence in the national health authority. According to the Organisation for Economic Cooperation and Development, trust in government and institutions is one of the key factors for the success of public policies and regulations that depend on behavioural compliance of citizens.

Thus, adaptability of the health system and swift preventive government action were critical in managing the pandemic —just as critical as experience in combating epidemics like HIV/AIDS and Ebola, appropriate use of technology, flexibility of the health system, and people's trust in the Government. The use of preparedness measures to support the progress towards also UHC helped Rwanda's effective response.

Source: UN DESA.

Box III.2

Oman: multisectoral and community cooperation, robust universal health coverage, and preparedness strategy

Oman has controlled and eliminated major communicable diseases, achieved remarkable reductions in maternal and child mortality rates, and steadily reduced the mortality attributed to non-communicable diseases in the past decade. The country's pandemic preparedness index score was 43.1, which ranked 73/193 for countries in the world. The Government of Oman has given priority to universal health coverage (UHC) by providing near-universal (both financial and geographic) access to health services to all regions for several decades. The country's continued population growth, with a rapidly growing ageing population, will require a shift in health service priorities. There is also a need to focus on preventative versus curative care, which will demand additional investment in primary health care as part of the UHC. As of 2019, Oman achieved 71 per cent effective UHC coverage.

Response to COVID-19

Oman's response to the pandemic has focused on supporting primary health-care facilities from early in the pandemic, and on boosting its UHC by increasing hospital capacity, including the number of Intensive Care Unit (ICU) beds, and by mobilizing the health-care workforce. The Government has provided COVID-19 diagnostic and treatment coverage free of charge to both Omani citizens and the immigrant community. The public health system enabled effective coordination of response activities at the regional and local levels, while the business sector facilitated supplies and technologies to the Government.

Yet, key challenges remain, such as increasing the number of hospital beds above 1.6 per 1,000 population—a number that is partly the result of population growth, which makes it difficult to isolate positive COVID-19 cases. During the COVID-19 spike in 2021, there were only 14 ICU beds available across the country. While individuals living in big cities have easy access to care, approximately 3.6 million immigrants (e.g., "non-nationals"), who often live in the outskirts of cities and in rural settlements, have less access to basic public services, making them vulnerable to COVID-19.

Oman is currently experiencing its "third wave" of community transmission after the introduction of the U.K. variant of COVID-19, which appeared with only 2 per cent of the population being fully vaccinated. Yet, the case fatality rate remains low. The current situation underscores the importance of gradual economic opening in tandem with continued preventive and preparedness measures, including vaccinating most of the population.

Oman's strength during the pandemic has been grounded in enhancing its UHC (i.e., expanding health-care coverage) and providing nearly free access to primary health care to its population. Also, the previous experience with MERS (Middle East Respiratory Syndrome) outbreaks since 2013 was the backbone of COVID-19 preparedness and response strategies. The establishment of a national taskforce before the first cases were detected sent a message of prompt government action in the early phase of the pandemic. The government-driven national-level response strategies were complemented with the engagement of the business sector and community-driven actions.

Source: UN DESA.

Box III.3

Cuba: investment in universal health coverage, prevention, and human resources

The country has one of the highest doctor-to-patient ratios in the world, and has made significant progress in fighting malaria and tuberculosis, and in reducing maternal and child mortality rates in the region. Yet, the mortality attributed to non-communicable diseases has been on the rise during the past decade. The country has made great progress towards universal health coverage (UHC), including the provision of primary health care, while its experience in disaster mitigation, including disaster preparedness institutions, has been used during epidemics and tropical hurricanes.

Response to COVID-19

Cuba activated the National Temporary Group to confront the pandemic with an intersectoral approach early in 2020, outlining the overall policies of the Government and focusing on effective communication and science and technology. The country subsequently followed the recommended international guidelines by instituting contact tracing, isolation of suspected cases, and mandatory use of masks in public places. It selectively closed its international borders at airports and recreational ports at a time when the country had fewer than 50 confirmed cases and only one death from COVID-19. All public events where safe social distancing was not possible were suspended, and a re-allocation of health-care resources created enough hospital beds to accommodate severe COVID-19 cases. When the transmission rate in the country peaked three months later, the occupancy rate of Intensive Care Unit (ICU) beds was only 20 per cent after accommodating all COVID-19 patients across 30 major hospitals.

Authorities also activated Cuba's defence councils, decentralizing the chain of command and instituting interprovincial checkpoints to enforce mobility bans. Cuba also instituted a nationwide door-to-door active screening for individuals with COVID-19 symptoms, which reached about 9 million people within a few weeks and referred suspected cases into isolation facilities where treatment and tests were conducted.

Long-established prevention strategies have helped the country to stave off the spread of COVID-19 during 2020. They included the UHC, particularly the services provided by a relatively high number of qualified medical personnel at the primary care level; investment in science and technology, supporting the supply of medicines and equipment; government capacity to reach out to local communities for testing and coordination; lessons from controlling previous communicable diseases and disasters; swift closing of borders and the restriction of movement across the country.

Yet, despite the prevalence of available doctors, there are still urban-rural disparities in the quality of care offered throughout the pandemic. Also, the opening of its economy—which depends on tourism receipts—by the end of 2020 has unleashed a pandemic outbreak. This is a cautionary tale for how carefully the preparedness and prevention strategies have to be maintained going forward, while a more gradual opening of the tourism industry may better support the economic recovery.

Source: UN DESA.

Box III.4

Viet Nam: universal health coverage preparedness and quick government reaction

Viet Nam has made significant strides in reducing the incidence of malaria, tuberculosis and HIV/AIDS; decreased maternal and child mortality; and improved the universal health coverage (UHC) effective coverage index, one of the highest in the region. Yet, Viet Nam has experienced a growing mortality rate attributed to non-communicable diseases. Viet Nam's pandemic preparedness index score was 49, which ranked 50/193 countries.

Response to COVID-19

Early in 2020, the Government issued the first national response plan and treatment and care guidelines for COVID-19, followed by national surveillance measures. As part of the containment policies, communication between the government units and between the Government and the public were prioritized, with regular updates on outbreak status and government actions. To this effect, the Government encouraged the development of several mobile applications that are provided free of charge to citizens. Measures also included preventing hoarding and price-gouging of basic personal protective equipment, closing of the border, and suspension of flights between Viet Nam and China.

Viet Nam's policy response in the first 12 months of the pandemic included facilitating effective coordination across central government units and from central to local levels; accessing the pandemic preparedness that resulted from experiences with past public health crises; prioritizing public health above economic considerations, using public education campaigns; adopting a whole-of-society approach to harness knowledge and capacities from across sectors and ministries; communicating outbreak-related developments quickly to foster trust and credibility among the public; and drawing upon the country's adaptation capacities for continued improvements and swift policymaking based on scientific and epidemiologic data. While these factors indicate a preventive and preparedness strategy framework, it was the flexibility and capacity to respond rapidly that helped the country to pre-empt the pandemic's progression.

In sum, Viet Nam's relative success in controlling the spread of the pandemic during 2020 and the first half of 2021 is mainly attributed to the political and administrative systems that facilitated cooperation within the government units and between the Government and the public. The previous experience combating epidemics like SARS, the high-level of pandemic preparedness, and the rapid adaptive capacities in its COVID-19 response were also instrumental in reducing the spread of the pandemic. Viet Nam's steady progress towards UHC has also played a key role in its level of preparedness capacity and will continue having a key role during the economic and social recovery from COVID-19.

As Viet Nam's economy has fully reopened, the country is currently undergoing its first COVID-19 outbreak with no signs of slowing down. Further, three main health-care challenges remain to be solved: the overcrowding of hospitals where bed occupancy rates reached 120–160 per cent before COVID-19; the rural-urban divide where farmers have pre-existent comorbidities and limited access to health services; and the shortage of physicians and medical personnel.

Source: UN DESA.

Outlook regarding SDG 3

Based on the health-care situation that prevailed during pre-COVID-19 years and the impact of COVID-19, this section presents the future outlook with regard to the effects of disruptions in immunization caused by the pandemic and the prospects for further progress in achieving UHC.

Scenarios regarding impact of disruptions in immunization

Routine immunization coverage has dropped in many countries in 2020. Childhood immunization services were disrupted by the COVID-19 pandemic in nearly 68 countries in 2020, and over 80 million children under the age of one have been affected. The main factors include the diversion of health-care staff, facilities and finances towards COVID-19 treatment and response; individuals' fear that bringing children to be vaccinated may lead to infection; barriers to travel due to physical distancing measures; disruptions in vaccine supply chains; lack of personal protective equipment; and decisions to postpone vaccination campaigns to reduce the risk of transmission during such campaigns (Gaythorpe and others, 2021).

The disruptions to routine health care due to the COVID-19 pandemic are projected to affect child and maternal mortality in low-income and middle-income countries. Figures III.8A and III.8B indicate possible scenarios of fatality impacts of immunization disruption and postponement in some developing countries (Gaythorpe and others, 2021). Figure III.8A shows the predicted number of deaths per 100,000 people between 2020 and 2030 due to measles, while figure III.8B shows the prediction for meningococcal A. The following four scenarios are modelled:

(i) Baseline Scenario 1: Business as usual (i.e., zero total disruption);

(ii) Disruption Scenario 2: Disruption of routine immunizations (RI) by 50 per cent;

(iii) Disruption Scenario 3: Postpone 2020 Supplementary Immunization Activities (SIA) to 2021;

(iv) Disruption Scenario 4: Disruption of RI by 50 per cent and postponement of 2020 SIAs to 2021.

In the case of measles, the effects of a reduction in RI coverage in Bangladesh in 2020 will be delayed—thanks to the past progress in immunization—but will result in an increased risk of outbreaks and deaths during 2028–2030 (Scenario 2). By contrast, in Ethiopia a drop in RI will entail a higher risk of earlier deaths, with an average increase of 2.26 deaths during 2020–2030 (Scenario 2), while the postponement of SIA from 2020 to 2021 will also cause a higher risk of deaths sooner (Scenario 3).

The disruption to both RI and SIA in Kenya will not lead to increased risk of deaths, due to high coverage of the first dose of the measles vaccine and better-timed campaigns in preventing outbreaks during 2020–2030 (Scenario 4). In Nigeria, the reduction in RI in 2020 will bring forward the risk of the projected outbreak from 2025 to 2023 (Scenario 2). In South Sudan, the postponement of SIA will not show up in the short-term—thanks

to past progress in SIA—but will result in increased risk of deaths during 2027–2028 (Scenario 3). For Chad, a reduction in RI in 2020 without catch up will bring forward the risk of the next projected outbreak from 2023 to 2022 (Scenario 2).

In the case of meningococcal A, a short-term disruption to RI in Burkina Faso, Niger, Nigeria and Chad (Scenario 2), and short-term disruption of SIA in Nigeria and Chad (Scenario 3) would not have significant effects in the short-term because they conducted SIA during 2010–2014 and introduced the vaccine into their RI schedules during 2016–2019 (Scenario 4). Yet, after 2025, the disease burden and risk of death is expected to rise. A maximum of 4 per cent increase in deaths is projected over the long term.

The projections presented above can help countries to be aware of the likely impacts of the disruptions caused by COVID-19 in the immunization programmes and to take necessary mitigation measures. The projections may also prompt them to avoid any further immunization disruptions, even as they grapple with the pandemic.

Outlook regarding universal health coverage

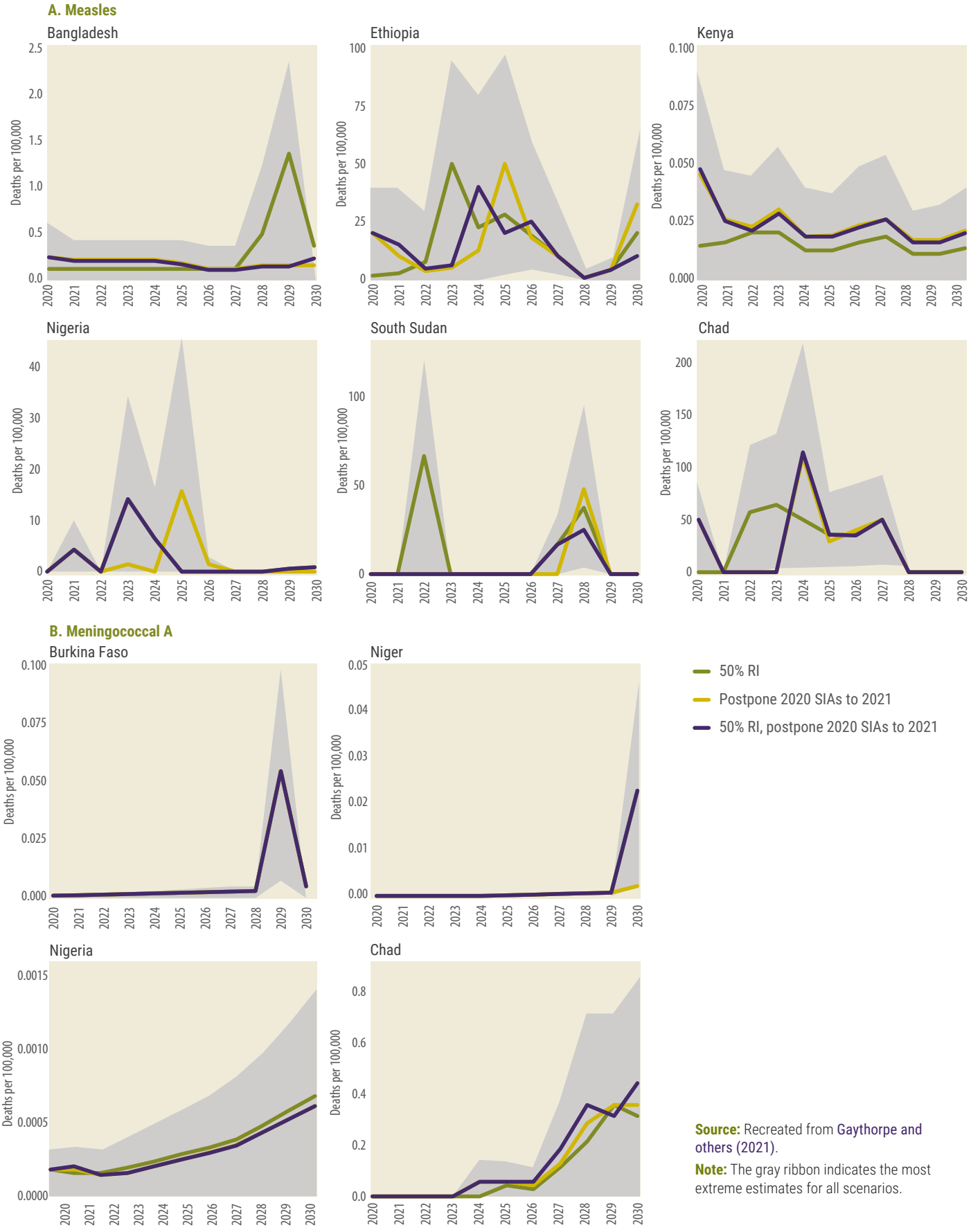
It is clear from the evidence and discussion in the preceding sections that the future regarding health and well-being depends crucially on the progress in achieving adequate universal health coverage (UHC), as called for by SDG target 3.8. The WHO (2019) estimates that the number of people benefitting from UHC effective coverage will increase by 389 million by 2023. However, this will leave a shortfall of about 1 billion people as compared to the target set by the WHO Thirteenth General Programme of Work (GPW 13) for 2019–2023 (World Health Organization, 2019). In short, faster progress towards SDG target 3.8 is necessary.

It should be noted in this regard that costs and paucity of resources are often put forward as an obstacle to achieving UHC. However, figure III.9 can be instructive in this regard. It shows the relationship between per capita health expenditure and the UHC coverage index. Although the UHC effective coverage index is strongly correlated with the pooled health spending per capita (with correlation coefficient, r = 0.66), the relationship does change at different levels of spending. Up to the level of about $2,000 (US dollars adjusted for purchasing power parity) in pooled health spending per capita, increased expenditures highly correlate with higher performance on the UHC effective coverage index (r = 0.79). Beyond that, however, this correlation is less strong (r = 0.22).

More importantly, figure III.9 shows that among countries with less that $500 per capita health expenditure, the UHC index can vary from 20 to 75 per cent. This indicates that the level of expenditure is not the most important determinant of UHC coverage and quality of health care. Countries can reach high levels of effective UHC coverage even with low per capita expenditure on health care. Low-income countries that are considering expanding UHC can draw important lessons from this evidence. In particular, they can take a closer look at the experiences of those countries which have attained effective UHC coverage with low per capita expenditure and use them to design their own systems of UHC, so that SDG target 3.8 can be achieved by 2030.

Figures III.8A and B

Scenarios of immunization disruption and impacts on deaths from measles (figure A) and meningococcal A (figure B), 2020–2030

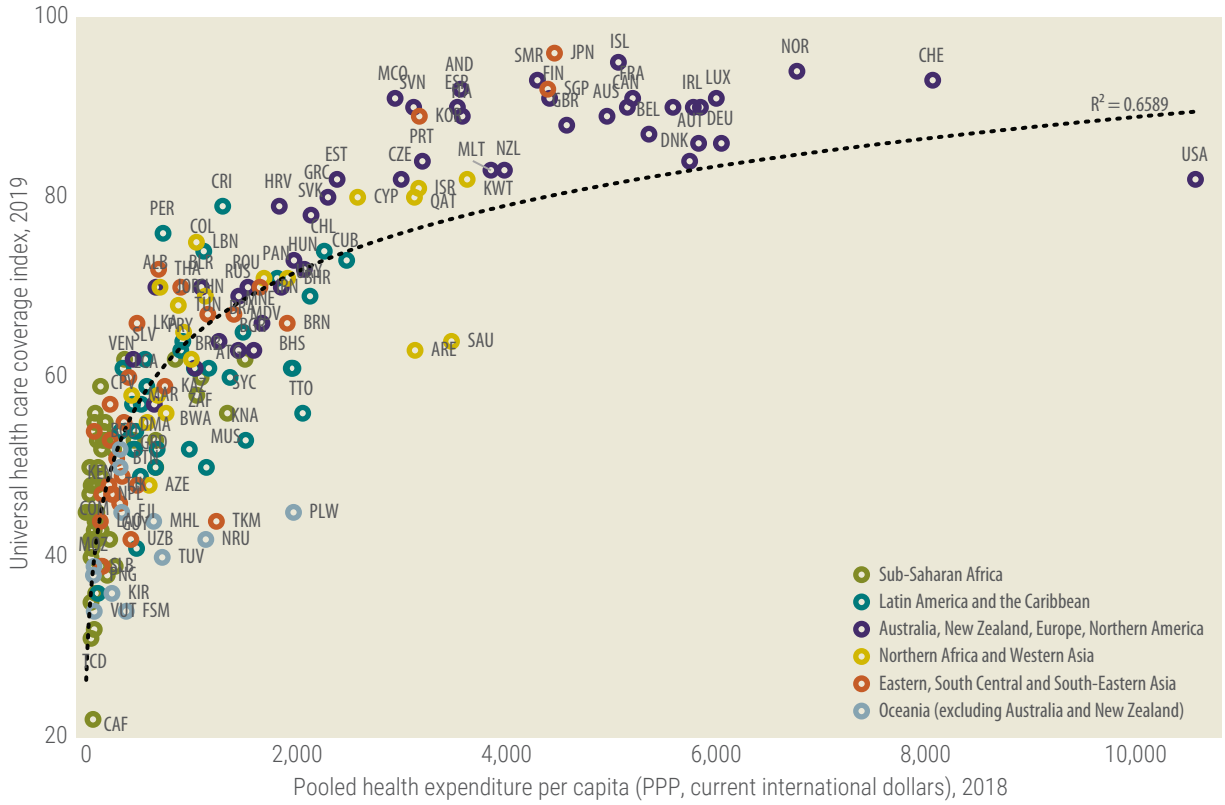


Source: Recreated from Gaythorpe and others (2021).

Note: The gray ribbon indicates the most extreme estimates for all scenarios.

Figure III.9

UHC effective coverage index relative to pooled health spending per capita, by region, 2018–2019



Source: UN DESA, based on data from GBD 2019 Universal Health Coverage Collaborators (2020) and World Development Indicators online.

Note: The *UHC effective coverage index* results from weighting 23 effective coverage indicators relative to its associated potential health gains, as measured by DALYs for each location year and population age group. The *pooled health spending per capita* includes domestic general government health expenditure, domestic private health expenditure and external health expenditure (all measured in PPP, current international dollars).

Policy suggestions

The information and analysis presented in this chapter point to the following policy suggestions.

Strengthen preparedness for health emergencies and invest in ensuring UHC

COVID-19 has exposed the lack of preventive mechanisms and preparedness to deal with a swift-spreading and mutating virus. Many countries lacked UHC and instead had fragmented health systems, with large segments of the population outside of any formal health coverage. Others had UHCs that were underfunded and inadequate for the challenge. Many countries lacked necessary preparation for health emergencies such as COVID-19, even though the world has seen several epidemics in recent times. The COVID-19 experience shows that countries that used previous health and disaster emergencies to take preparatory measures did better in confronting COVID-19 than those which lacked such preparedness, even though they had high capabilities for treatment of diseases. A major suggestion that emerges from this experience is to design policies that take SDG target 3.8

much more seriously. Experience across countries shows that UHC can be achieved even with low per capita health expenditure, so that low-income levels in a country should not be a barrier to having UHC. The difference in UHC between countries is that some are able to provide quality and affordable UHC, including preparedness and prevention strategies as part of that quality. Experience also shows that new digital technologies have opened up many new methods and approaches that also use fewer resources. Now is the time to build on past health achievements and lessons learned, raising investment in preparedness and prevention for future health emergencies. Such preparedness has become all the more necessary because of the increased frequency of zoonotic epidemics and pandemics such as COVID-19.

Adopt an integrated approach

The COVID-19 experience has shown that strengthening the health-care system alone cannot ensure a country's success in achieving SDG targets. For example, without accompanying income support and social protection systems, various measures necessary for containing a pandemic cannot be efficiently carried out. Fulfilling SDG 3 targets therefore requires an integrated approach, as was recognized in the 2030 Agenda for Sustainable Development, which emphasized the interlinkages among the SDGs. In general, health-related efforts—or those towards SDG 3—have to be cognizant of the entire SDG effort and make the best use of possible synergies that exist among policies on all SDGs.

Enhance investment in fighting non-communicable diseases

Non-communicable diseases account for more than 85 per cent of deaths in high-income countries; and countries with low- and middle-income levels are rapidly moving in that direction. Health-care campaigns in many developing countries have correctly put emphasis on fighting communicable diseases (through various immunization programmes), but these efforts need to be balanced by necessary attention to NCDs. In fact, an important goal for these countries should be to moderate consumption habits and lifestyles, and incentivize the use of renewable energy. Production and consumption processes would then not generate so much waste and pollution of air, water and land—pollution that leads to many of the NCDs. Reorienting countries' health systems towards more balanced and effective health-care services that address NCDs is crucial for achieving SDG 3.

Build resilience to simultaneous health shocks

It is necessary to build the capacity for dealing with simultaneously occurring health shocks. This is because humankind is entering a new phase, one that is characterized not only by the great opportunity resulting from technological advances, but also by great peril, due to breaches in planetary boundaries and the stresss and schisms caused by globalization and other socioeconomic processes. Thus, vanishing forests and wilderness has made zoonotic epidemics and pandemics more frequent. Climate change is making natural disasters more frequent, with their attendant health effects. Changing lifestyles are leading to unwelcome consequences, such as obesity, which is attaining epidemic proportions, and in turn causing many diseases. Health-care systems, including both prevention and treatment capacities, need to rise up to the palpable challenge of having to deal with multiple health emergencies at the same time.

Boosting health interventions by maximizing co-benefits with other SDGs

The COVID-19 experience reveals the links between health-related and other SDGs and the need for focussing on maximizing co-benefits and minimizing trade-offs. The identification and analysis of interlinkages between SDG 3 and SDGs 1,2, 8 and 10 is a step forward in this direction and can be extended to linkages with other SDGs. In fact, within a framework in which livelihood, health and well-being become the compass for sustainable development, the achievement of SDG 3 is essentially linked to providing affordable access to renewable energy to reduce air pollution (SDG 7); building inclusive, safe and resilient cities (SDG 11); ensuring sustainable consumption and production patterns to reduce NCDs, waste and pollution (SDG 12); strengthening resilience and adaptive capacity to climate-related hazards (SDG 13); restoring marine ecosystems (SDG 14); and reversing land degradation and biodiversity loss (SDG 15). In sum, the identification of links between SDG 3 policies and actions to accomplish other SDGs can serve to improve the design of evidence-based sustainable development pathways.

Increased national and international cooperation

One of the most important lessons of COVID-19 has been that no part of the population of a country is safe unless safety can be ensured for the rest of the population. Similarly, no nation can be safe unless safety can be ensured for other nations, too. This shows that increased cooperation both within and across countries has become a stronger imperative than ever before. Setting up effective and affordable UHC within a country is a direct corollary of this imperative. At the international level, the corollary is that developed countries need to assist developing countries in their efforts to set up quality and affordable UHC, by providing them with expertise, technology and finance. Right now, the corollary of the above imperative is that developed countries with firms producing COVID-19 vaccines should do their best to make this vaccine available to all people of the world as quickly as possibile and at the lowest cost possible.

Matrix of policy interlinkages and synergies among policies for SDG 3 and those for SDGs 1, 2, 8 and 10

SDG 3, target 3.8 (health security) policy interlinkages and synergies with SDG 1, indicators 1.1.1, 1.2.1, 1.3.1 and 1.4.1 (income security)
Countries have responded to the pandemic with preparedness and prevention strategies. "Drive-thru" pharmacies provide quick, convenient access to products and services; improve protection and safety of staff and patients; and ensure the application of preventive measures suggested by the World Health Organization. These benefit senior citizens, parents with small children and persons with severe illness and/or physical disabilities. In the future, technology facilitating digital interaction with patients will demand upgrading pharmacists' capacity to provide tele-pharmacy. These developments must take place within broader health-care infrastructures. Digital intensification and changing pharmacy practices associated with pandemic management are supporting these developments.
A 2021 global synthesis by *The Lancet* found that lockdowns, inefficient health-care systems, disruption of health-care services, reduced maternity services and fear of attending health-care facilities affected the well-being of pregnant women and their babies. There was a significant disparity between high-income and low- and middle-income settings. In the latter, remote consultations are less feasible, and women miss out on antenatal care. In Nepal, hospital deliveries decreased among disadvantaged groups, and, in the United Kingdom of Great Britain and Northern Ireland, 88 per cent of pregnant women who died during the first wave of the pandemic were from black and minority ethnic groups. Further investment in resilient health-care systems (*equipment and trained personnel*) to provide safe, affordable and equitable maternity care is needed. This would prevent the loss of decades of progress in reducing maternal and infant mortality.
Programmes supporting the universal health coverage (*UHC*) of non-communicable diseases should target the most susceptible and vulnerable populations, such as older persons, women and people living in rural areas.
Health and development programmes to eradicate poverty and hunger in the long term need a strong interregional focus, because most countries do not suffer poverty and hunger in isolation.
An integrated package of quality and affordable UHC, income support, and universal social protection can strengthen a country's resilience and reduce the pandemic incidence and fatality rate among informal workers, many of them migrants. They often earn low and insecure wages, and are unable to afford quality food, water and sanitation, and proper housing. Living in overcrowded housing, and unable to work from home, they rely on overcrowded public transportation to commute to work, making social distancing ineffective.

Source: UN DESA.

Existing policies

Potential policies

SDG 3, target 3.8 (health security) policy interlinkages and synergies with SDG 2, indicators 2.1.1, 2.1.2, 2.2.1, 2.2.2, and 2.3.2 (food security)
Global and regional trends over the last three decades indicate the burden of hidden hunger (micronutrient deficiencies) has always exceeded the burden of chronic hunger (protein-energy malnutrition and child underweight). Policymakers in low- and middle-income countries should prioritize (a) enhancement of micronutrient density of cereals through biofortification and industrial fortification; (b) diversification of production systems and consumer diets; and (c) development of nutrition-sensitive food value chains where food environment, women's empowerment and gender equality play key mediating roles.
Some country experiences indicate that COVID-19 and government "social distance" and transportation restrictions adversely affected the availability and cost of farm inputs (fertilizer, certified seed), labour, distribution and the consumption of beans—a basic crop for farmers' nutrition. The resulting production (mainly family-based bean farming firms) and distribution shocks (affecting micro, small and medium-sized enterprises (MSMEs)) impacted food security, farmers' health, the patterns of food consumption in households, and food quality—all of which exacerbate livelihood insecurities and poverty. Government policies are promoting preventive safety measures to reduce the pandemic incidence; supporting smallholder farmers and traders by strengthening current programmes of subsidized agricultural inputs; facilitating seed/grain collection and storage centres; supporting bulk purchasing, onward distribution of grain, and digital capacity building programmes for MSMEs.
Movement restrictions to limit the spread of the COVID-19 pandemic disrupted local agricultural markets and labour supply for agricultural production and processing in sub-Saharan Africa. An in-depth study of Western Kenya's smallholder farming of maize showed that food insecurity was lower during COVID-19 restrictions when farmers were equipped with an improved low-cost on-farm storage technology and training. As a result, post-harvest losses diminished (e.g., storage waste, insect infestation) while net maize supply increased, with positive effects on policymaking for climate change adaptation, food security and public health protection.
The response of the Nepalese Government to increased food insecurity triggered by the COVID-19 pandemic has aimed to strengthen farmers' overall resilience by enhancing health preparedness and promoting free seed and fertilizer to foster urban farming; insurance of selected crops and livestock; minimum prices for major crops; extension and advisory services; low-interest loans; and subsidies on improved hybrid seeds, fertilizers and machines. Context-specific and scale-appropriate mechanization and other labour-saving techniques included reduced tillage and direct seeding of rice, establishment of post-harvest facilities, development of cold storage and grain storage facilities, and expansion of irrigation facilities. Digital marketing connecting local producers and consumers is being developed and upgraded. Further, policies to improve subsistence farming systems aim to boost productivity through quality inputs and diversification, and promotion and protection of the indigenous food system. Land consolidation, use of fallow land, improvement of landraces, and promotion of markets for niche crops are enhancing small-farm production. Policies to improve commercial farming systems promote sustainable intensification by building reliant supply networks linking farming with markets while guaranteeing the supply of inputs.
In the face of COVID-19 and climate change, ensuring the affordability of healthy diets and reducing the costs of nutritious foods require a significant transformation of existing food systems worldwide. A starting point is making healthy diets more affordable through policies that enhance income-generating activities, especially for small farmers and informal workers. The efficiency of internal trade and marketing mechanisms is also key to reducing the cost of food to consumers and to boosting incentives for the local production of nutritious foods, thus improving the affordability of healthy diets for both urban and rural consumers. Complementary policies include the taxation of energy-dense foods, regulation of the food industry (including marketing), nutrition education, sustainable food consumption, and food waste reduction.

Source: UN DESA.

Existing policies

Potential policies

SDG 3, target 3.8 (health security) policy interlinkages and synergies with SDG 8, target 8.3 (social security)
The largest declines in health-risk exposure are strongly linked to reductions in household air pollution; unsafe water, sanitation and handwashing; and child growth failure. Incentives for improved equipment and infrastructures, together with regulatory and taxation policies, have succeeded in the global reduction of health risks, including tobacco smoking and lead exposure.
The Indonesian, Japanese and Sri Lankan experiences show that (a) increased funding for social protection, (b) support to small and medium-sized enterprises, (c) well-established health-care and surveillance systems (learned from past epidemics) and (d) flexible operational measures (e.g., targeting new infectious places) are key to containing and overcoming COVID-19. In the case of Indonesia, the national integration of social and income programmes and capacity-building have been essential for improving efficiency and building overall country resilience.
In low-income and middle-income countries, the adequacy of adaptation responses to the pandemic have been dependent on how robust the health-care systems and economy were before COVID-19. The rapid acceleration of telehealth care (adaptive response) required adequate digital infrastructures (system robustness), otherwise it reinforced health inequalities and discrimination. As a result, effective programmes and interventions have focused on "strategic levers" (political commitment, governance and socioeconomic policy, financing and allocation of resources, engagement of communities) as much as on "operational levers" (diverse models of care, workforce strengthening, and use of digital health technologies).
The COVID-19 pandemic and climate change have devastated many countries' health systems and economies, revealing and amplifying enormous social gaps between low- and high-income population groups. At the same time, they have widened the opportunity for policies to actively support decent work, the acceleration of innovation, and nature-based solutions. A seamless sustainable transformation of agriculture, industry and services can be boosted by investment in digital infrastructures and capacity development. Wider access to quality and affordable on-line education, telemedicine, and renewable energy can effectively support inclusive and resilient economic recovery.
The reduction of health inequalities and vulnerability within countries can enhance compliance with national directives such as lockdowns and mobility restriction aimed at reducing COVID-19 contagion, which will boost economic growth as well as trust in and efficacy of the policy-driven stringencies. The pandemic's incidence and fatality rate are also likely to diminish.

Source: UN DESA.

Existing policies

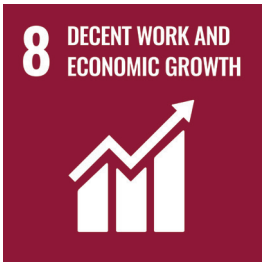
Potential policies

SDG 3, target 3.8 (health security) policy interlinkages and synergies with SDG 10, indicators 10.1.1, 10.2.1, and 10.3.1 (economic security)
The reduction of health inequalities in South Africa is being supported by socially oriented policies focusing on reducing inter- and intraracial group inequalities and unemployment; improved access to education of disadvantaged population groups, and sustainable development programmes of the country's provinces.
Incentives—in the form of maternity allowance or childcare benefits that ensure immunizations for children (vaccines) in low-income groups—have been able to increase the immunization rate and support the reduction of health inequalities. Similarly, funded vaccination programmes for indigenous children and adults in the past, targeted or as part of universal programmes (e.g., hepatitis A and B and pneumococcal disease) have reduced disease and racial disparities, since strain variations are less important and herd immunity is high.
Policy interventions in low- and middle-income countries that incorporated health into all policies; institutional building to strengthen governance at national, regional and local levels; increases in public health expenditure, reallocation of funds to primary care from hospital specialist services; and engagement of civil society organizations in decision-making have been key to averting even deeper health inequalities and discrimination during COVID-19.
In low-income and middle-income countries, the adequacy of adaptation responses to the pandemic have been dependent on how robust the health-care systems and economy were before COVID-19. The rapid acceleration of telehealth care (adaptive response) required adequate digital infrastructures (system robustness), otherwise it reinforced health inequalities and discrimination. As a result, effective programmes and interventions have focused on "strategic levers" (political commitment, governance and socioeconomic policy, funding and allocation of resources, engagement of communities) as much as on "operational levers" (diverse models of care, workforce strengthening, and use of digital health technologies).
Both climate change and COVID-19 are global public health crises threatening lives and livelihoods, increasing poverty and exacerbating inequalities. A response to both crises can only succeed when tackled concurrently. To protect global public health from the damage to natural systems upon which life depends, health and equity need to be integrated into climate mitigation and adaptation actions. The unequitable (health) impacts of climate change and COVID-19 should lead to prioritizing policies that reduce emissions while offering immediate health, social, and economic benefits. Policies informed by the pandemic can boost the path to resilient, sustainable and net-zero emission societies – using human health and equity as compasses.
Mitigating the disproportionate effect of COVID-19 on ethnic minorities includes reducing inequalities driven by socioeconomic factors, and the implementation of economic policies that tackle poverty, unemployment, and poor housing. In particular, funding and development of programmes for prevention and education on COVID-19 should be developed in partnership with ethnic minority communities. Health promotion and disease prevention programmes are important for reducing the spread of non-communicable diseases.
The reduction of health inequalities and vulnerability within countries can enhance compliance with national directives, such as lockdowns and mobility restriction aimed at reducing the COVID-19 contagion, which will boost economic growth as well as trust in and efficacy of the policy-driven stringencies. The pandemic's incidence and fatality rate are also likely to diminish.

Source: UN DESA.

Existing policies

Potential policies



Chapter IV

Economic growth and employment

Introduction

Achieving the vision set in the 2030 Agenda for Sustainable Development requires not just faster growth, but also better growth. Even as all countries are faced with the challenge of accelerating their reopening and recovery, and with preventing a resurgence of the COVID-19 virus, increasing the pace of growth is not enough if the world is to meet the targets under Sustainable Development Goal (SDG) 8. The quality of growth pathways—making growth more inclusive and more environmentally sustainable—is also of central concern. Unfortunately, the quality of growth has been on a disappointing trend, made worse by the COVID-19 pandemic. As a result, meeting many of the targets of SDG 8 is now a matter of considerable challenge.

As explained in the *Sustainable Development Goals Report 2021* (*SDG Report 2021*), few countries had been on track to meet the global targets for economic, employment and productivity growth. Economic growth had already been slow and getting slower for much of the world prior to the economic shock caused by the COVID-19 pandemic. In 2018, real gross domestic product (GDP) per capita growth was 2 per cent, and it slowed to 1.3 per cent in 2019. In 2020, per capita GDP is estimated to have decreased by 4.3 per cent (United Nations, 2021b). Additionally, the slow rate of economic growth has not been inclusive or sustained. The growth rate for least developed countries (LDCs) was much less than the 7 per cent targeted in the 2030 Agenda, and the pandemic has abruptly and profoundly disrupted the progress that was being made. Looking ahead, the outlook for economic growth will first depend on how quickly countries can vaccinate their populations to allow for a full economic reopening. As the world moves beyond the immediate crisis, achieving the SDG targets will also depend on how countries rebuild, and whether they manage to accelerate economic growth.

As detailed in the *SDG Report 2021*, full and productive employment and social inclusion continue to elude most of the world, while informality remains entrenched. In 2019, the unemployment rate stood at 5.4 per cent for the world. Unemployment rates of 10.6 per cent in Northern Africa and Western Asia highlight the unequal distribution of progress across regions. Unemployment was also much higher in certain groups. About 22 per cent of the world's young people were not in education, employment or training. Compared to average rates, unemployment among young workers are much higher in every region of the world and have hardly changed since 2005. The COVID-19 pandemic was a large shock to the already weak labour markets. Global unemployment increased to 6.5 per cent in 2020. Youth and women employment declined by 8.7 and 5.0 per cent, respectively. The crisis also affected informal workers, the self-employed, and daily wage earners. Before the pandemic, informal workers represented over 60 per cent of total global employment, or about 2 billion people. Three quarters of them are estimated to have either been significantly affected by lockdown measures or worked in the most-impacted sectors. Looking ahead, the outlook for employment and greater inclusivity are closely tied to the future pace and orientation of economic growth.

Finally, the trends regarding sustainable consumption and production have been heading in the opposite direction of what was needed for achieving SDG 8. Progress on the sustainability targets of SDG 8 demonstrate how growth has also become less sustainable given the increasing environmental footprint of economic activity, which is driven mainly by large developed and emerging economies. In the past 50

years, the total extraction of materials has more than tripled while the human population has doubled. The global economy has grown nearly fourfold in the same period. The absolute level of increase in material extraction and use has increased during this period, but at a slower pace than economic growth. Unfortunately, this trend of decoupling peaked in the early 2000s and started to reverse course.

Between 2000 and 2017, world material consumption increased from 8.7 to 12.2 metric tons per capita. Regions where the increase was notable include East and South-East Asia, home to large economies like China, and Europe and Northern America (United Nations, 2021b). As a result, global trends since 2000 have not improved sufficiently to achieve SDG target 8.4, to "improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation". Looking ahead, the outlook for decoupling economic growth and environmental impact will depend on significant technological innovations and the structural transformation of economies away from resource-intensive activities.

This chapter discusses the outlook for SDG 8 targets, building on the information reported in the *SDG Report 2021*. Whereas the *Report* discusses recent trends, this chapter takes them as the starting point and looks ahead at likely scenarios, how the outlook will matter for developing countries, and what can be done to improve the outlook and achieve better growth for all.

The discussion is organized as follows. The first section discusses the historical trends and main features of the three dimensions of SDG 8 targets: those directly involving economic variables (targets 8.1 and 8.2), the targets of interest for social inclusion and decent work for all (targets 8.3 and 8.5–8.8), and those concerned with decoupling growth and environmental impact (target 8.4). This is followed by an explanation of how the COVID-19 pandemic is impacting and transforming those trends, and highlights country cases that illustrate notable progress despite the pandemic. The next section discusses various possible outlook scenarios for each of the three aspects, illustrating the range of possibilities and the role of specific policies in determining the path forward. Finally, the chapter offers suggestions of how policymakers can improve their chances of moving towards an optimistic scenario in all three dimensions of SDG 8.

Pre-COVID-19 trends towards decent work and economic growth

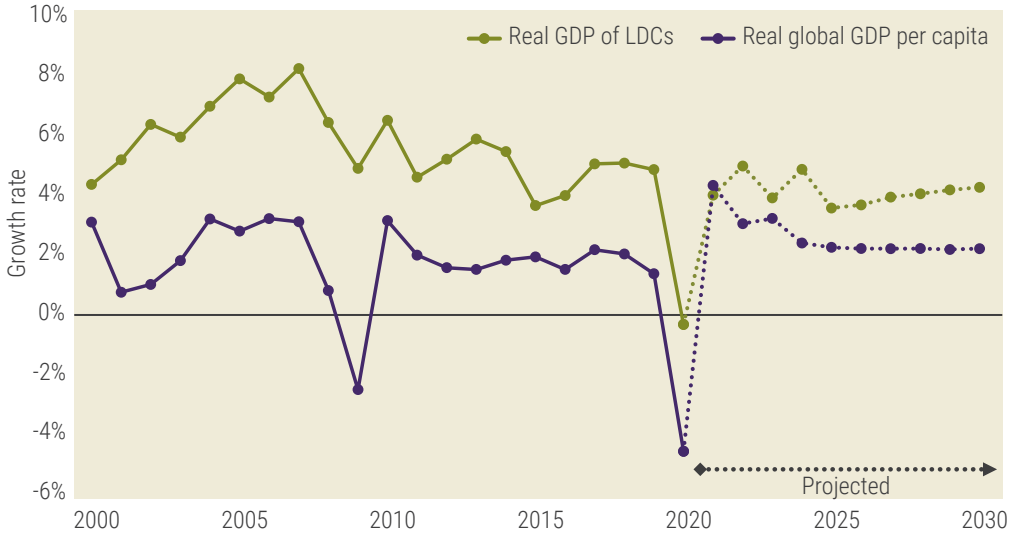
Limited economic progress with few bright spots

SDG 8.1 calls for sustained economic growth. However, the GDP growth rate had already been slowing for much of the world prior to the pandemic. The average growth rate of global real per capita GDP declined since 2010, as compared to the period before the 2008 global financial crisis. Between 2010 and 2019, average annual GDP per capita growth dropped to 1.8 per cent per year. It had been 2.4 per cent per year between 2000 and 2007. The COVID-19 pandemic of 2020 impacted an already slowing global growth (figure IV.1).

Most countries in every region of the world saw their economic growth slow in 2013–2019 compared to the 1998–2012 period (figure IV.2). Two thirds of developed countries had slower economic growth in the last five years ending in 2019 compared to the 1998–2012 period. A similar slowdown was seen in countries in Latin America and the Caribbean, Africa, and East and South Asia. In Western Asia, 93 per cent of countries experienced slower growth in the most recent five-year period compared to the past.

Figure IV.1

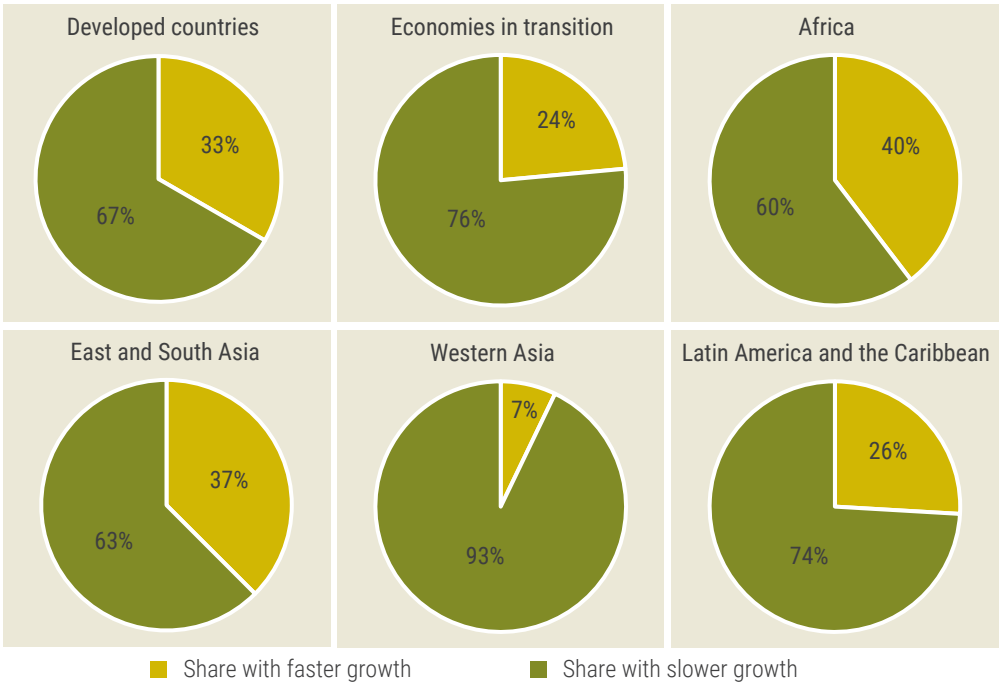
Annual growth rates of global real GDP per capita and real GDP of LDCs, 2000–2019 and projections to 2030



Source: UN DESA, based on data from the World Economic Forecasting Model (WEFM).

Figure IV.2

Share of countries with slower economic growth in 2013–2019 compared to 1998–2012, by region and country grouping

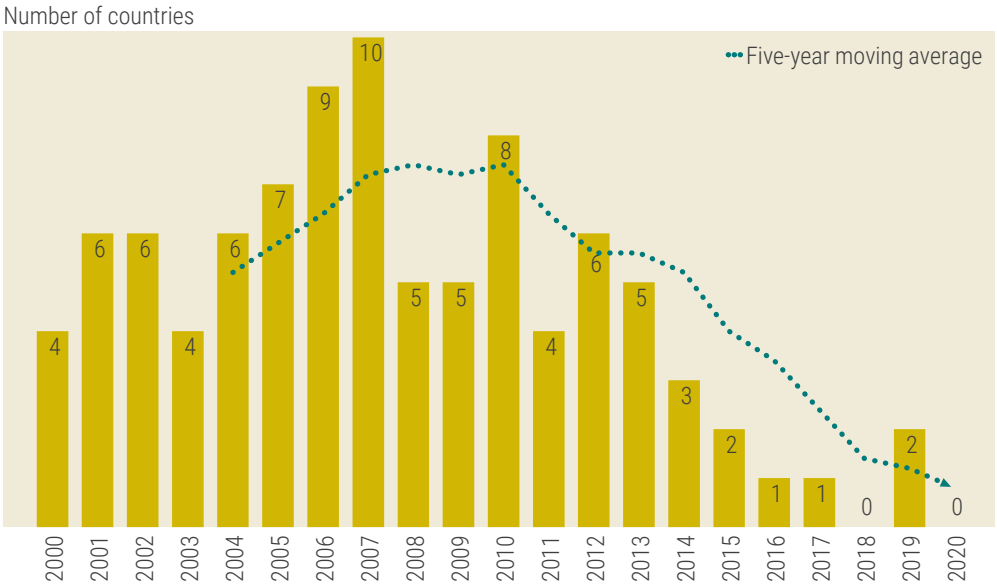


Source: UN DESA calculations, based on data from United Nations (2021c).

Note: Share of each region's countries that experienced slower average annual growth during the 2013–2019 period compared to the 1998–2012 period.

SDG target 8.1 requires the real GDP per capita of LDCs to grow by at least 7 per cent per year. Meeting this target has proved challenging, even though growth in LDCs has been more rapid than the world average. The group's real GDP growth per capita slowed from an average annual rate of 6.0 per cent during 1998–2012 to 4.7 per cent during 2013–2019. Only 6 of the 46 LDCs have averaged real GDP per capita growth above 7 per cent per year during 2013–2019. Since 2010, a declining number of LDCs have managed to reach yearly per capita growth of 7 per cent or higher (figure IV.3).

Figure IV.3
Number of LDCs that achieved over 7 per cent per capita growth annually, 2000–2020



Source: UN DESA calculations, based on data from the World Economic Forecasting Model (WEFM).

It is no surprise then that many regions are far from reaching the SDG targets for sustained per capita economic growth and of full and productive employment for all.[1] Notably, sub-Saharan Africa, Latin America and the Caribbean, and the Pacific Island countries are regions that are both very far from these targets and that experienced a deterioration in 2020.

The bad news is not universal, however, as prior to the pandemic some countries were making progress in meeting the SDG 8 targets. In Central and Southern Asia, Eastern and South-Eastern Asia, and the developed countries as a group, the pace of economic growth has been on track to meet the target.

Better work and social inclusion limited by entrenched and structural barriers

Full and productive employment continues to elude most of the world, especially as the COVID-19 pandemic interrupted any progress that had been made earlier towards more inclusive employment and growth.

The quality of employment—which includes gender equality, youth employment, informality, among other measures—continues to disappoint and was made worse by the pandemic. Even before the pandemic, gender inequality in employment and wages, as well

1 See https://unstats.un.org/sdgs/report/2021/progress-chart-2021.pdf.

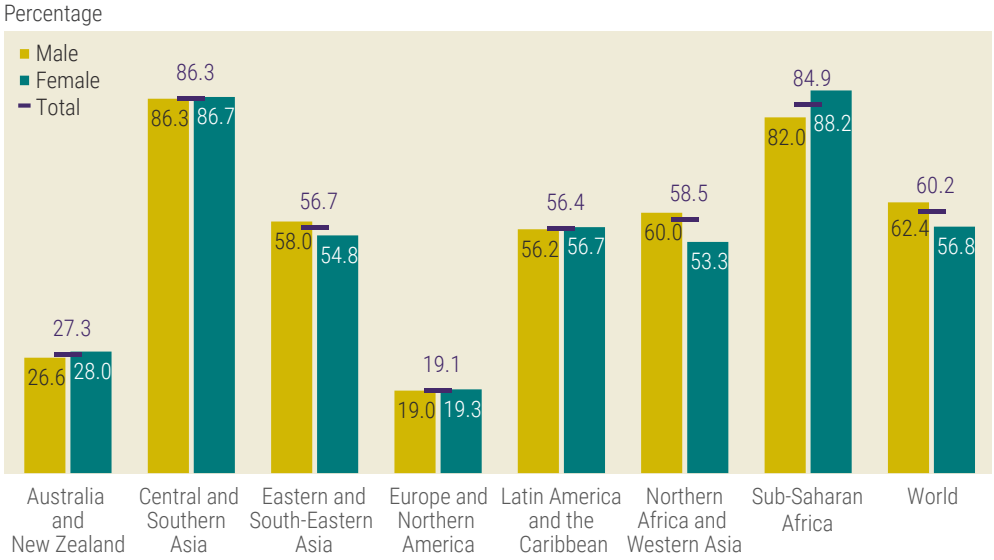
as youth unemployment, remained high around the world. Globally, hourly wages for women were between 12 and 22 per cent lower than wages for men in 2017 (International Labour Organization, 2018a). In 2019, more than one in five of the world's youth were not employed or being educated. More worrisome is the fact that this ratio has remained unchanged since 2005 (United Nations, Economic and Social Council, 2020).

Informality can be defined as one of two concepts. The first is the productive concept, which sees informal employment as being related to small units of production. The other is the legalist concept, which associates informal employment with the evasion of labour regulations. These two concepts often overlap in practice but have different policy conclusions: policies to reduce productive informality involve structural transformation and the shift of resources from traditional to modern sectors, while policies to reduce legalist informality emphasize labour market regulation, taxes and contributions (Amarante, 2021).

The rate of labour informality has remained entrenched globally, especially in many developing countries. In 2019, over 60 per cent of the world's workers—about 2 billion people—were in informal employment arrangements. In sub-Saharan Africa, informality reached 85 per cent of the continent's total workforce. In Central and Southern Asia, informality was slightly higher at 86 per cent (figure IV.4). Here again, there are important differences between men and women in how they participate in the labour market. Overall, the rate of informality for women is lower than for men, due to lower rates of informality for women in only two regions: Eastern and South-Eastern Asia, and Northern Africa and Western Asia. In all other regions, female informality in employment is higher than for men. This also has implications for the differentiated impact of COVID-19 in labour markets, as discussed below.

Figure IV.4

Proportion of informal employment, by region and gender, 2019



Source: UN DESA, based on data from UNSD Global SDG Indicators database.

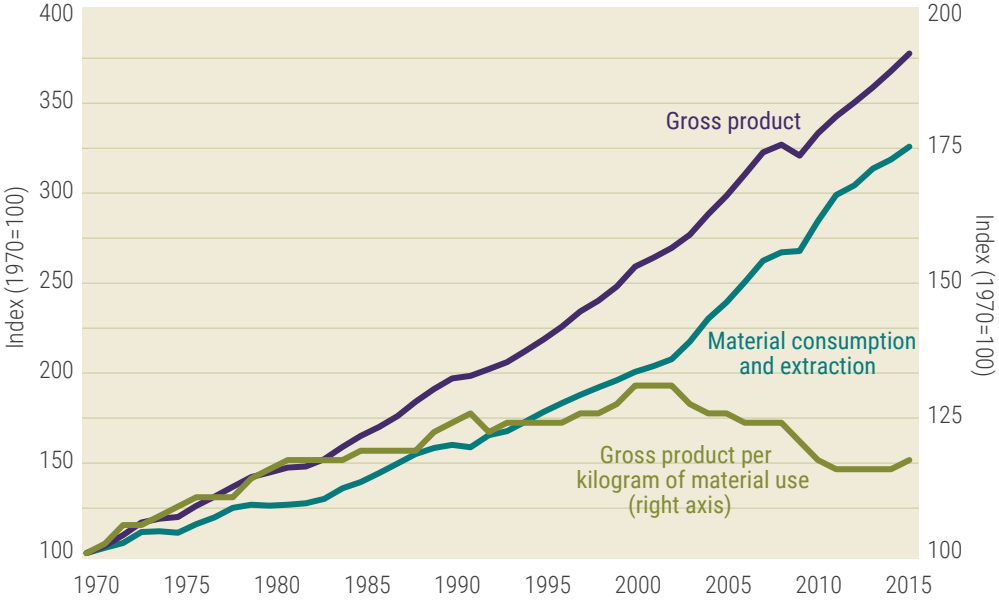
Some improvement in resource intensity, but not where it is needed most

SDG 8 also calls for decoupling economic growth from its environmental impact, in part by reducing the material resources needed. Global demand for natural resources remains closely coupled with overall economic and population increases. Since 1970, the global population

has more than doubled while the global economy has increased fourfold. The demand for greater growth and well-being led to a somewhat slower increase in the extraction of natural resources until 2000, when material extraction outpaced GDP growth (figure IV.5). In per capita terms, material extraction increased by almost 40 per cent between 2000 and 2017 to reach 12.2 metric tons (United Nations, 2021b).

Since 2000, the increase in the extraction of materials was the largest in the Asia and Pacific region. Led by increases in China and India, the region was responsible for 78 per cent of the total global increase in domestic extraction of materials from the early 2000s to the late 2010s (figure IV.6). There are two reasons that help explain this concentration. First, the demand for infrastructure required by economic growth in emerging economies has not been matched with a similar increase in resource productivity. Second, the globalization of production resulted in developing countries taking on a greater share of the material and energy-intensive stages of industrial production (International Resources Panel, 2019).

Figure IV.5
World gross product and material extraction, 1970–2015



Source: UN DESA calculations, based on data from the United Nations Environment Programme International Resource Panel Global Material Flows Database.

Note: Material consumption and extraction is measured in kilograms, and gross product is measured in constant 2005 United States dollars. All series have been indexed to 1970.

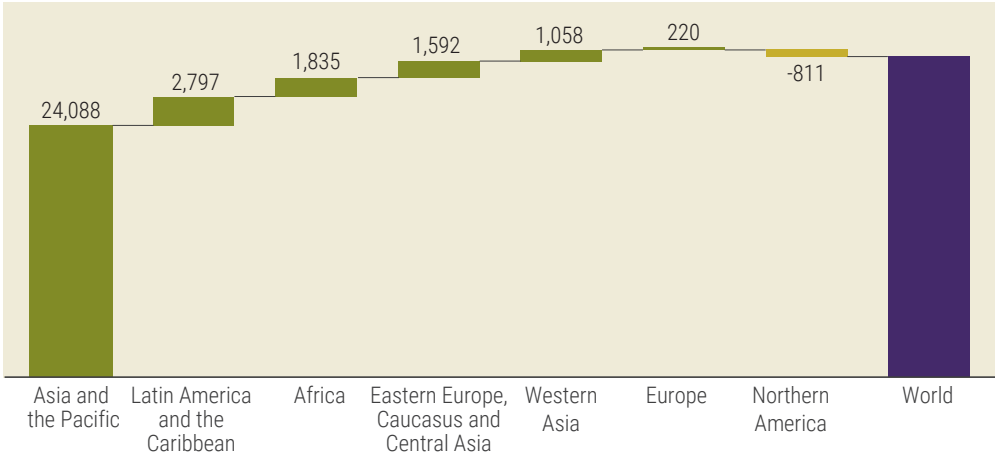
The consumption of materials is also relatively concentrated. Over 68 per cent of total global consumption in 2017 was done by the leading 10 economies. Upper-middle-income countries accounted for over half of the total. The low-income and developing economies have experienced a different trend. The share of low-income countries in global material consumption has remained below 3 per cent since 1970.

This decline in consumption was driven by large improvements in Central Asian and sub-Saharan African economies, although these results may not be as positive as they may suggest (see box IV.2). In Africa, Niger decreased its material consumption by 6.5 kilograms (kgs) per unit of GDP in the same period. In South America, the largest decrease was in Chile, were material consumption per unit of GDP dropped by 3.1 kgs (figure IV.7). Mongolia saw its material consumption per unit of GDP produced reduced by 8.7 kgs between 2000 and 2017, a 50 per cent increase in its total material productivity. This was largely due to a change in the output composition rather than an increase in resource efficiency (box IV.1).

Figure IV.6

Change in material extraction, by region, 2000–2004 to 2013–2017 averages

Millions of kilograms

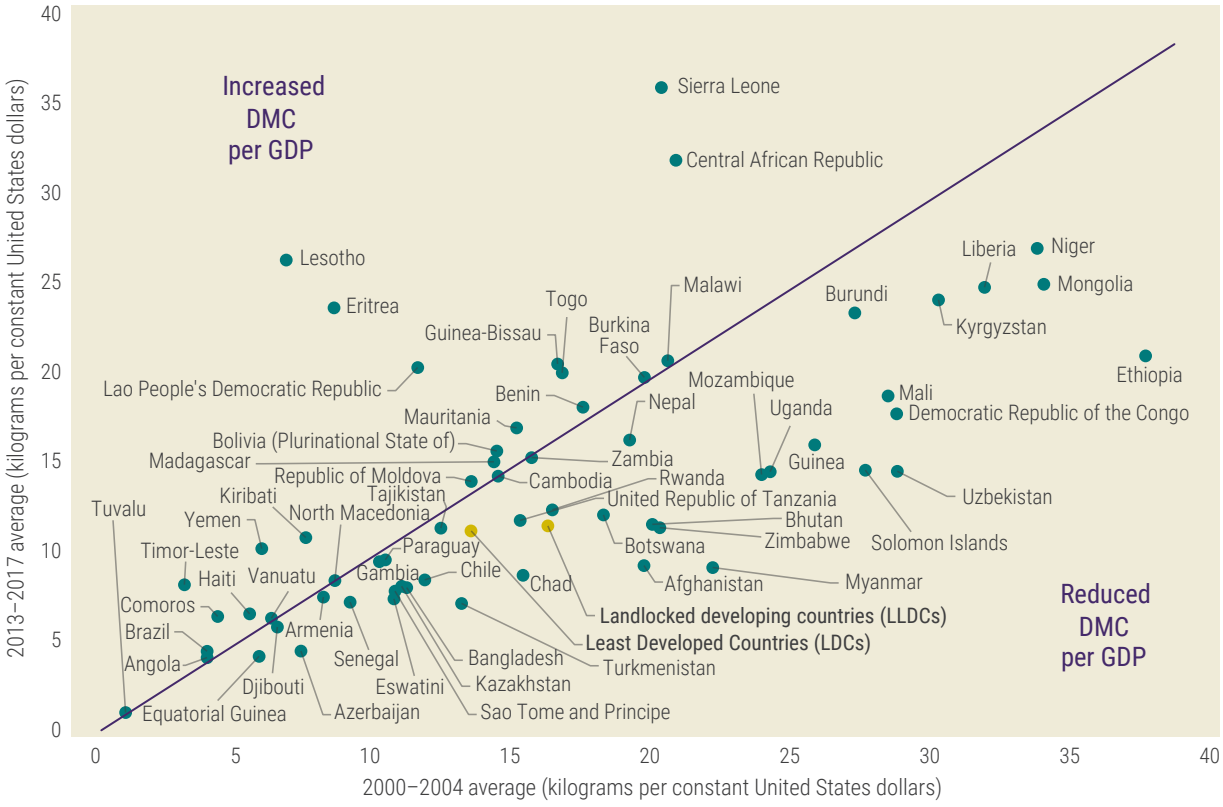


Source: UN DESA calculations, based on data from the United Nations Environment Programme International Resource Panel Global Material Flows Database.

Note: The change compares the five-year average in material extraction during the periods of 2000–2004 and 2013–2017.

Figure IV.7

Domestic material consumption per unit of GDP in developing countries, 2000–2004 and 2013–2017 averages



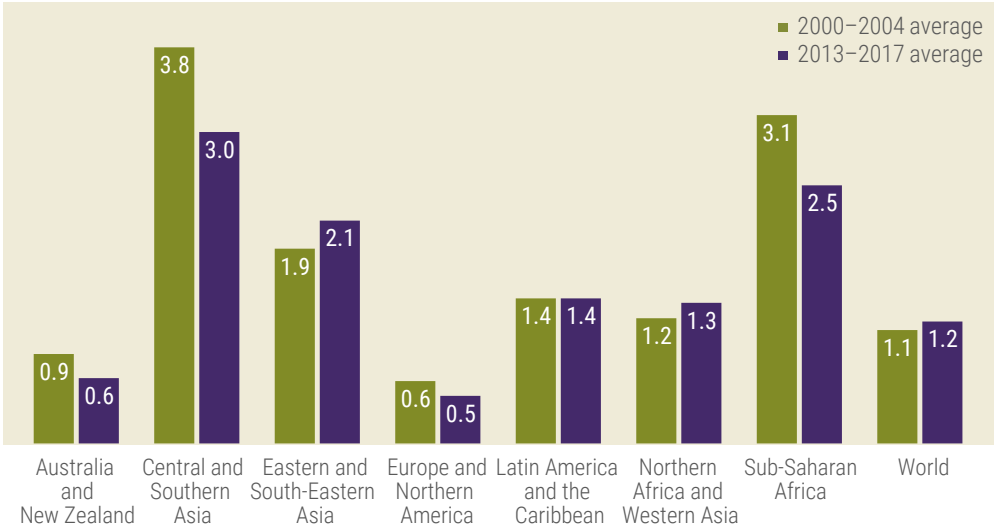
Source: UN DESA calculations, based on data from UNSD Global SDG Indicators database.

Relative to economic activity, the trend for material consumption has shown limited improvement (figure IV.8). For the world as a whole, the material requirement per unit of GDP increased by 0.1 kgs between 2000–2004 and 2013-2017. This is a notable reversal from the long-term trend between 1970 and 2000, as shown in figure IV.5. The negative trend follows from the increase in the consumption of materials per unit of GDP in Eastern and South-Eastern Asia—a result of the rapid industrialization of countries such as China. The large size of China's demand for materials helped drive the overall global increase observed.

Figure IV.8

Change in domestic material consumption per unit of GDP, by region, 2000–2004 and 2013–2017 averages

Kilograms per constant 2010 United States dollars



Source: UN DESA calculations, based on data from UNSD Global SDG Indicators database.

Note: Domestic material consumption measures the total quantity of materials (in kilograms) directly used within an economic system.

The impact of the COVID-19 pandemic on SDG 8

The global, but not uniform, economic effects of the pandemic

As the *SDG Report 2021* noted, growth and employment took a major hit due to COVID-19. The slow and uneven economic progress witnessed in pre-COVID-19 years was made worse by the 2020 pandemic. As the virus was transmitted around the world, causing unprecedented death and illness, it also impacted economic life. Containment measures confined people to their homes and prevented businesses from operating.

According to the *World Economic and Social Prospects 2021*, world gross product fell by 3.6 per cent in 2020—the sharpest contraction of output since the Great Depression and far worse than the 1.7 per cent contraction during the 2008–2009 global financial crisis (United Nations, 2021c). Europe and North America saw declines of 6.7 and 3.6 per cent, respectively, in 2020. The pandemic hit Latin America and the Caribbean the hardest, with GDP growth contracting by 7.3 per cent in 2020 (figure IV.9). The contraction in global output would have been worse save for a smaller contraction in Asian economies. China's lower (although still positive) growth rate in 2020, for instance, helped keep global growth above previous estimates. The real GDP of LDCs increased by 4.9 per cent in 2019 and declined in 2020 by 0.3 per cent, which is less than that of the global economy, due in part to the less restrictive measures taken by developing countries in response to the COVID-19 pandemic.

Box IV.1

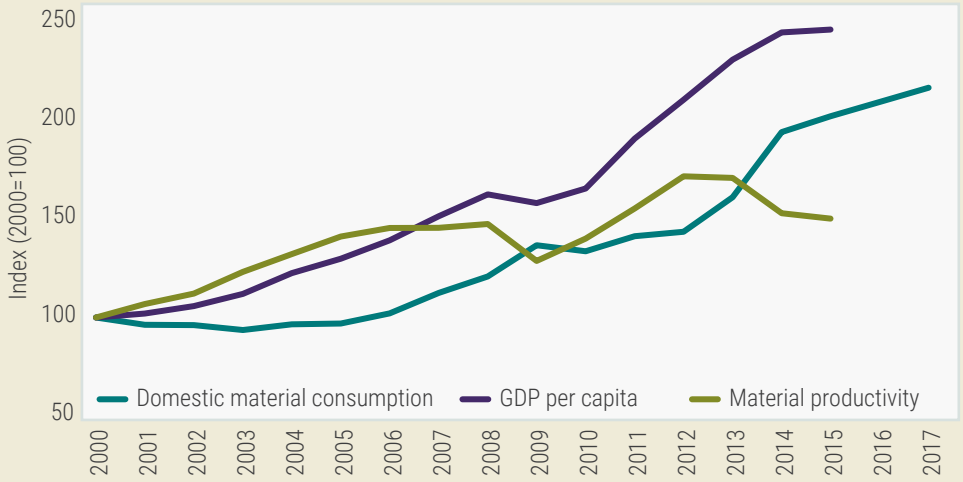
Mongolia's resource decoupling improved but needs follow-up

Significant gains in decoupling material use from economic growth have been observed in a number of countries. However, while this improvement in resource productivity is good news for achieving SDG target 8.4 for many countries, it still represents a significant increase in the total extraction of resources.

Mongolia, for instance, has managed to improve the productivity of its material resource use by achieving faster economic growth compared to the additional extraction of resources. The gains are important, but represent a relative improvement, not an absolute one. Rather than representing a significant structural transformation of its economy or the adoption of new greener industrial techniques, Mongolia's improvement shows a composition effect, as overall gross domestic product grew at a faster rate than the increase in material consumption. Between 2000 and 2017, total domestic extraction in Mongolia increased by 163 per cent, with the greatest increases in construction materials and coal. Construction materials in the form of crushed rock and sand gravel amounted to 8.6 per cent of the country's total domestic resource extraction in 2017, up from just 1 per cent in 2000. Material extraction for coal production increased to 21.9 per cent in 2017, up from 10.6 per cent in 2000 (figure IV.1.1).

Figure IV.1.1

Domestic material consumption, GDP per capita, and material productivity in Mongolia, 2000–2017



Source: UN DESA calculations, based on data from the United Nations Environment Programme International Resource Panel Global Material Flows Database.

Note: Productivity is the ratio of domestic material consumption (kilograms) and GDP per capita (2005 United States dollars). All series have been indexed to 2000.

Recognizing this trend, the Government of Mongolia has developed a comprehensive plan of action to decouple its economy from natural resource use. Mongolia has made the greening of economic growth a key goal of its national development strategy and has encoded this vision in its 2014 Green Development Policy and the 2016 Mongolia Sustainable Development Vision 2030.

A key feature of its green growth approach is recognizing natural capital as being both a factor of production and important to the well-being of the population. The country has begun to assess the monetary value of natural resources and establish benchmarks to calculate environmental damage and compensation. Mongolia also developed 38 green development indicators to measure progress in greening economic growth and how much coupling there is between economic activity and environmental degradation.

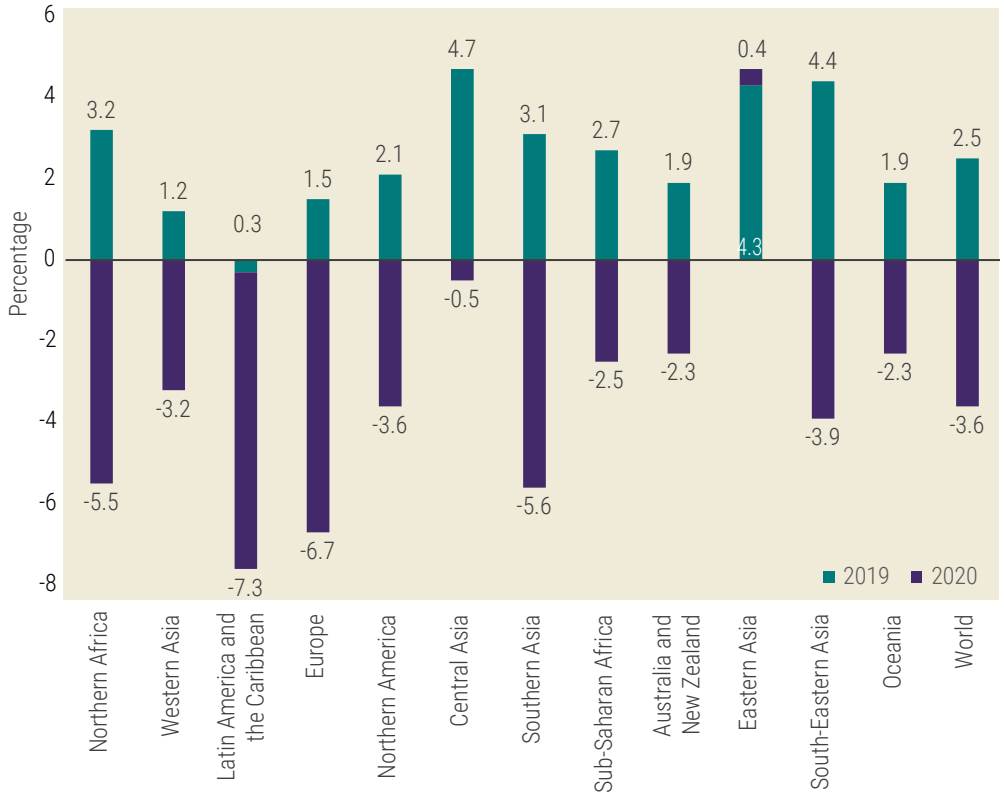
continued >>

Box IV.1
continued

The first phase of its plan is to (i) lay the foundation for green development, establishing models and norms in all economic and social sectors; (ii) build a legal framework for green development progress; and (iii) target infrastructure and redevelopment investments that are compatible with sustainable development. The country worked to expand green financing mechanisms and introduce clean technologies for renewable energy production and environmentally friendly infrastructure. In the second phase, Mongolia aims to build on this progress and to accelerate its transformation towards a socially equitable, inclusive and efficient green economy by 2030.

Source: UN DESA, based on IRP (2019) and UN ECE (2018).

Figure IV.9
Real GDP growth, by region, 2019 and 2020



Source: UN DESA, based on data from the World Economic Forecasting Model and United Nations (2021c).

All economies in South Asia were badly hit by the crisis. Regional output contracted by 5.6 per cent in 2020, led mostly by a 6.8 contraction in India. Despite the depth of the economic decline in the region, some countries managed to limit the crisis. Bangladesh, for instance, managed to maintain a relatively robust growth of 4.3 per cent in 2020. The country had been averaging 7 per cent annual growth between 2013 and 2019.

In Latin America and the Caribbean, the health crisis was followed by a deep economic downturn of 7.3 per cent in 2020. The continent suffered not only from the imposed lockdown orders, but also from weaker merchandise exports and a collapse in tourism. For many countries, this is particularly difficult as the crisis follows several years of disappointing growth. In Brazil, the region's largest economy, the economic decline was 4.1 per cent in 2020. In Mexico and Central America, the combined decline was 8.1 per cent.

The economic downturn in Africa has been less severe than in most other regions, with a GDP decline of 3.5 per cent in 2020. The continent is still suffering a severe shock that threatens to wipe out the development gains of recent decades. In what is a familiar story, domestic lockdowns combined with lower external demand and lower commodity prices, led to the collapse of tourism and lower remittances.

Ethiopia is a notable example of how policies can withstand the negative economic impact of the pandemic, then turn the situation around and achieve positive growth. In recent pre-pandemic years, Ethiopia has seen its exports sustain robust growth and its living standards improve. As in other countries, the global pandemic initially affected Ethiopia's exports negatively. For example, sales of cut flowers to Europe decreased by as much as 80 per cent in early 2020. Garment exports and the country's tourism sector were also impacted. Realizing the threat this posed to exporting firms, the Government provided support to firms and helped them keep workers on payroll. The private sector was also able to react quickly. The country's airline shifted operations to cargo transportation, as the country became a distribution hub for medical supplies across Africa. This also helped the recovery of flower exports, which are transported by air freight. Exporters of garments were able to quickly shift their manufacturing operations to produce personal protective equipment (PPE) for the domestic market.

A large impact on employment

The abrupt fall in economic activity during 2020 has had a significant adverse impact on labour markets around the world, especially affecting more vulnerable workers. About 2.7 billion workers—81 per cent of the world's total workforce—were affected by full or partial lockdown measures (United Nations, 2021c). The International Labour Organization (ILO) estimates that 144 million jobs were lost in 2020 compared with the pre-COVID-19 employment trends (International Labour Organization, 2021). The overall unemployment rate increased by 1.1 percentage points.[2] In developing countries, unemployment reached record highs. In populous countries like Nigeria and India, unemployment reached 27 and 23 per cent, respectively. In Brazil, the unemployment rate reached 13 per cent.

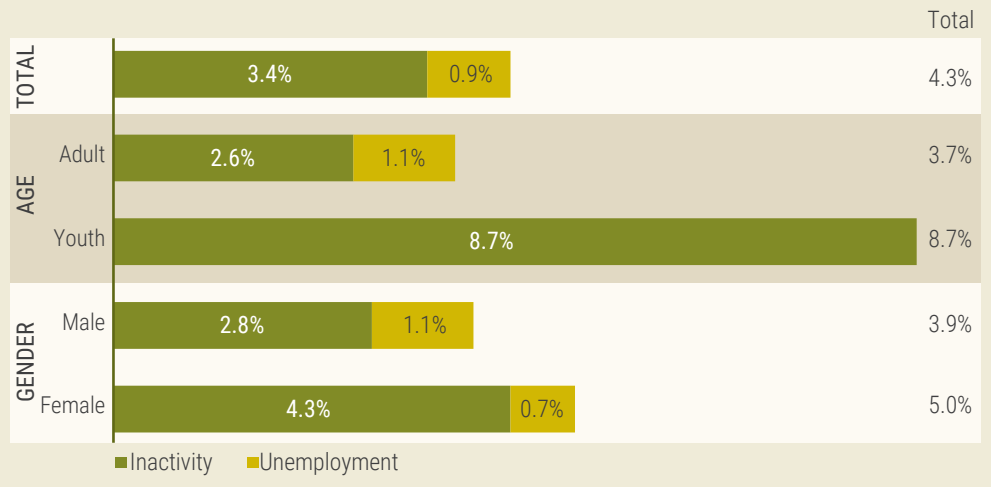
In 2020, there was an estimated 9 per cent decline in working hours for the world, the equivalent of 255 million full-time jobs (International Labour Organization, 2021). Both inactivity and shorter hours have turned out to be major drivers of global working-hour losses. The global labour force participation rate decreased by 2.2 percentage points. The decline in working hours was the largest in Latin America and the Caribbean, Southern Europe and Southern Asia, owing to lockdown measures and the relative inability to adjust to using remote working arrangements. Countries in Eastern Asia and Africa adopted fewer lockdown measures and experienced a relatively smaller loss of working hours.

Globally, the employment losses amounted to a 4.3 per cent decline relative to the pre-pandemic forecasts. During the pandemic, employment losses—and the consequent income losses—were higher for women than for men, and for young workers than for older workers (figure IV.10). The drop in employment happened despite significant efforts to shield businesses and workers from the worst effects of the lockdowns. Governments provided subsidies to employers to keep workers on their payrolls and financial support to workers that were forced to stay home (United Nations, 2021c).

2 Unemployment rate has fallen by less than overall GDP because of changes in the labour force.

Figure IV.10

Global employment losses relative to pre-pandemic forecasts, by type of loss, age and gender, 2020



Source: Recreated from ILO (2021).

In 2020, the pandemic's impact on employment has also been higher in sectors which employ a greater share of women (United Nations, 2021c, figure III). The impact on young workers is seen in significant withdrawals from the labour force and an increase in the overall share of young people not in education, employment or training (SDG target 8.6.1). For young people, the pandemic increased their disconnect from labour markets.

The full effect of the loss in working hours on labour income was attenuated by income support measures and reflects the significant variation in impact and fiscal response across countries. The protection offered by these measures was limited by the still-high degree of informality around the world.

The disproportionate effect of the COVID-19 crisis on the self-employed and informal workers generally highlights the importance of addressing the structural problem of labour informality. About 1.6 billion people engaged in informal work were working in the hardest-hit sectors or were significantly impacted by the lockdown measures. Globally, the income of informal workers is estimated to have fallen by 60 per cent in the first months of the crisis. The rate of informality, however, has declined in some regions because of a sharper fall in total informal employment. In Uruguay, for instance, workers moved out of the labour force and there was a large decline in registered work. Informality did not increase, however, because informal employment (including self-employment) also declined (box IV.2). This trend was observed in all of Latin America and the Caribbean and represents a change in the historical dynamic: in all previous crises, the informal sector acted as a buffer and received displaced workers from the formal sector (International Labour Organization, 2021).

The impact of the crisis on the self-employed and informal workers generally is magnified by the fact that traditional social protection programmes, such as unemployment insurance and other income support policies, and health-care coverage do not extend to these workers (see chapter III for a discussion on health). The service sectors, whose demand was heavily affected by the lockdowns in many countries, are dominated by informality. Many informal workers are involved in the provision of face-to-face services, which bring a higher risk of contagion and the impossibility of working remotely. Limited or absence of savings and constrained access to credit make the situation worse for them (Amarante, 2021).

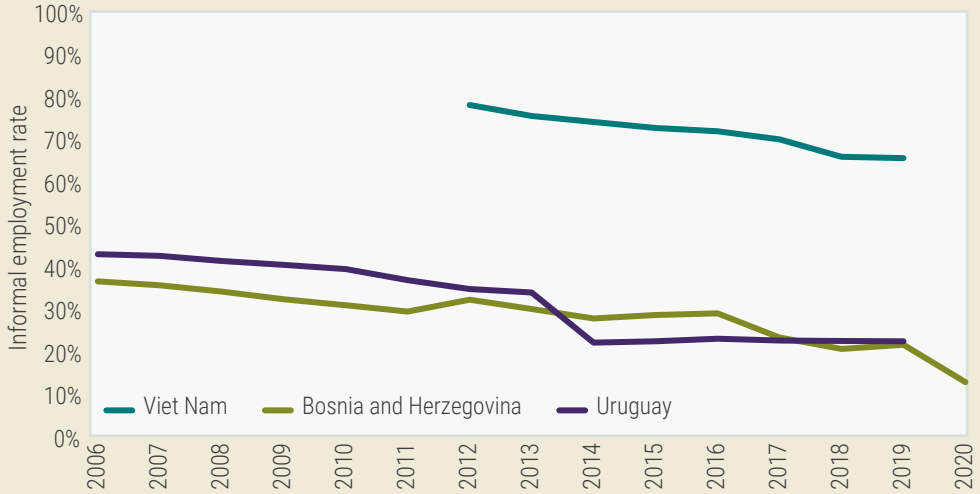
Box IV.2

Country experiences in reducing informality: Bosnia and Herzegovina, Uruguay and Viet Nam

A careful review of informality in Bosnia and Herzegovina, Uruguay and Viet Nam—three countries that have each experienced important reductions in informality in the last 15 years—provides useful insights into what influences progress. A common factor among the experience of these three countries is the importance of periods of sustained economic growth for meaningful declines in informality.

Figure IV.2.1

Evolution of productive informality in select countries, 2006–2020



Source: UN DESA, based on data from ILOSTAT.

In Bosnia and Herzegovina, population ageing and significant emigration resulted in a decline in the working-age population. Labour force participation rates remain low and structural unemployment remains high. The country has the highest rate of youth unemployment in Europe and sizeable gender gaps in labour markets. Individuals who are young, less educated, low skilled, from rural areas and from economically weak families have higher probabilities of participating in the informal economy. Informal markets absorb the unemployed in subsistence agriculture and low value-added trade and production. The reasons for recent declines in the country's informality are not clear. Policy changes have been recent and cover only part of the informal labour sectors. A decline in the value added tax is a contributor to lower informality, as are changes to unemployment insurance. Despite these reforms, there is no clear explanation for the country's informality decline.

In Uruguay, the decrease in informality followed a period of sustained economic growth and stability. The country also enacted a significant set of reforms and new policies to reduce informality. Changes in labour market regulations, in health-care services, and specific regulation of the domestic service sector have helped increase formalization, as have social policies to support parents and to provide health care for children. Women´s and men´s informality diverge dramatically after parenthood. In particular, the share of working women who are not registered workers increases after the first child is born, while fathers' trajectories remain basically unaffected.

continued >>

Box IV.2 *continued*

In Viet Nam, greater formalization was helped by the country's transition from an agricultural to an urban, manufacturing and services-based economy. Employment has shifted from agriculture to manufacturing and services, and from household enterprises to registered businesses. Specific reforms to social insurance policy—such as expanding coverage and contribution options and government subsidies to contributions,—have also contributed to reducing informality. At the same time, higher payroll taxes and stagnant minimum wage levels have slowed progress on formalization.

Source: Amarante (2021).

The impact of COVID-19 on natural resource decoupling: too soon to tell

Despite the improvements in LDC performance discussed previously, the world and its various regions are not currently on track to meet the goal of decoupling economic growth from resource use and, more broadly, environmental impact; COVID-19 has not significantly changed this fact. The *SDG Report 2021* shows that the world remains at a moderate distance from the target of reducing material consumption, and has made limited or no progress (United Nations, 2021b).

The specific impact of COVID-19 on decoupling of growth from natural resource use is not yet possible to identify, due to a lack of timely data and the difficulty in disentangling the impact of the economic contraction from changes in both the composition of GDP and the efficiency of resource use (achieved through, for example, technological changes and improvement in management). Nonetheless, it is possible to state that the overall environmental impact of economic activity has declined in 2020 as economies went into lockdown.

As the *SDG Report 2021* shows, the social and economic limitations imposed by the COVID-19 pandemic resulted in a fall in CO_2 emissions during the year. Countries that managed to restrict their economic activities the most saw the associated large decreases in emissions. The average drop in developed countries, for instance, approached 10 per cent compared to 2019 levels. Developing countries, in contrast, saw a drop of 4 per cent (United Nations, 2021b). More recent data shows that emissions are recovering in line with the economic reopening. Emissions and overall environmental pressures are expected to rise further, making the need to rapidly achieve decoupling more urgent.

The outlook for SDG 8 as the world recovers from COVID-19

The long-term post-pandemic outlook will build on these short-term results and further depend on structural policies to accelerate growth, as opposed to a return to a pre-pandemic normal of slow growth. The optimistic long-term outlook is founded on a choice to "build back better" by investing in new industries that will generate faster and more sustainable growth.

In qualitative terms, several scenarios can be postulated, depending on the success of short-term policies (health, vaccination, economic support, etc.) and on the ability of Governments to make the necessary investments to position economies for faster and more inclusive growth in a way that is compatible with environmental sustainability. Four

possible scenarios are therefore expected, depending on vaccination and growth policies, with implications for overall SDG progress (figure IV.11).

(i) Scenario 1: A slow distribution of vaccines and protracted lockdown-induced economic crisis means a slow reopening and a deep scarring of economies. Even as economies eventually reopen, they fail to restructure and return to a slow pre-pandemic growth path. This worst-case scenario means the SDGs will most certainly be out of reach, keeping the world under threat of a re-emergence of the pandemic. Any recovery, however slow, will be concentrated in those few countries that have access to the vaccines and can fully reopen. Meaningful SDG progress will be limited to countries that rapidly accelerate productivity, leaving many countries behind. The only silver lining would be if growth in large economies succeeds in creating greater trade demand and prices that benefit exporting economies;

(ii) Scenario 2: Vaccines are distributed rapidly to all countries, allowing them to quickly resume economic growth, but long-term economic measures still fail to significantly accelerate economic growth in the post-pandemic period. A return to the pre-pandemic rates of economic growth means that the world will eventually rebound, but the SDG targets will be missed as the world fails to accelerate to make up for lost time;

(iii) Scenario 3: Some economies drastically accelerate their growth through lasting fiscal and other stimulus measures, with a strong focus on building back better and with robust international support. In this scenario, vaccine distribution remains limited to the wealthier nations and the world sees a more acute split between the winners and losers. Some countries will benefit from fewer deaths and the economic benefits of faster reopening. Others will continue to fight the virus with lockdowns;

(iv) Scenario 4: The best possible scenario is a global economic resurgence coupled with the rapid distribution of vaccines. This would create the real possibility of ending the threat of the pandemic and leading the world economy to a rapid recovery for all.

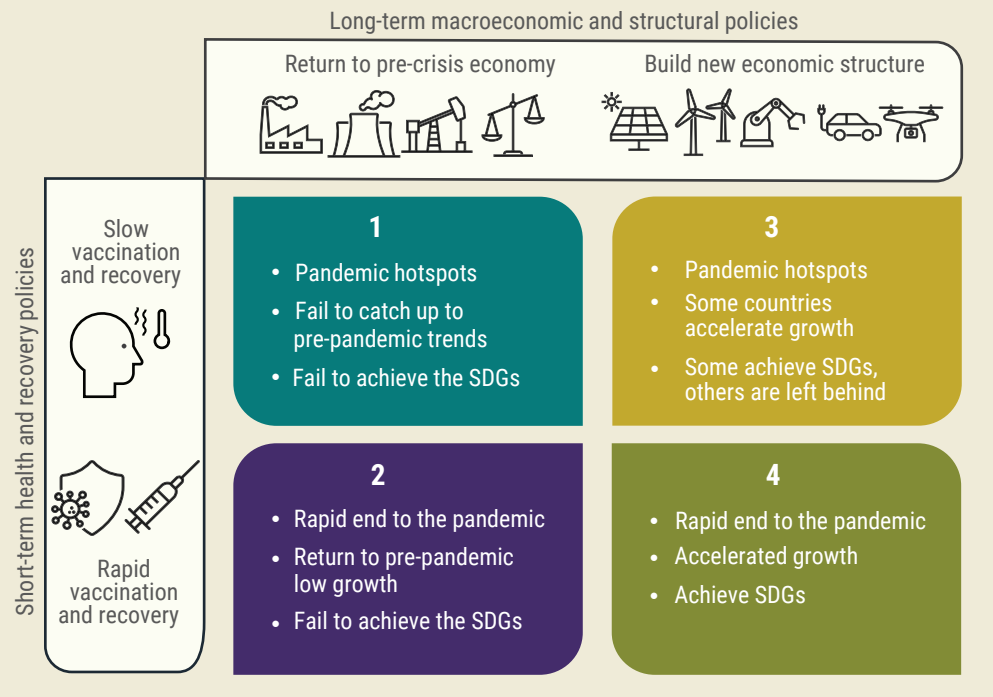
In summary, the scenarios above show that the path for any economy will depend on how well the country manages to control the transmission of the virus and what kind of strategies and policies it adopts regarding future economic growth. It is important for all countries to be aware of these options and take necessary measures for embarking on the optimistic fourth scenario, which is most conducive to achieving the SDG targets regarding sustained economic growth.

Scenarios and outlook for economic growth

As the pandemic lingers, the immediate outlook for sustained economic growth will depend, at first, on how quickly vaccines are made available to all countries and how quickly these vaccines are administered. A durable end to the economic crisis facing every country requires an end to the health crisis first, followed by economic support and, in the longer term, much faster productivity growth. The outlook points to highly unequal prospects across countries in this regard.

Despite the efforts to limit the rates of infections using lockdown and other health measures, many countries have seen a resurgence of the virus in non-vaccinated communities (see chapter III for a discussion on health measures). Countries with advanced progress in vaccinations have been better able to bring and keep the pandemic under control. The

Figure IV.11
Short- and long-term drivers of the different post-pandemic outlooks



Source: UN DESA.

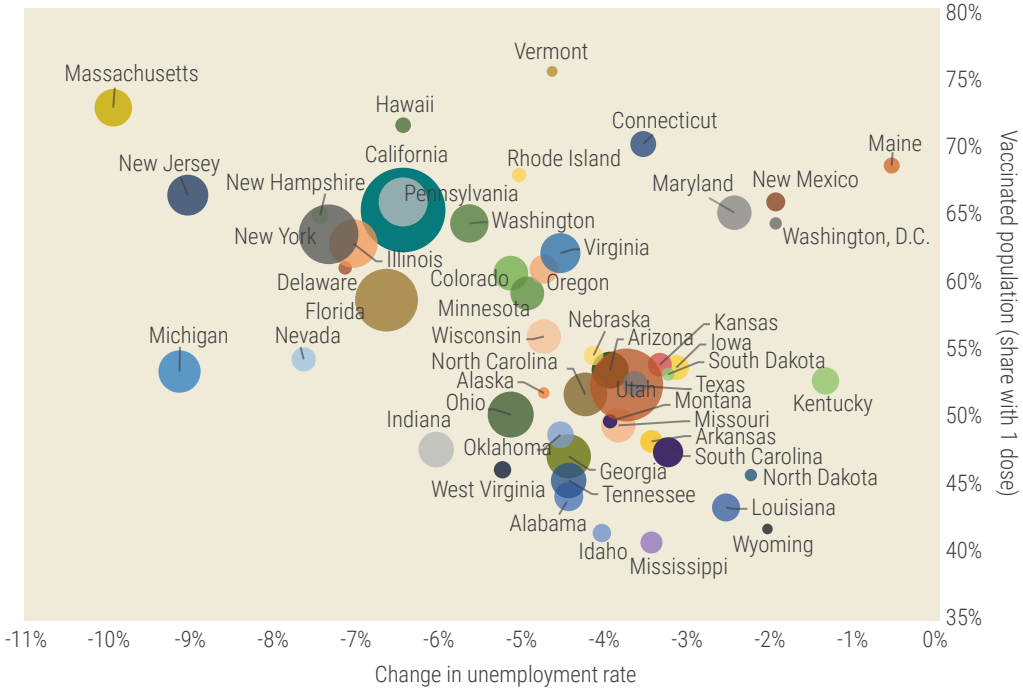
world's largest economies have invested heavily in vaccination efforts and as a result are starting to recover from the health and economic crisis. The recovery in these economies will drive the 5.4 per cent projected growth of the global economy in 2021 (United Nations, 2021c). At the same time, the pandemic is far from over for most countries. In populous emerging economies, such as Brazil and India, the pandemic continues to require lockdowns and economic sacrifices. In most smaller developing countries, the pandemic continues to be a burden. The ongoing spread of the virus is a threat even to countries that now have the pandemic under control. Some Asian and European countries are already dealing with a resurgence of infections as new variants of the virus emerge.

As the *World economic situation and prospects as of mid-2021* argues, timely and universal access to vaccines is the most important pathway towards an inclusive and resilient recovery (United Nations, 2021c). Countries like the United States of America are rapidly vaccinating their populations and have transitioned to fewer restrictions and normalization of their economies. In fact, the United States shows that there is no "original sin" with respect to pandemic recovery: a robust vaccination and reopening programme can overcome a poor initial phase of pandemic control. State-level data for the United States also shows a positive correlation between vaccination rates and job market recovery (figure IV.12).

Unlike developed countries that have ample access to vaccines, vaccination in developing countries remains at the mercy of the larger economies that could afford to develop or purchase vaccines early on. The WHO reports that over 50 per cent of the population in high-income countries have been vaccinated as of 4 August 2021. In comparison, just 1.4 per cent of the population of low-income countries have been vaccinated.[3] These countries

3 See WHO Coronavirus (COVID-19) Dashboard, available at https://covid19.who.int/.

Figure IV.12
Vaccinated population and unemployment reduction in the United States, June 2020–June 2021



Source: UN DESA, based on data from United States' Centers for Disease Control and Prevention and Bureau of Labor Statistics.

Note: Bubble size represents each State's total labour force in June 2021.

are being left vulnerable to COVID-19 and its emerging variants and will likely experience a much slower recovery out of the crisis (for more on the inequality aspects of the recovery, see chapter V). Even countries that managed to contain the spread of the virus early on, such as New Zealand and Singapore, are dependent on vaccines to establish a robust path to reopen their economies. The recovery is not yet inclusive or robust, and there is a widening gap between the outlooks for developed and developing countries.

Given the importance of vaccination for economic recovery, it is unfortunate that recent scenarios for vaccine deployment by the end of 2021 show a disappointing outlook (Agarwal and Gopinath, 2021). Under a business-as-usual scenario of vaccine deployment, only 46 per cent of the world population will be fully vaccinated by the end of this year (figure IV.13). In the worst-case scenario, where vaccine supply is severely constrained, less than a third of the world population would be vaccinated. However, there is a possible path to reaching nearly 70 per cent of the world population by the end of 2021. It requires drastically increasing the effective supply of vaccines by a combination of "dose-stretching" and providing large donations of surplus vaccines to countries in need.[4]

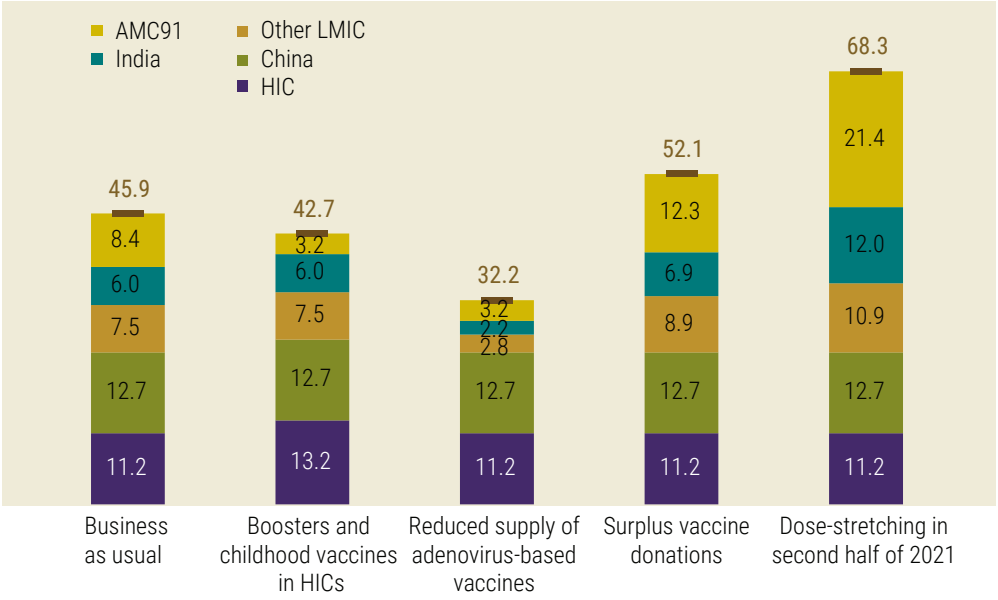
Regardless of the vaccination scenario that is realized in 2021 and beyond, countries that lack access to the vaccine in sufficient quantities will need to maintain the proper balance between stimulating economic activity and enacting measures to control the spread of the virus. Maintaining this balance without vaccinations is difficult and risky. Even countries that succeeded in containing the disease in 2020 and were able to keep their economies open are experiencing new outbreaks and the need for new lockdown measures.

4 "Dose-stretching" refers to extending the time between first and second doses of the vaccine to provide immunity more quickly to a greater number of people.

Figure IV.13

Fraction of the world population fully vaccinated by the end of 2021, by country, country grouping and scenario

Percentage



Source: UN DESA, based on data from Agarwal and Gopinath (2021).

Note: AMC91 stands for the group of 91 low- and middle-income countries (excluding India) that are eligible to access the COVAX facility. Other LMIC refers to the group of low- and middle-income countries excluding China, India and AMC91 countries. HIC refers to high-income countries as per World Bank income classifications. For a description of each scenario, see Agarwal and Gopinath (2021).

The possibility of more virulent strains of the COVID-19 virus emerging in the future makes the need for widespread vaccination more urgent.

Scenarios and outlook for social inclusion and decent work

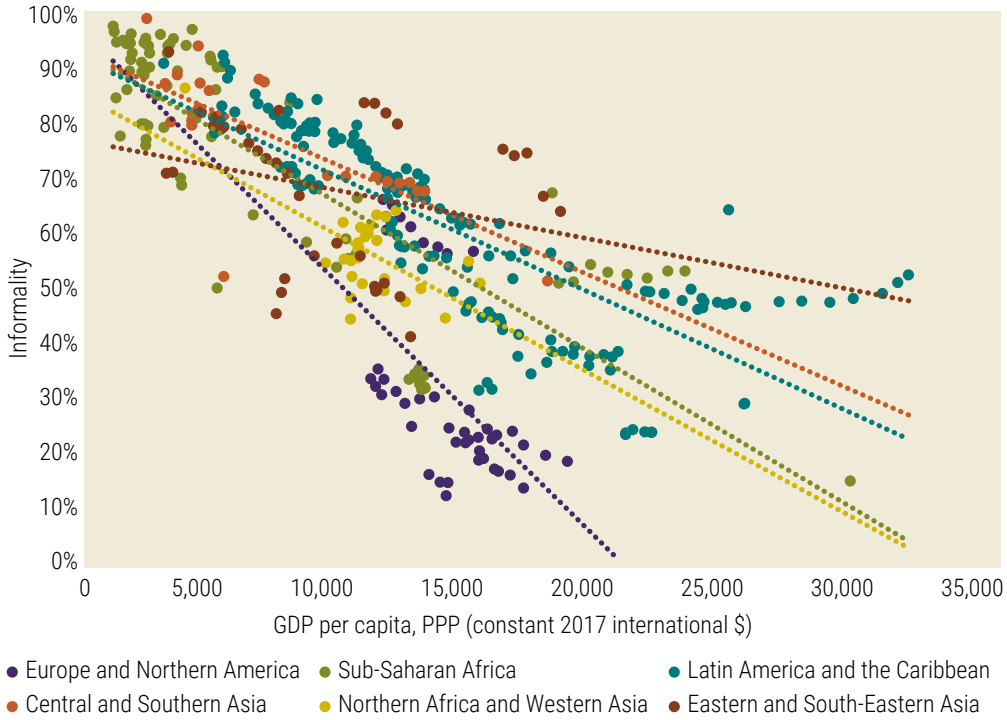
The outlook for the rapid improvement in the quality of work in the post-COVID-19 period is contingent on how much the pandemic affected national labour markets. The outlook for social inclusion and decent work also depends on a robust recovery that reduces informality.

The effects of the pandemic on workers have been magnified by the high incidence of informality. As discussed above, informal labour markets in many developing countries did not serve their traditionally countercyclical role, due to the widespread impact of the pandemic. If the recovery is robust in formal labour markets, it is likely that the fall in informality will be more pronounced than historical trends suggest.

In many countries there is a strong association between per capita incomes and rates of formal employment (figure IV.14). The outlook for sustained growth and structural change will provide the conditions for a reduction in informality and drive long-term trends for three main reasons. First, in a context of economic stability, the risks from labour market rigidities are lower, which gives employers an incentive to favour formal employment. Second, lower unemployment rates increase workers' bargaining power and therefore their chances of negotiating formal employment. Finally, economic growth benefits the earnings of the self-employed and helps them afford the costs of formalization (Amarante, 2021).

Therefore, the outlook for inclusive growth and decent work will depend on similar factors that will determine how quickly economies can accelerate economic growth. Looking ahead, the outlook for the quantity and quality of employment in the immediate aftermath of the pandemic is one of modest recovery, but with a high degree of uncertainty.

Figure IV.14
Correlation between informality and GDP per capita, by region, 2008–2020 average



Source: UN DESA, based on Amarante (2021).

The ILO has prepared three alternative scenarios for the recovery of the labour market compared to the pre-pandemic level of employment, although all possible paths involve a persistent work deficit in the coming years, as the recovery will take time (International Labour Organization, 2021).

The baseline scenario for employment assumes a strong recovery starting in the third quarter of 2021, due to vaccination and the positive impact of lockdowns in early 2021. In this scenario the speed of recovery is assumed to match the pace seen in the third quarter of 2020. In subsequent quarters, the recovery is assumed to match historical trends.

In the pessimistic scenario, employment losses total 130 million from pre-pandemic levels, driven by much weaker economic growth compared to the baseline scenario. It also assumes a strong scarring of the labour market from the economic contraction as those who lost jobs find it difficult to return to work.

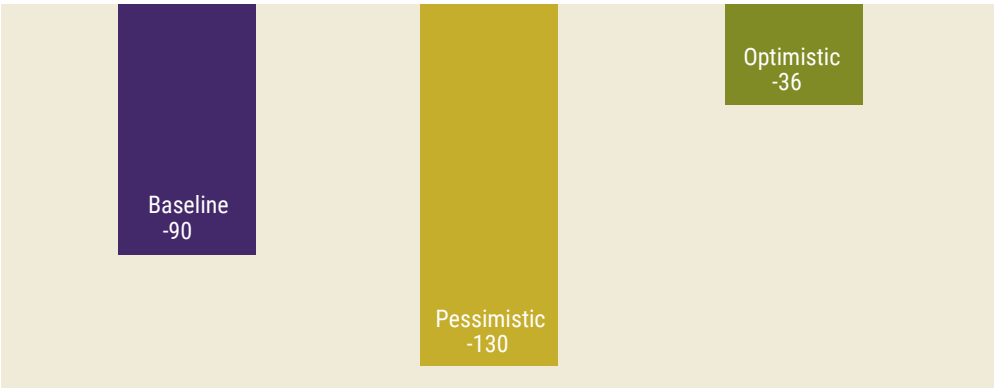
An optimistic view sees employment losses limited to 36 million equivalent full-time jobs relative to pre-pandemic employment levels, driven by faster recovery and growth compared to the baseline scenario. It also assumes that workers do not have significant difficulties in finding jobs and that those who have lost jobs during the pandemic manage to quickly return to previous or new work (figure IV.15).

Clearly, the pace of economic growth is important in determining which labour market scenario is realized. This in turn will depend on the widespread availability of vaccines. Robust vaccination campaigns will determine the pace of economic recovery in 2021 and beyond, as well as the size of fiscal and other support provided.

In each of the three labour market scenarios, there is a disproportionate impact on women, young workers and low-skilled sectors, and the existing gaps in access to decent

Figure IV.15
Estimated job losses in 2021 relative to pre-pandemic (Q4 2019) levels, by scenario

Millions of equivalent full-time jobs



Source: UN DESA, based on data from ILO (2021).

work will rise. The scenarios for recovery foresee increases in the already persistent labour market inequalities that will further undermine social inclusion. The ILO concludes that women, young people and low-paid and low-skilled workers will not see a quick recovery in employment. These are also the groups most at risk of finding themselves detached from labour markets.

Scenarios and outlook for sustainable economic growth and environmental decoupling

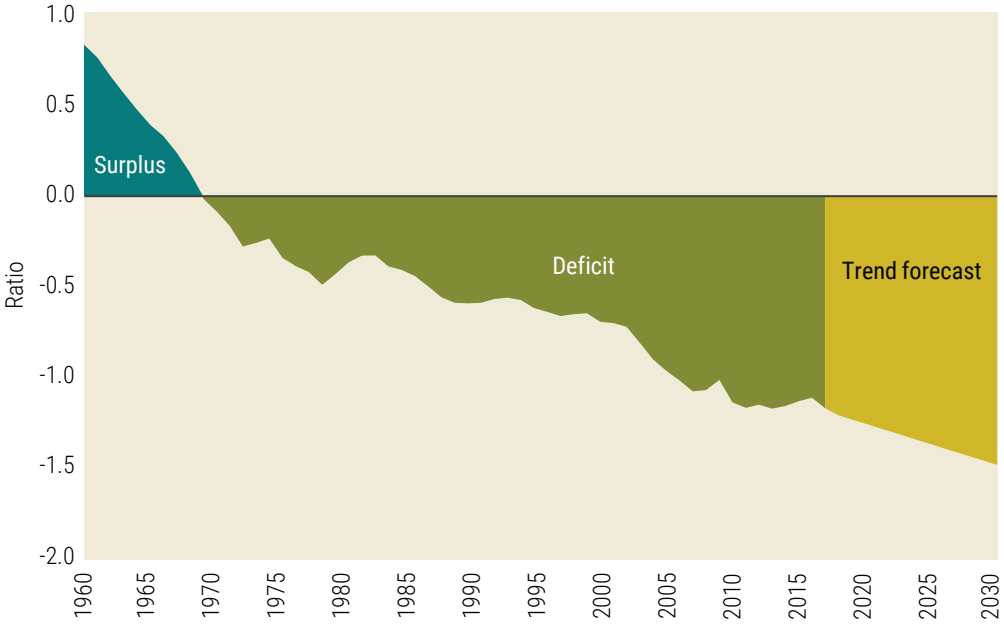
Improving the outlook of sustainable economic growth will require a reversal of the current trends through new ways to produce, process, use and manage natural resources. However, decoupling economic activity from resource material use is not enough to ensure a sustainable outlook. Resource extraction and processing account for more than half of global climate change impacts (International Resource Panel, 2019). For example, the agriculture, food and beverage, and building and construction sectors accounted for nearly 70 per cent of the world's total material footprint in 2015, while being among the most intensive greenhouse-gas-emitting sectors (United Nations Environment Programme, 2021b). Production of chemicals, steel and cement is concentrated in emerging market and developing economies and accounts for 70 per cent of total industrial CO_2 emissions.

The result is an unsustainable pressure on the Earth's biophysical capacity that has been worsening during the last six decades. The ecological footprint of human activity—human demand from the biosphere—has outpaced the Earth's ability to recover since 1970 (figure IV.16). The trend suggests that this is likely to worsen as population and per capita incomes continue to grow.

It is important, therefore, to decouple overall well-being from overall environmental impact. This can be achieved by simultaneously reducing the impact that economic activity has on the environment ("impact decoupling") and increasing the benefit that any resource that is extracted gives in terms of economic growth and, more broadly, well-being ("well-being decoupling") (figure IV.17).

It is conceivable, therefore, to trace the possible resource decoupling scenarios regarding the sustainability of economic growth, as called for in SDG 8. The first scenario

Figure IV.16
Ratio of per capita ecological footprint relative to biocapacity, 1961–2017 and projections to 2030



Source: UN DESA, based on data from Global Footprint Network.

Note: Footprint and biocapacity divided by the population, measured in global hectares per person. The trend forecast is based on a linear extrapolation of the 1970–2017 period.

is one where the historical trends are maintained, while a more optimistic scenario posits decoupling sufficient to achieve the Goal's sustainability targets (see box IV.3 for a description of how resource decoupling is important to achieving net zero emissions).

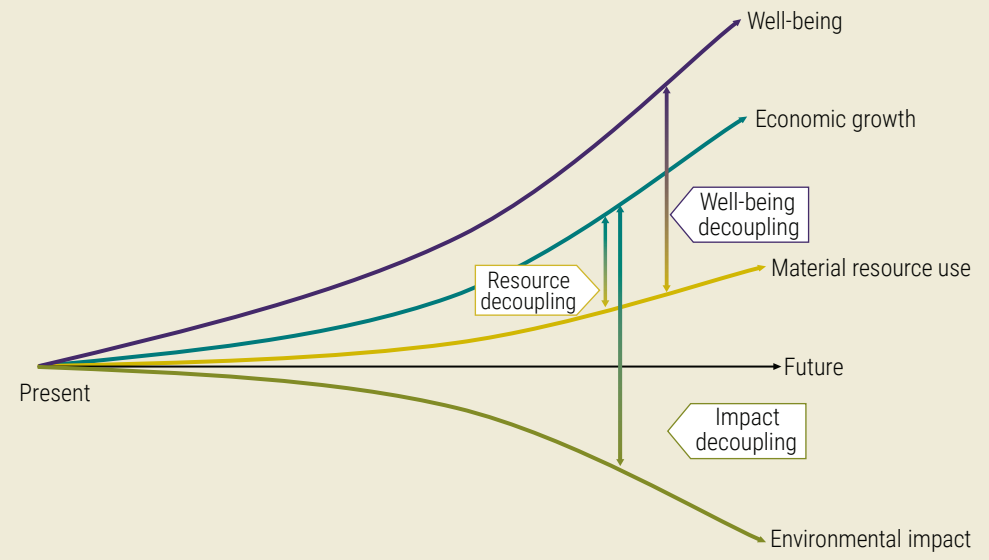
The business-as-usual scenario extrapolates from historical trends, with no significant policy changes to achieve greater resource efficiency or improvements in sustainable production and consumption that would reduce material use. According to model simulations produced by the International Resource Panel (International Resource Panel, 2019), a continuation of historical trends of production, consumption and policy structure would result in a doubling of material extraction between 2015 and 2060. The main drivers in this scenario are economic and population growth during this period and the additional demand for construction and infrastructure associated with growth. Resource use per capita would increase by over 55 per cent in the same period. Low-income countries that export raw materials would see the highest rates of material extraction growth.

The alternative scenario is one where resource efficiency gains and changes to production and consumption patterns are sufficient to decouple growth and well-being from resource and environmental impacts, as called for in SDG target 8.4[5] In this scenario, sustained and increasing economic growth is possible while achieving resource and well-being decoupling. As a result, the world economy sees net positive benefits beginning in 2030.

The differences between the two scenarios are stark. In the optimistic scenario, the successful decoupling of economies and resource use leads to higher incomes while reducing the environmental impact. The business-as-usual scenario has similar increases in income but comes at a much higher environmental cost (table IV.1).

5 For a full technical discussion of the drivers of each scenario, see International Resource Panel (2019).

Figure IV.17
Decoupling outcomes from resource and environmental impacts to achieve the sustainability targets of SDG 8



Source: Adapted from International Resource Panel (2017, 2019).

Policies and actions needed to ensure a positive scenario

The COVID-19 pandemic has affected every country, amplifying some negative trends or, in the case of environmental impact, offered a respite. During the COVID-19 pandemic, some countries managed to mitigate the economic impact of the virus with a combination of rapid and effective responses to the pandemic that limited the need to shut down their economies. For those unable to take similar action, the need to contain the pandemic had deep and ongoing economic consequences. For everyone, social safety nets, new education initiatives, and strong and effective health systems were important assets.

As the world starts to emerge from the worse of the pandemic, achieving the goal of inclusive and sustainable growth for all by 2030 remains a challenge. Scenarios for the recovery show that only with a drastic acceleration of progress in the economic, social and environmental dimensions can Goal 8 be achieved.

Accelerate growth by controlling the pandemic and investing in the future

Faster economic growth will require policies that reverse the long-term trend of slowing productivity and wage growth, in both developed countries and emerging and developing economies. Large developed and emerging economies will experience high growth as they reopen. It is important that all countries ride this wave of high growth to build the foundation of high and sustained growth for all.

Accelerate access to vaccines and treatments to all countries. There is no doubt that protecting the population from COVID-19 is the best way to restart economic activity and begin the economic recovery. Vaccination offers the best hope for quickly ending the

Table IV.1
Key drivers and outcomes of two outlook scenarios for resource decoupling

Business-as-usual scenario	Optimistic scenario
Outcomes	
➤ Global material resource use doubles in the 2015–2060 period ➤ Material extraction growth is highest in low-income raw material producers ➤ A slight well-being decoupling is possible due to some convergence in technology and productivity between countries	➤ Compared to the BAU scenario, global resource extractions grow 25 per cent slower per year, and amount to 25 per cent less extractions overall compared to BAU ➤ Per capita resource use converges across different country groups ➤ Natural resource use is substantially decoupled from economic outcomes (income, energy services and food) ➤ Global resource productivity increases by 27 per cent by 2060
Policies needed to achieve the outcomes	
➤ Historical trends continue ➤ No significant policy changes are needed to achieve greater resource efficiency ➤ Improvements in sustainable production and consumption would not be achieved at a level that reduces material use ➤ Continued economic and population growth leads to additional demand for construction and infrastructure	➤ Large gains in resource efficiency are achieved ➤ Other SDGs are simultaneous impacted ➤ Greenhouse emissions are consistent with 2.0°C warming ➤ The rate of energy efficiency improvements is doubled by 2030 relative to BAU ➤ The expansion of land used for agriculture is limited ➤ Crop-based biofuels are eliminated ➤ Zero net global deforestation is achieved by 2030 ➤ Water stress from irrigation is substantially reduced ➤ Consumers shift to healthy diets and reduce food waste

Source: Adapted from International Resource Panel (2019).

pandemic and requires the rapid acceleration of vaccine production and distribution to all countries. Individual countries have been doing their best to procure and deliver vaccines to their populations; and support from other countries and international organizations has been increasing rapidly. At the global level, the Access to COVID-19 Tools (ACT) Accelerator represents the community's efforts to accelerate the development, production, and equitable access to vaccines, tests, and treatments.[6]

Global support for fiscal capacity to sustain economic activity during the crisis is imperative. National and global action to end the pandemic is just the beginning of the path to recovery. Swift and bold policy interventions in developed countries have mitigated their economic crisis. In developing countries with more limited fiscal capacities, a longer economic crisis can turn into a lost decade of growth (United Nations, 2021c). Fiscal support for workers and private firms, and for social programmes, needs to be maintained in sufficient quantity to soften the economic blow. But these policies will also need to be sustained over longer periods to help recovery in a way that reduces poverty and inequality

6 See https://www.who.int/initiatives/act-accelerator/about.

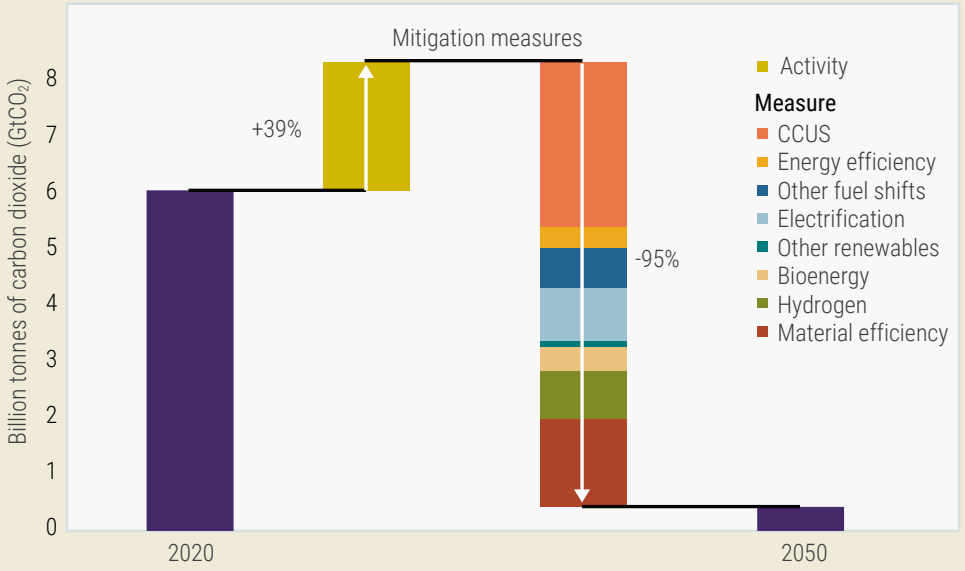
Box IV.3

The ambitious path towards net zero emissions requires significant gains in material efficiency

The International Energy Agency has published a plan for achieving sustainable economic growth by transitioning to global net zero emissions (NZE) by 2050. Notably, this path is consistent with robust economic growth and stable and affordable access to energy (International Energy Association, 2021). In the NZE vision, nearly one fifth of the reduction in emissions needed must come from greater material efficiency (figure IV.3.1). Decoupling and stabilizing material demand from economic growth to achieve NZE is possible through a combination of electrification of transportation and improving building standards to reduce material demand, and by making progress towards sustainable consumption and production to more than offset the additional material demand for the infrastructure of the future.

Figure IV.3.1

Mitigation measures needed to achieve net zero emissions by 2050



Source: Adapted from IEA (2021).

Note: CCUS refers to "carbon capture, utilization and storage".

(see chapter II for a discussion on poverty and hunger, and chapter V for a discussion on inequality).

Accelerate investments on structural change with a strong focus on inclusion and environmental sustainability. Looking beyond the crisis, achieving sustained economic growth as called for in SDG 8 requires a realignment of the policy priorities to focus on economic diversification and transformative changes. While these policies have a longer-term objective of structural transformation, immediate actions will have immediate results that will set the foundation for even greater change. SDG target 8.2 calls for "diversification, technological upgrading and innovation," as the central strategy for reaching the objective of higher economic productivity and job creation. This is notable as a policy direction, as it represents an important change from the conventional growth and trade models that call for specialization and achieving higher growth levels.

Make growth more inclusive by investing in equality and new opportunities

SDG 8 is built on the foundation that productivity growth on its own is not sufficient for meaningful progress. Growth and development also need to be inclusive and sustainable. This is another important guidance for policy design, as it challenges the outdated notions of growth-based development models that assume the poor will automatically attain higher incomes. SDG 8 is premised on the knowledge that such trickle-down effects are often a mirage (International Labour Organization, 2019). As such, social aspects of transformation are central to translating growth into broader progress across many other SDGs.

As the ILO explains in their report on SDG 8 progress, Governments must coordinate simultaneous efforts on various aspects of inclusive growth to achieve meaningful change (International Labour Organization, 2019). This broad perspective is the central guiding principle of policies to make growth more inclusive. The outlook will be dominated by the way in which countries prioritize social objectives in their fiscal and development plans. Policy actions must all be taken simultaneously as the objectives are mutually reinforcing. Reducing child labour, for instance, can help end the cycle of low education and low productivity that entrenches poverty for millions (see chapter II of this report). Social policies that obviate the need for short-term child labour in families struggling during the crisis would help prevent the long-term damage caused to children.

A universal perspective still requires targeted actions. Specific priorities to make fundamental progress on all aspects of employment include:

- Creating more jobs through economic support and investment;
- Creating rules and incentives for faster progress towards equal pay for equal work;
- Fully incorporating youth and those with disabilities into the labour force by training and matching workers with job opportunities;
- Making working conditions safe and secure;
- Strengthening worker rights, including bargaining rights; and
- Providing social protection, including childcare and unemployment insurance.

Reduce the legislative, fiscal, and economic incentives that exist for informality. The outlook for greater social inclusion and decent work is complicated by the entrenched levels of informality and the high fiscal burden of recovering from the pandemic. Social safety nets and other programmes may be at risk of premature austerity and other adjustments.

Build a path for young people to enter the job market as early as possible. The high rates of youth unemployment are a particular priority that can give immediate and significant benefits that can be gained, analogous to a demographic dividend.

Decouple growth from resources with structural and technological change

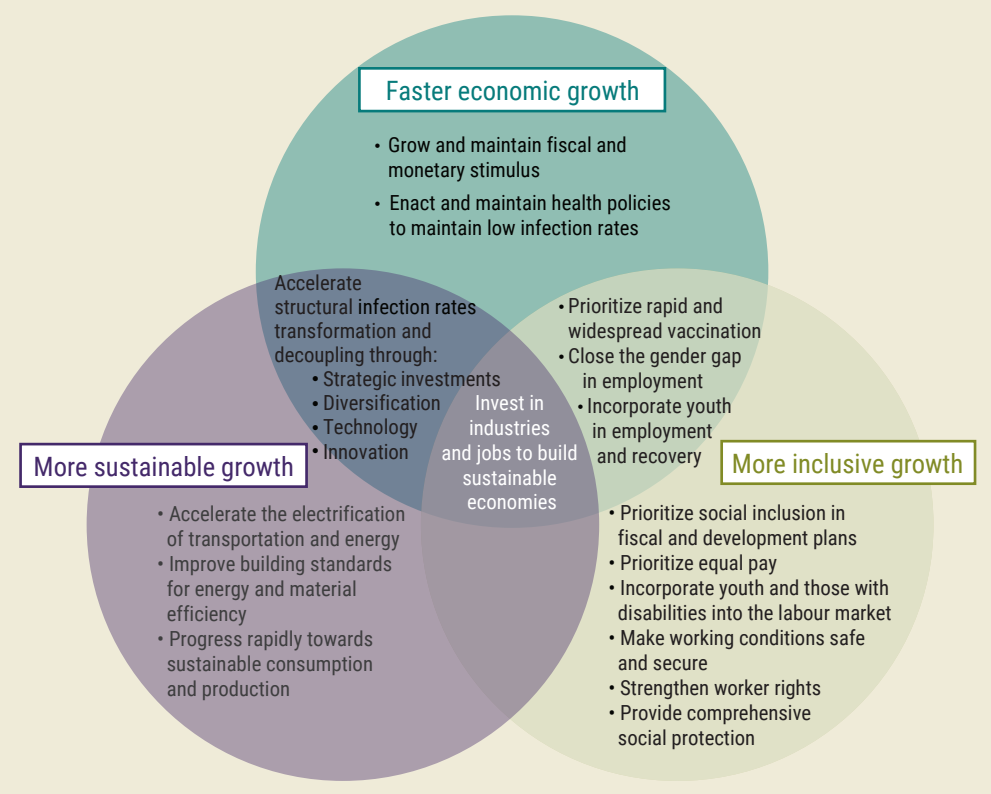
Meaningful improvement to the sustainability of economic growth will require drastic action to introduce technological and structural transformation in industries with large ecological impact. One possible scenario calls for a decoupling of material consumption from economic growth through sectoral improvements and with fast progress towards sustainable consumption and production. The path to this future requires using the recovery from the pandemic as an opportunity to make investments in new economic structures that will improve on the environmental impact of growth and make growth more inclusive.

Shift to a knowledge economy. Businesses can take advantage of the many opportunities to develop knowledge-based products and technologies that can be delivered to customers digitally and can be scaled globally. Some of these opportunities include ways to transform energy and transportation to be less reliant on fossil fuels and other natural resources, another objective of SDG 8.

Design public policy to make economies and societies "greener". Reducing the environmental impact of growth and well-being requires structural and behavioural changes, which in turn depend on policy changes underpinned by civil society and the private sector. Policies should be guided by the overarching objectives of combatting climate change.

Promote sustainable production and consumption patterns. Progress in the environmental objective of SDG 8 (and the broader goal of environmental sustainability in the 2030 Agenda) can be accelerated by changing how products and services are produced, by reducing consumer demand for resource-intensive products, and through significant technological innovations in the highest polluting sectors such as transportation, construction, and electricity generation. Success will also depend on the creation of a cycle of reuse, recycling and waste management that closes the material use loop (box IV.4). At the international level, changing consumption and production patterns to achieve sustainable growth requires consensus and partnership.

Figure IV.18
Policy priorities to advance each dimension of SDG 8 and interlinked impacts



Source: UN DESA.

Box IV.4

Lithium-ion batteries, and how to reduce material extraction and demand

The growing importance of lithium-ion batteries in energy generation and transportation, as well as in consumer electronics, makes it important to manage how resources are used in their manufacture.

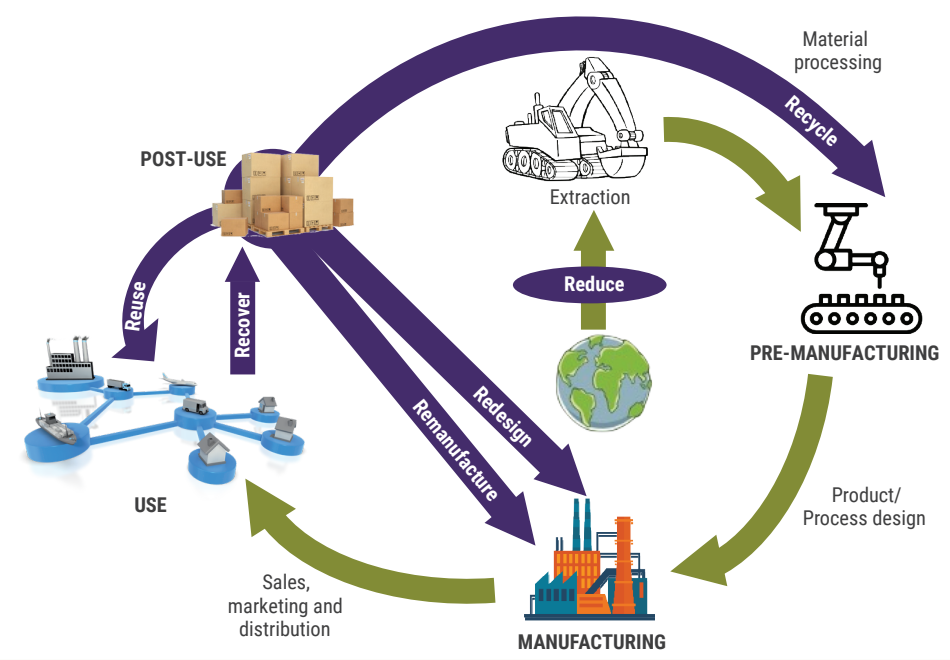
At the same time, lithium-ion batteries have become a critical pillar for building a fossil fuel-free economy, by enabling cleaner methods of transportation and energy production and by creating a new source of demand for natural resources that could be harmful to the environment. To tilt the balance between environmental benefit and impact in favour of greater sustainability, it is important that the international community help advance more powerful and affordable lithium-ion batteries that are manufactured and used in a closed-loop resource system.

A closed-loop material flow system expands on the idea of "reduce, reuse, recycle" and aims to make battery manufacturing sustainable. Closing the loop also requires preventing batteries from ending up in landfills, redesigning batteries to be more environmentally friendly, and remanufacturing batteries to give them new life (figure IV.4.1). Such a system is a guide for all manufacturing as a way to achieve well-being decoupling by vastly increasing the productivity of extracted resources.

Source: Kawamura and others (2021).

Figure IV.4.1

Achieving the 6Rs (reduce, reuse, recycle, recover, redesign and remanufacture)



Source: Adapted from Jawahir and Bradley (2016).

Scale up research and development. Finally, to support decoupling and greater transformation towards sustainable growth, public policies should aim at achieving significant increases in investment in research and development and the implementation of environmentally friendly technologies. A sustained effort towards innovation requires building effective national innovation systems (United Nations, 2018).

Integrate and coordinate policy action to achieve greater impact

Many of the policies and actions laid out in the sub-sections above can benefit multiple dimensions of SDG 8 (see figure IV.18 on p. 26).

It is possible, for instance, to accelerate economic growth while decoupling it from the use of natural resources by investing in new industries and by making technological improvements to existing processes. In the same way, it is possible to achieve faster growth that is also more inclusive of women and young people, and in a way that is less harmful to the environment by investing in education and training of skills that are useful in new green economic sectors and industries. It will be important to take advantage of policies that can help achieve several targets of SDG 8 simultaneously.

Chapter V

Reduce inequality within and across countries

Introduction

Reflecting the pressing need to tackle persistent inequalities and exclusion, the 2030 Agenda for Sustainable Development adopted "leaving no one behind" as a guiding principle for the international community's effort to pursue sustainable development. Adopted by States Members of the United Nations in 2015, the document states: "As we embark on this great collective journey, we pledge that no one will be left behind. Recognizing that the dignity of the human person is fundamental, we wish to see the Goals and targets met for all nations and peoples and for all segments of society. And we will endeavour to reach the furthest behind first" (United Nations, 2015, para. 4).

This collective commitment is a response to a multitude of persistent divides between and within countries. From a topic that for years was of interest mainly to small circles of policymakers, activists, and academics, inequality has thus been accepted as a top priority by the Governments and the international community.

Tackling inequalities is central to the achievement of every one of the 17 Sustainable Development Goals (SDGs). Unequal access to economic opportunities, adequate food and nutrition, quality health-care services, and decent jobs directly undermines the achievement of SDGs 1, 2, 3 and 8—those covered by *Sustainable Development Outlook 2021*.

The purpose of the chapter is to analyse the progress so far regarding SDG 10, the impact that COVID-19 has had and continues to have on this progress, and to identify policies that can help to reach this Goal in the coming years. The chapter focuses on SDG targets 10.2, 10.3 and 10.4, which call for empowering and promoting the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion, economic or other status (SDG 10.2); ensuring equal opportunity and reducing inequalities of outcome (SDG 10.3); and adopting policies, especially fiscal, wage and social protection policies, and progressively achieving greater equality (SDG 10.4).

Building on the findings of the *Sustainable Development Goals Report 2021* (United Nations, 2021b), this chapter first discusses the pre-pandemic inequality situation, followed by an in-depth discussion of the immediate and longer-term within- and between-country distributional effects of the COVID-19 pandemic. The chapter then presents scenarios of within-country income inequality, based on different assumptions regarding the duration of the pandemic. It ends with a section on policy options for addressing inequality in the light of the transmission channels emphasized in this chapter.

Pre-COVID-19 inequalities

Changes in within- and between-country inequalities before COVID-19

During the decade following the global financial crisis (2010–2019), the inequality situation was improving according to some measures. As reported by the Sustainable Development Goals Report 2021, there was a fall of the average Gini index—a popular measure of income inequality—for emerging market

and developing economies. In fact, during this period, about 55 per cent of the global population lived in countries that saw a fall in income inequality, up from the 25 per cent during 1990–2009 (figure V.1). Among the 98 countries with available data, 63 countries saw a decrease in inequality during the recent decade. These include the populous Asia-Pacific countries, which served as the main driver of the turnaround in inequality. Table V.1 groups the countries based on the extent of income-inequality change they experienced during 2010–2019. Despite the turnaround, inequalities persist, and across countries, on average, 13 per cent of the population still live below 50 per cent of the national median income. In particular, within-country inequalities increased regarding the measures of "enhanced capabilities"—such as quality health and education at all levels, access to modern technologies, and resilience to unknown new shocks—even though inequalities decreased regarding "basic capabilities"—such as early childhood survival, primary education, access to entry-level technology, and resilience to recurrent shock (United Nations Development Programme, 2019).

Similarly, between-country inequality also persists. While there has been some reduction in the difference in average incomes across countries, driven largely by rapid growth of emerging economies in Asia, many developing countries still see a staggering income gap with developed countries. For example, the average income in North America is 16 times higher than that in sub-Saharan Africa (United Nations, 2020a).

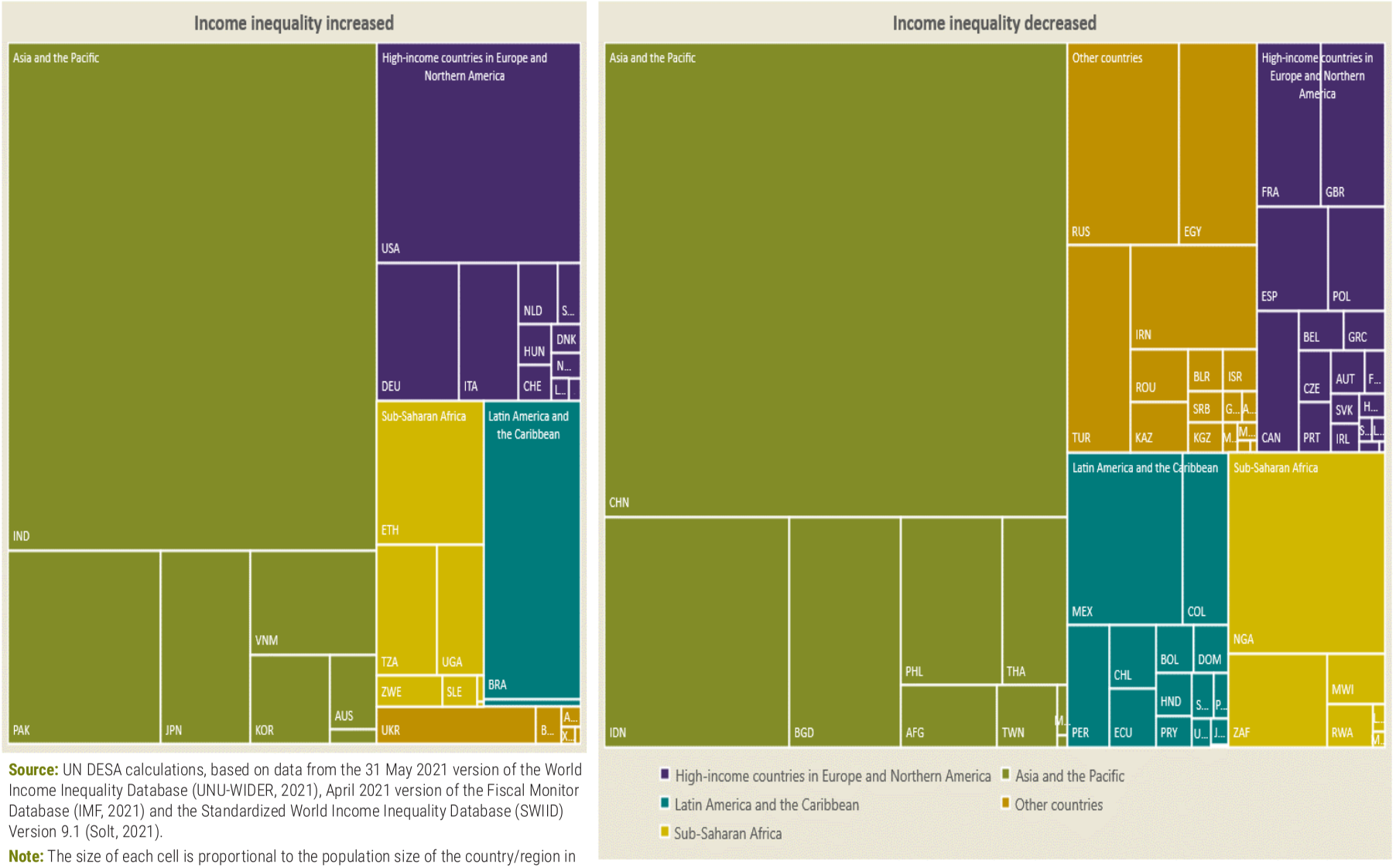
Table V.1
Extent of income-inequality change across countries, 2010–2019

Within-country/ region income inequality change (Gini point)	Countries/regions	Number of countries/ regions	Total population	Share in total population of countries/ regions with sufficient data
Decline: >=4	Barbados; Dominican Republic; Egypt; Georgia; Honduras; Lesotho; Republic of Moldova; Nigeria; Republic of North Macedonia; Rwanda	10	345,342,861	5.4%
Decline: >=2 and <4	Afghanistan; Belarus; Bolivia (Plurinational State of); Colombia; Croatia; Djibouti; El Salvador; Israel; Mexico; Paraguay; Peru; Poland; Slovak Republic; South Africa; Taiwan Province of China; Thailand; Uruguay	17	495,654,335	7.7%
Decline: >0 and <2	Armenia; Austria; Bangladesh; Belgium; Bhutan; Canada; Chile; China; Czech Republic; Ecuador; Estonia; Finland; France; Greece; Iceland; Indonesia; Iran (Islamic Republic of); Ireland; Jamaica; Kazakhstan; Kyrgyzstan; Latvia; Malawi; Malta; Mauritius; Mongolia; Panama; Philippines; Portugal; Romania; Russian Federation; Serbia; Slovenia; Spain; Turkey; United Kingdom of Great Britain and Northern Ireland	36	2,659,221,709	41.3%
Increase: >0 and <2	Australia; Costa Rica; Cyprus; Denmark; Germany; Greenland; Hungary; India; Italy; Japan; Montenegro; Netherlands; New Zealand; Norway; San Marino; Sierra Leone; Sweden; Switzerland; Uganda; Ukraine; United States of America; Viet Nam	22	2,251,684,175	35.0%
Increase: >=2 and <4	Brazil; Eswatini; Republic of Korea; Lithuania; Luxembourg; Pakistan; Tanzania; Zimbabwe	8	556,537,142	8.7%
Increase: >=4	Albania; Bulgaria; Ethiopia; Kosovo; São Tomé and Príncipe	5	123,912,616	1.9%

Source: UN DESA calculations, based on data from the World Income Inequality Database (UNU-WIDER, 2021), the Fiscal Monitor Database (IMF, 2021) and the Standardized World Income Inequality Database (SWIID) (Solt, 2021). See figure V.1 for more details about the data.

Figure V.1

Geographic distribution of within-country inequality changes, by region, 2010–2019



Source: UN DESA calculations, based on data from the 31 May 2021 version of the World Income Inequality Database (UNU-WIDER, 2021), April 2021 version of the Fiscal Monitor Database (IMF, 2021) and the Standardized World Income Inequality Database (SWIID) Version 9.1 (Solt, 2021).

Note: The size of each cell is proportional to the population size of the country/region in 2019. Changes in income inequality during 2010–2019 are calculated based on comparing average Gini for the period 2017–2019 with that for the period 2010–2012. Calculation of income-inequality changes for some countries used data from a shorter period due to limited data availability. The Asia-Pacific region denoted here excludes countries of Central Asia and West Asia.

Most of the data used was taken from the UNU-WIDER database. Data for Bangladesh, Democratic Republic of the Congo, Ethiopia, India, Iran (Islamic Republic of), Japan, Pakistan and the Philippines were obtained from the IMF database or SWIID, when such data for certain years were not available in the UNU-WIDER database.Japan, Pakistan and the Philippines were obtained from the IMF database or SWIID, when such data for certain years were not available in the UNU-WIDER database.

Drivers of inequality: megatrends and policies

Interactions of different megatrends that have major distributional effects—such as globalization, technological revolution, climate change, changes in institutions—are at the root of changes in inequality (UN DESA, 2020b). To illustrate, this section highlights some of the key megatrends and how they affect distributional outcomes.

Globalization. Transformation of economic structures brought about by globalization have created economic winners and losers. Increasing cross-border capital flows and more rigorous competition for jobs and customers worldwide have led to a higher return to footloose capital and higher wages for highly skilled workers, such as those working in knowledge-based sectors, including technology, communication and finance. Labour with lower levels of skill—typically more location-bound and subject to national regulations, such as agriculture, textile and low-value-added manufacturing—benefit less from, or are even adversely affected by, a more globalized economy.

Technological change. Rapid technological change is having differentiated job-replacement effects. Uneven access to technologies and connectivity to the digital economy have allowed some to prosper, while others fall behind. There is a rising concentration of market power, data and innovation capacity in the technology industry, while technological diffusion remains constrained.

Climate change. A vicious cycle has emerged between inequality and environmental degradation in general, and climate change in particular, because the adverse effects of the latter are disproportionately shouldered by vulnerable and disadvantaged population groups (Islam, 2015a; Islam and Winkel, 2017).

Changes in labour market institutions. Also aggravating inequality are sizeable informal sectors and shares of labour working under informal arrangements. Firms in the informal sectors tend to have fewer assets and access to financing, including government support, making them more likely to go bankrupt in economic downturns. The workers in these firms then find themselves helpless, because the social protection systems generally cover only workers of the formal sector.

Policies and prejudices. The inequality-increasing effects of the above-noted megatrends are often reinforced by policies. For example, urban-oriented policies make socioeconomic gaps between urban and rural areas persistent, whereas an increasing share of the global population are moving to cities, which are often more unequal than rural areas. Similarly, policies regarding social protection, education, labour market, trade, taxation, market competition, rural-urban integration, and climate change adaptation affect the outcomes regarding inequality. In addition, pervasive prejudice and discrimination against certain groups—including women, older persons, youth, ethnic and racial minorities, indigenous people, persons with disabilities and immigrants—exacerbate inequality. A vicious cycle emerges, with economic and political inequality reinforcing each other, leading to an "inequality trap" where policies aggravate inequality rather than mitigate it.[1]

Impact of COVID-19 on inequalities

The vicious cycle between inequality and COVID-19

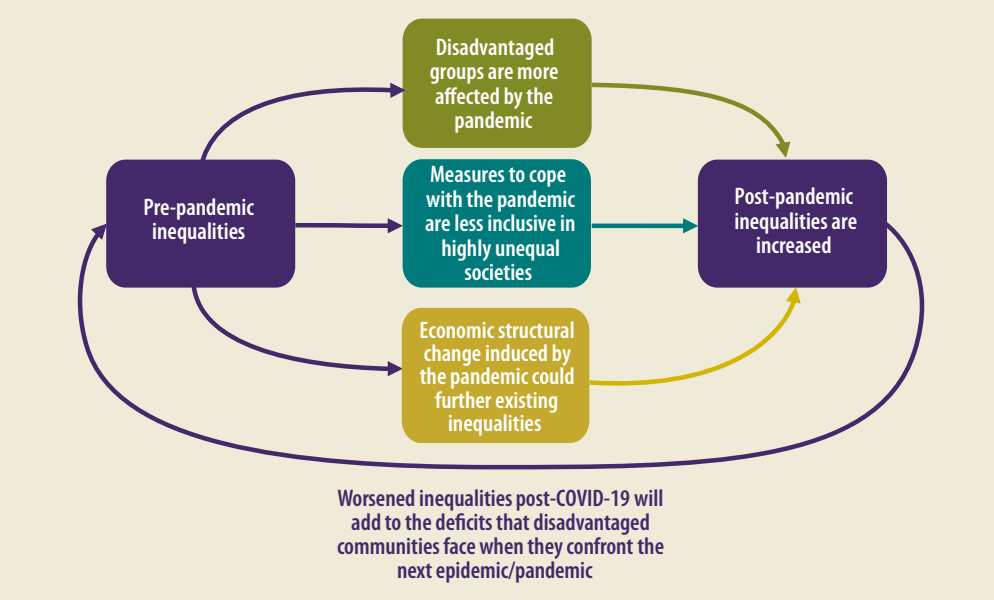
The COVID-19 pandemic has exposed the extent and severity of the inequalities the world is facing. As noted by the Secretary-General of the United Nations António Guterres in his 2020 Nelson Mandela Lecture, the pandemic "has been likened to an X-ray, revealing

1 See Islam (2015b) for the concept of "inequality trap." See also UN DESA (2020b).

fractures in the fragile skeleton of the societies". One of these fractures is the profound inequality plaguing our world. Furthermore, COVID-19 has given rise to a vicious cycle whereby pre-existing inequalities cause disadvantaged groups to be more affected by the pandemic, which then worsens their position, thus aggravating inequality. As summarized in figure V.2, disadvantaged groups are more exposed to immediate risks generated by the pandemic (elaborated in figure V.3) and are less protected by the policy measures aimed at coping with it. COVID-19 also accelerates structural changes that could put these groups in an even more disadvantaged position after the pandemic is over.

Figure V.2

The vicious cycle between inequality and the pandemic



Source: UN DESA.

Figure V.3

Unequal distribution channels of COVID-19's adverse effects

	More exposed to COVID-19	More susceptible to collateral health-related damages of the pandemic	Less represented in clinical trials for vaccine development	Less represented in policymaking processes	Greater loss of employment and income
Examples	Women account for 70 per cent of global health professionals	The pandemic has diverted resources away from the provision of essential sexual and reproductive health services	80 per cent of Pfizer, AstraZeneca and Moderna vaccine trial participants were of European descent, when Africa and Asia account for around 80 per cent of global population	Women account for only 25 per cent of COVID-19 task force members globally	In EU, 27.3 per cent of immigrant workers have teleworkable jobs, compared to the 40.9 per cent among native-born workers
	Greater barriers for persons with disabilities to implement basic hygiene measures	The pandemic has made it more difficult for people with disabilities to access services and support they need	Vaccine trials were disproportionately lacking in Africa, Asia and the Pacific and Latin America and the Caribbean	Globally, only 18 per cent of social protection and labour market measures in response to COVID-19 are gender sensitive	Cross-country data show that women are 24 per cent more likely to lose their job than men during the pandemic

Source: UN DESA.

COVID-19 impacts inequality through a number of transmission channels, including the following:

Greater COVID-19 exposure[2]

While the COVID-19 pandemic affects everyone, disadvantaged groups are generally more exposed to the virus than others. Women are particularly at risk as they provide most health-care services, accounting for 70 per cent of global health professionals (United Nations, 2021c). In some countries, women and racial and ethnic minorities are disproportionately represented in essential jobs and industries, many of which require close physical proximity with others (Centers for Disease Control and Prevention, 2020). Persons with disabilities also suffer greater health risks during the pandemic. There are greater barriers for them in implementing basic hygiene measures, such as hand washing, as sinks might be physically inaccessible (World Health Organization, 2020). It could be difficult for persons with disabilities to practice social distancing because of the additional support they need. Also, the pandemic has made it more difficult for them to access the services and support that they rely on, due to the diversion of medical attention and resources to dealing with COVID-19 (United Nations Educational, Scientific and Cultural Organization, 2021).

Another group that is at higher risk of contracting COVID-19 are those that suffer from housing deprivation, such as residents of informal settlements and homeless people (Klugman and Moore, 2020). Residents of informal settlements typically live in overcrowded spaces where proper social distancing is not possible. Public health crises show how outbreaks can very easily take place when viruses are introduced into crowded slum areas. For example, in the case of Mumbai, India, a mid-2020 study found that 57 per cent of residents in its major slum were exposed to COVID-19, compared to an only 16 per cent infection rate for people living outside the slums in the same areas (Biswas, 2020). As for homeless people, they simply cannot comply with the stay-at-home directive, and social distancing is difficult in shelters, thereby exposing them to greater COVID-19 risk.

Higher income and employment loss risks

Disadvantaged social groups are also affected disproportionately in terms of employment and income loss during the pandemic. Cross-country data from multiple regions show that there is a 24 per cent greater chance for women to permanently lose their jobs than men during the pandemic. The survey data show that women expect their labour income to fall by 50 per cent more than men's (Dang and Nguyen, 2021). The fact that women have been worse affected in the labour market during the COVID-19 crisis denotes a reversal of the historical pattern seen in past economic crises when male-dominated industries were worse hit (Alon and others, 2020). Figure V.4 shows that either during or in the aftermath of each recession in the past 40 years, men's unemployment rate in the United States of America rose faster than women's unemployment rate. The COVID-19 recession was an exception: women's unemployment rate rose faster than men's, although it was followed by a relatively quick narrowing. Some estimates suggest that if women and men were equally represented in sectors adversely affected by the pandemic, 112 million fewer women globally would have been at risk of losing their incomes or jobs (Berkhout and others, 2021).

2 This section focuses on the disproportionate health risks that COVID-19 imposes on disadvantaged groups. For a more comprehensive assessment of the overall health risks imposed by the pandemic, please refer to chapter III.

Evidence also suggests that among the age groups, the youngest and oldest workers are most likely to have lost their jobs or seen their income cut (Peachey, 2020). Young people could be particularly hard hit due to limited savings and less chance in cutting spending as they tend to spend a higher portion of income on essentials. There could also be longer-term labour market effects for some of these workers, which will be discussed later in this chapter.

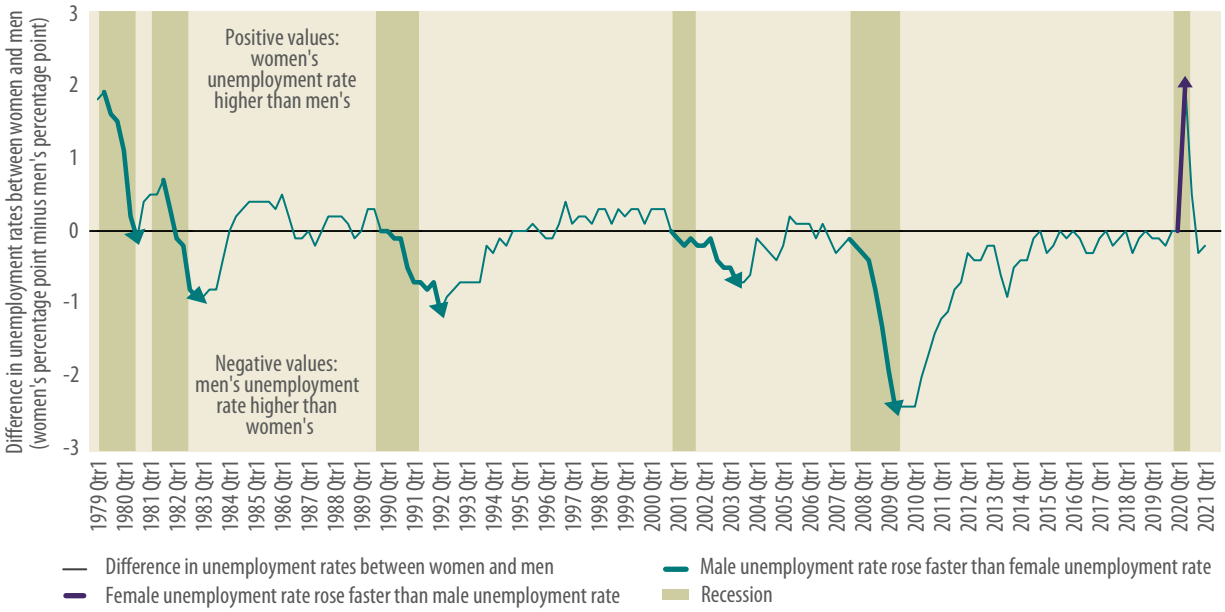
Another group that has been more adversely affected by COVID-19 is immigrants. Data from the European Union (EU) show that immigrant workers are more exposed to economic and health shocks caused by the pandemic (Bossavie and others, 2020). For example, only 27.3 per cent of immigrant workers have teleworkable jobs, compared to 40.9 per cent of native-born workers. The difference continues to exist even when adjusted for educational levels. Also, immigrants are less likely to have income-safe jobs (53.9 per cent of immigrants versus 65.3 per cent of native-born workers) and health-safe jobs (77.1 per cent versus 84.4 per cent).

Workers in informal employment particularly suffer in terms of social protection coverage, as they are typically not covered by traditional social protection programmes. Also, workers in informal employment tend to come disproportionately from disadvantaged social groups. For example, the incidence of informality is higher among the youngest age groups (15–24 years) and in the 55-and-over age group, yielding a U-shaped pattern observed across countries (Amarante, 2021). In developing countries, as recently as 2016, the percentage of women workers who are informally employed was higher than the percentage of men workers (92 per cent versus 87 per cent) (Bonnet, Vanek and Chen, 2019).

An assessment of inequality caused by the pandemic is difficult, as real-time data is not yet widely available. International Monetary Fund (IMF) estimates that COVID-19 would increase the average Gini index for emerging market and developing economies by more than 6 per cent, with even larger increases in low-income countries (International

Figure V.4

Difference between unemployment rates for women and men: the case of the United States, 1979–2021



Source: UN DESA calculations, based on data from the U.S. Bureau of Labor Statistics.

Monetary Fund, 2020b). Similarly, based on microsimulation exercises, the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) (2021) projects that the predicted labour income trends in Latin America during the COVID-19 pandemic would lead to an increase of the average Gini index by 5.6 per cent, which would be partly offset by transfers made by Governments, resulting in a net increase of the average Gini index by around 2.9 per cent. This is supported by country-specific simulation-based studies that show similar results (Bonavida and Gasparini, 2020; Brum and De Rosa, 2021). Lustig and others (2020) find that income losses in Latin American countries tend to be higher for the middle deciles rather than the poorest, partly because the existing social assistance programmes are often only available to poorer households (see also United Nations Economic Commission for Latin America and the Caribbean, 2021).

Greater susceptibility to health damages

Disadvantaged groups are also found to be more exposed to other health-related risks during the pandemic. For example, for women and girls, the shift of public health attention towards addressing the pandemic has diverted resources away from the provision of essential sexual and reproductive health services. It means not only that women are more exposed to COVID-19, but they also suffer additional health-related risks due to the pandemic. Women have also seen worse deterioration in mental health during COVID-19. According to analysis of evidence from 38 countries, the number of women who reported mental health impacts from COVID-19 was three times that of men (Van Ness, 2021). This finding matches the observation that gender-based violence increased significantly since the start of the pandemic, and, that as schools face closure, there have been increased childcare and schooling responsibilities that are more commonly shouldered by women.

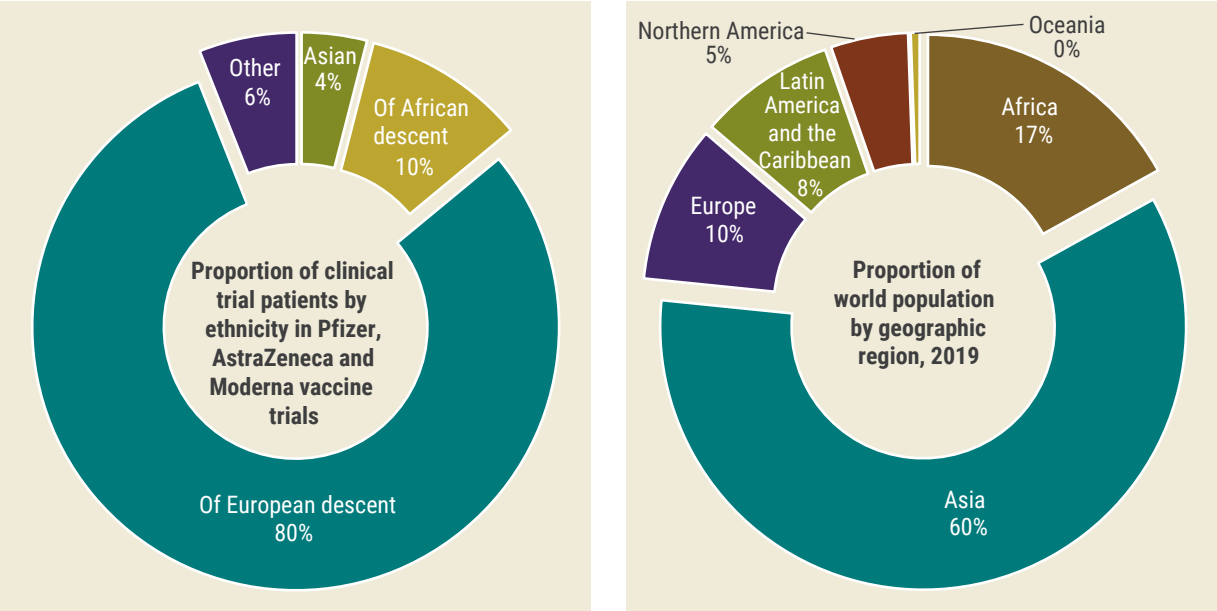
Less representation in clinical trials for vaccines

At the global level, certain ethnic groups are significantly underrepresented in the crucial clinical trials for vaccine development (Pepperrell and others, 2021). For example, 80 per cent of participants in Pfizer, AstraZeneca and Moderna vaccine trials were of European descent, which is far from representative of the global population, of which about 80 per cent live in Africa and Asia (figure V.5).

Under-representation in policymaking processes

Also with broad implication is the underrepresentation of certain social groups in the policymaking processes during the pandemic. Globally, women account for only a quarter of COVID-19 task force members, and less than 20 per cent in both Africa and Asia. Of the 225 national and local COVID-19 task forces with gender composition data available, 84 per cent have more men than women, and 12 per cent of these task forces have no women at all. Moreover, a global review of 2,517 measures in response to COVID-19 shows that around 60 per cent of them are not gender sensitive, meaning they do not directly address the specific risks and challenges that the pandemic poses to women and girls (United Nations Development Programme and UN Women, 2021). When it comes to social protection and labour market measures in response to COVID-19, only 18 per cent are gender sensitive, in that they target women's economic security or address unpaid care.

Figure V.5
Global ethnic representation gap in COVID-19 vaccine trial participants



Source: UN DESA, based on data from Pepperrell and others (2021) and UN DESA (2019).

Successes and challenges in counteracting inequality-aggravating effects of COVID-19

Although estimates based on real-time data, coming mainly from the developed world, all point to an increase in economic inequality due to COVID-19, some countries have been able to reduce the increase later through policy measures targeting lower-income groups.

Thus, data from five European countries show that disposable income inequality rose in most of them during the first months of the pandemic; but by September 2020, all these countries saw the inequality level drop below the pre-pandemic level, due to COVID-19-related policy responses that appear to have been more beneficial for the poor than the rich (Clark, Ambrosio and Lepinteur, 2020). Germany is the only country of the five that has seen inequality fall since the beginning of the pandemic, which is likely due to its automatic stabilizer-like policy measures that kicked in as soon as the socioeconomic effects of the pandemic began to materialize. In particular, the country's *Kuzarbeit* (short-time work scheme) has been attributed to playing an important role in preserving employment during the pandemic (box V.1).

Pre-existing social protection schemes helped to mitigate the inequality-aggravating effect of COVID-19 in some developing countries too. An example is provided by Ethiopia's Productive Safety Net Program, which proved effective in supporting disadvantaged groups during the pandemic (box V.2). Unfortunately, the majority of the global population (about 53.1 per cent) was not covered by any such social protection programme (United Nations, 2021b). The pandemic has prompted authorities to draw up many temporary social protection responses, and, going forward, an important task will be to use these responses to create new comprehensive social protection systems.

Box V.1

Germany's short-term work scheme goes to work during the pandemic

Germany's *Kurzarbeit*, a short-time work (STW) scheme, has been credited with playing a notable role in mitigating adverse labour market effects during the COVID-19 pandemic. It has been widely considered the gold standard and has previously proven to be highly effective during the global financial crisis: it helped Germany to be the only G7 country that did not experience an employment fall in 2009, despite a significant decline in gross domestic product (International Monetary Fund, 2020a).

Notable features of the short-time work scheme

The STW scheme allows employers to reduce the working hours of the employees, instead of terminating the employment. Under this scheme, workers would normally be compensated for 60 per cent of their pay (67 per cent for workers with children) for the work hours that are reduced, and full pay for the hours they work. Another notable feature of the scheme is that it complements the country's private working-hour flexibility arrangements. With this arrangement, workers are allowed to attain credits while working overtime and save them in their "working time accounts," which can later be used during recessions to make up for possible lost earnings. It is only when these "working time accounts" are empty that the STW scheme kicks in, which helps to limit fiscal cost.

To avoid abuse of the scheme, an employer is normally required to pay 80 per cent of the social security contribution owed on the reduced working hours. But during crisis times, including the current pandemic, employers' share of contribution is lowered to reduce their financial burden. This type of flexibility is provisioned to ensure sufficient relief for the firms during difficult times, while avoiding introducing too much rigidity to the labour market.

Effects of the scheme in mitigating adverse distributional effect

Some evidence suggests that this type of STW scheme helps to reduce the adverse effect of the pandemic on inequality. Adams-Prassi and others (2020) shows that employees in Germany, with its well-established STW scheme, are substantially less likely to be affected by the crisis. It is considered to be one reason that the country saw no increase in inequality in the first months of the pandemic—a rare exception. Overall, 35 per cent of employees in Germany were asked to reduce their hours to benefit from the scheme, illustrating its significance.

Proponents of the scheme also argue that by avoiding massive layoffs of workers, it could help to reduce inefficiencies associated with rehiring and retraining new workers as the economy recovers.

Sources: Adams-Prassl and others (2020); IMF (2020).

The COVID-19 pandemic serves as a reminder of the importance of improving the structural problem of informality in the labour markets. In the pre-COVID-19 years, some countries made sustained progress in reducing informality, either driven by economic growth stability and structural transformation or supported by a range of policies regarding the labour market, taxation and health care, among others (box V.3 addresses Uruguay's experience of reducing informality through concerted policy efforts).

It is important to note that policies to cope with the pandemic likely become less effective when the population varies greatly in terms of socioeconomic conditions, and when different segments of the population have different priorities in terms of their needs. High income and wealth inequality can lead to what is often called "policy capture," in which the

Box V.2

Ethiopia's Productive Safety Net Program

The Productive Safety Net Program (PSNP), Ethiopia's flagship rural social safety net programme, has proven effective at supporting disadvantaged households in the country during the COVID-19 pandemic (Abay and others, 2020).

Notable features of PSNP

The PSNP provides food and cash assistance to poor households in exchange for labour, as well as direct cash transfers to households that are not capable of participating in physical labour. Most participants are employed to carry out labour-intensive public works for six months per year, whereas a small percentage (about 15 per cent) receives unconditional payment. The majority of assistance is in cash, but food payments are made in areas that have poor access to markets. The PSNP targets districts that are considered chronically food insecure. It also targets households based on a set of criteria, including the history of food insecurity, household asset holdings, and income from alternative sources of employment. In normal times, PSNP covers about eight million Ethiopians, but the number doubled during previous crises (e.g., drought) (Khodr, 2020).

The PSNP also incorporates several other interesting features, including public works activities geared towards improving climate resiliency; a risk financing facility to help poor households and communities better cope with transitory shocks; and the use of targeting methods that assist the most climate-vulnerable community members to obtain the full benefits of consumption smoothing and asset protection (World Bank, 2013).

Estimated impact of PSNP during the pandemic

In the early months of the pandemic, household survey data show that among the households that did not participate in PSNP, food insecurity, as measured by the percentage of households reporting a food gap, increased by 11.7 percentage points. Also, for the same group of households, the size of the food gap (defined as the number of months the household was not able to satisfy its food needs) within a six-month period increased by 0.47 months. On the other hand, participation in PSNP nearly negates all these adverse effects. Among those who participated, the chances of becoming food insecure increased by only 2.4 per cent and the duration of the food gap increased by only 0.13 months. In particular, the programme provides greater protection in terms of food security and consumption smoothing for poorer households—where the PSNP transfer comprises a greater share of consumption expenditure—and those living in remote areas that have greater difficulty satisfying their food needs through food markets. Data has also shown that PSNP participants were less likely to reduce health, education and agricultural input expenditures during the pandemic.

Sources: Abay and others (2020); Khodr (2020); and World Bank (2013).

policy formulation process is dominated by the rich and powerful, with "common" people feeling disaffected and not participating (Solt, 2008). Policies emerging from such a process often cannot meet the needs of the disadvantaged groups and end up reinforcing inequality, leading to an inequality trap (Islam, 2015b).

As a result, high inequality deteriorates trust in government and institutions and leads to less compliance of the public with rules and regulations, which in turn leads to less effective governance (Organisation for Economic Co-operation and Development, 2013). Cross-country data from pre-COVID-19 years has shown that lower trust in government was associated with vaccine hesitancy (Miyachi and others, 2020). The COVID-19 experience also shows that countries with low COVID-19 vaccine acceptance tend to be those with weak trust in central governments (Lazarus and others, 2021). Research shows

Box V.3

Uruguay: sustained decrease in informality leads to decline in income inequality

Uruguay has seen one of the greatest declines in the share of total employment under informality during the past decade, reporting a fall of more than 15 percentage points in 2010–2018. Coupling with this informality decline is a noticeable drop in income inequality, with its Gini index falling from 44 to 40 during the same period.

Drivers of formalization in Uruguay

A combination of factors likely contributed to formalization, including a positive and stable macroeconomic environment and multiple macroeconomic and redistributive reforms that improve the appeal of labour market formality.

Stable economic growth in the pre-COVID-19 years provided favourable conditions for reducing informality. Economic stability reduced the risks of layoffs and the associated costs in the case of formal workers, providing incentives for employers to formalize their employees. Also, low unemployment rates increased workers' bargaining power and therefore their chances of being formalized. Moreover, increased earnings during times of economic growth put those who are self-employed in a better position to cover the costs of formalization.

Besides the positive macroeconomic environment, significant reforms have also contributed to formalization by improving its appeal for workers. An important change is the reinstatement of mandatory collective bargaining in 2006. This process affects wage formation in the formal sector and, given the dynamism in Uruguay's labour market, has led to favourable wage increase, incentivizing workers to join the formal sectors. Other reforms that make formalization more appealing include the rise of the national minimum wage; changes in domestic work regulations that favour workers; national health system reforms that extended the health-care coverage to include employees' dependent children; and pension system reforms that include lowering the required years of employment and introducing pension credits for mothers.

There have also been reforms that encourage creation of formal employment. In 2007, the Government introduced changes to its "single tax" social security scheme for microenterprises, which consist of a unique fee that substitutes all national taxes and social security contribution. Flexibilities were introduced to the scheme, such as inclusion of small stores and raising the maximum sales limits, so that a greater number of self-employed were able to join the social security system, thereby formalizing their own employment. Moreover, a tax reform was introduced in the same year, granting tax incentives, such as corporate income tax reduction, for productive investment with formal job creation.

Formalization led to inequality reduction

The combination of economic dynamism and favourable reforms that incentivize formalization has led to a higher formalization rate in Uruguay. Data suggests that formalization is key to the decrease in earnings inequality. Decomposition analysis has shown an increase in the formality premium for those at the lower end of the income distribution, which could be attributed to minimum wages and the aforementioned wage bargaining.

Source: Amarante (2021).

that monetary policies also lose effectiveness in situations of high inequality (Park, 2019; Voinea, Lovin and Cojocaru, 2018). In view of the above, it is not surprising that, other things being similar, countries with more equitable distribution of income performed better in dealing with COVID-19 than those with very high degrees of inequality.

Impact of COVID-19 on between-country inequalities

Sustainable Development Goals Report 2021 notes that the pandemic is now exacerbating existing inequalities among countries and hitting the poorest countries hardest (United Nations, 2021b). Others have reached similar conclusions (Stiglitz, 2020). Indeed, as reported in chapter IV of this report, the economic effects of COVID-19 have been uneven across countries. Economic outputs in some developing regions, such as Latin America and the Caribbean, North Africa and South Asia, were particularly hard hit in 2020, which is likely to further widen their income gaps with other regions.[3]

Of the many factors that are driving up between-county inequality, two are likely to be of continued importance, namely the share of labour force able to work from home and the share of population that is vaccinated.

The lower-income countries tend to have a smaller share of workforce that can work from home, which means they are less able to adapt to the post-COVID-19 world of work. For example, in low-income countries, only 1 out of 26 jobs can be done from home, while the ratio is 1 in 3 in high-income countries (Garrote Sanchez and others, 2021). It means a greater portion of the labour force in lower-income countries is affected by lockdown measures that restrict mobility, which exerts additional downward pressure on their growth.

Second, as highlighted in chapter IV, the prospects of economic recovery of a country depend to a large extent on how quickly it can gain access to and administer vaccines. Unfortunately, the global distribution of COVID-19 vaccine has remained, so far, highly uneven. Figure V.6 shows that, as of 26 July 2021, high-income countries had received 30 per cent of global vaccines, even though they account for only 15 per cent of the global population.

It should be noted that, in addition to its obvious distributional effect, concentration of vaccines in wealthy countries is likely to slow down the global recovery. It is estimated that even if wealthy countries are fully vaccinated by mid-2021 but poor countries remain largely shut out from vaccines, the global economy could suffer a loss of more than $9 trillion, with half of this loss borne by the fully vaccinated wealthy countries because of weak external demand and disruption of imports from countries that are not fully recovered from the pandemic (Çakmaklı and others, 2021). This fact again illustrates the interdependence of the countries of the world.

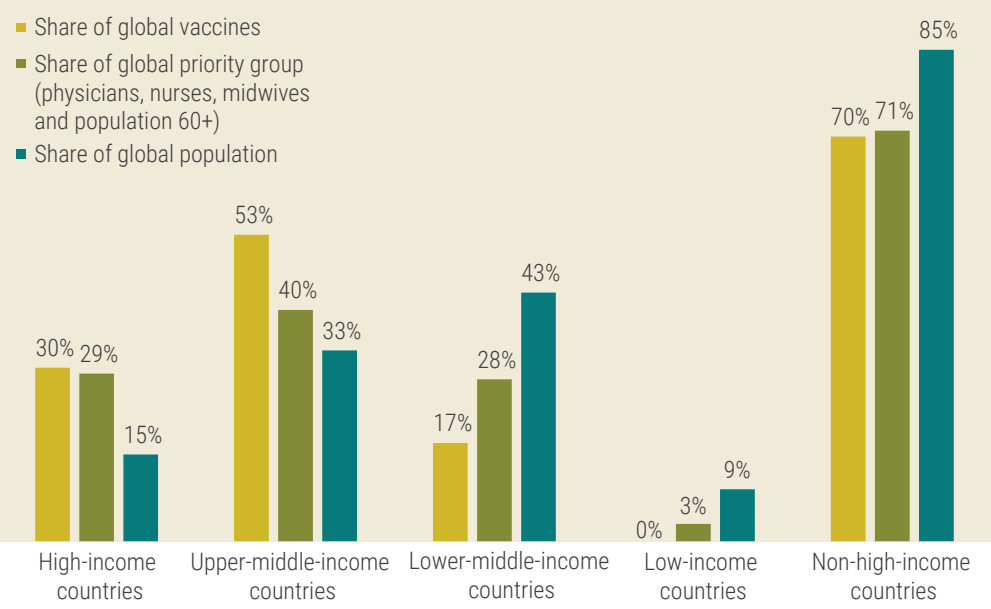
Outlook scenarios regarding inequalities

Growing vaccination gap and between-country inequality

Going forward, even in an upside scenario—in which surplus vaccine inventory in high-income countries is being utilized and production capacity being increased to expand global vaccine coverage—it is projected that a notable gap of vaccination rate (about 20 percentage

3 For more details, please refer to chapter IV.

Figure V.6
Mismatch between global vaccine distribution and global needs, as at 26 July 2021



Source: Adapted from Schellekens (2021).

Note: In calculating vaccines administered, double-dose equivalence is imposed on single-dose vaccines by multiplying the number of single-doses administered by two.

points) between high-income countries and the rest of the world will remain beyond April 2022 (figure V.7).[4] Needless to say, the inequality in vaccination rates will act as a driver of between-country inequality in growth, income and other measures of well-being.

Scenarios of within-country inequality depending on duration of the pandemic shock

Although the impact of COVID-19 on within-country inequality has been complex, in most cases, as noted above, it had an aggravating effect. Going forward, the impact on inequality will depend on when the crisis ends.

Based on estimates reported by Furceri and others (2021) that uses data from previous major epidemic and pandemic events, figure V.8 presents the projected impact of the pandemic on the net Gini index (which measures inequality of net income after tax and transfer) during the six years starting from 2022, under three different scenarios: the first assumes the pandemic will end in 2022, the second assumes an end in 2021, and the third, a reference scenario, assumes it ended in 2020.

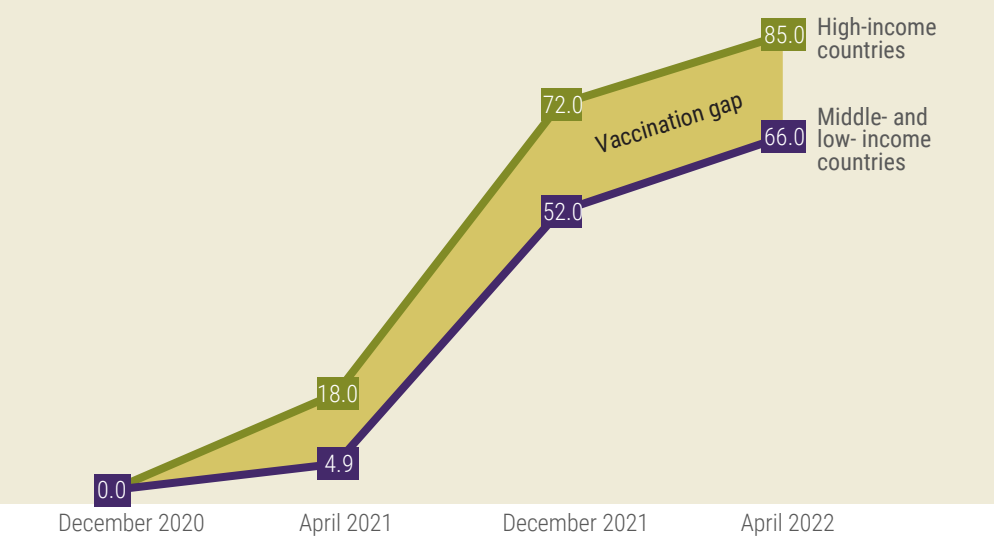
This scenario analysis complements the statistical exercise that generated the IMF estimate of Gini index change in several ways: (i) the analysis looks at how the duration of the pandemic affects its distributional effect; (ii) it employs data from both developed and developing countries; (iii) its analysis is based on previous episodes of epidemics and pandemics, whereas the IMF analysis did not explicitly rely on data from previous outbreaks; and (iv) the projection made use of estimates that capture the policy responses

4 The projection is based on an IMF scenario in which (i) there is additional upfront financing of at least $4 billion for COVAX; (ii) countries with insufficient coverage immediately place purchase orders for vaccines; (iii) there is free cross-border flow of raw materials and finished vaccines; and (iv) countries with surplus vaccines donate to others (Agarwal and Gopinath, 2021).

Figure V.7

Vaccination gap projection, high-income countries versus middle- and low-income countries, December 2020–April 2022

Fully vaccinated (percentage of total population)

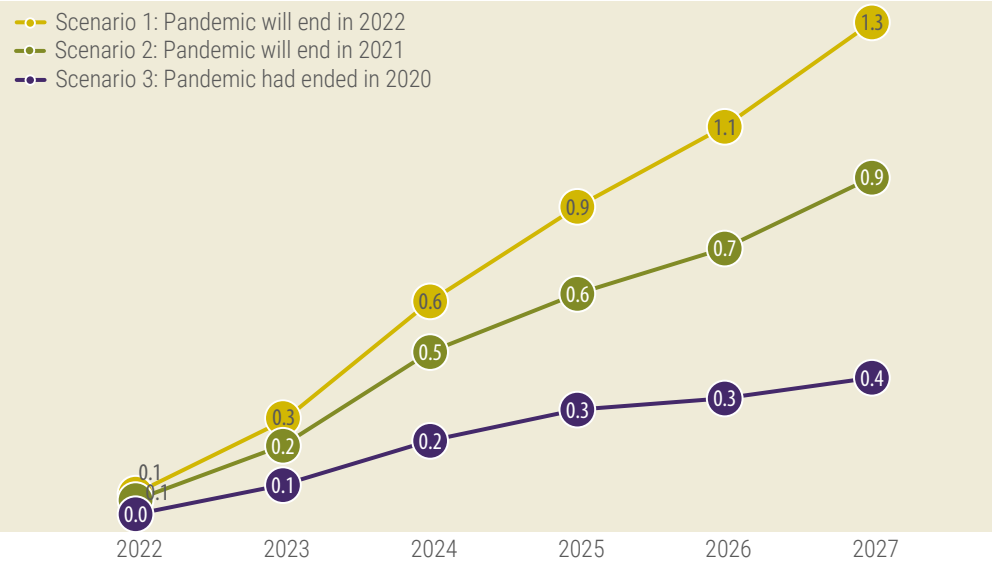


Source: UN DESA calculations, based on data from Agarwal and Gopinath (2021).

Figure V.8

Alternative scenarios of increase in income inequality caused by the COVID-19 pandemic, 2022–2027*

Cumulative increase in Gini points



Source: UN DESA calculations, based on data from Furceri and others (2021).

***** Assumes policy responses remain similar to those followed in past epidemics/pandemics.

Note: Using data from 5 major events (SARS in 2003; H1N1 in 2009; MERS in 2012; Ebola in 2014; and Zika in 2016), Furceri and others (2021) estimates an impulse response function from local projection:

$$y_{i,t+k} - y_{i,t-1} = \alpha_i^k + \gamma_t^k + \beta^k D_{i,t} + \theta^k X_{i,t} + \varepsilon_{i,t+k}.$$

$y_{i,t}$ is the Gini index for country i in year t; α_i are country fixed effects; y_t are time fixed effects; $D_{i,t}$ is a dummy variable indicating a pandemic event that affects country i in year t. $X_{i,t}$ is a vector that includes two lags of the dependent variable and two lags of the pandemic dummy. k denotes the number of years after the pandemic shock. All projections presented in this figure are made from the perspective of year 2022 (i.e., t =2022) and based on the paper's estimated β^K and the estimated coefficients on the two lags of the pandemic dummy. The Gini index used here is the post-tax, post-transfer net Gini index.

made during the previous outbreaks and shed light on COVID-19's possible effect on post-tax, post-transfer income inequality, whereas the IMF estimate was made by allocating projected negative aggregate income shock to different income quintiles according to the teleworkability of households in each income group, without accounting for policy responses that mitigate adverse distributional effects.

A notable result from the scenario analysis is the projected 1.3 Gini point increase by the end of the six years if a pandemic does not end in a country until 2022. Considering that the average rise in Gini points during the 29 years of 1990-2019 was 4.4 (which translates into an average 0.9 Gini point increase over a six-year period), the 1.3 Gini point increase over 6 years that is attributable to the pandemic alone is sizeable. Moreover, the projected income-inequality increase under the first scenario (pandemic ends in 2022) is three times that under the third scenario (pandemic ends in 2020), and about 40 per cent higher than the projected six-year increase in inequality in the second (pandemic ended in 2021).

There are two take-aways from this projection exercise. First, if the effect of this pandemic on inequality follows a similar path as the previous major outbreaks, one can expect a significant increase in income inequality in the short run. Second, the projected effect of the pandemic on income inequality varies greatly depending on the length of the pandemic, which highlights the urgency of ending it as quickly as possible.

It is important to note that these projections are based on previous episodes of epidemics and pandemics that, while devastating for many countries, did not have the same scale of socioeconomic effects as COVID-19. The far-reaching effects of the pandemic suggest that its distributional effect could be greater than these projections suggest. This could partly explain why the IMF estimate—which accounts for the projected economic shock of the COVID-19 pandemic—suggests a greater increase in Gini index. The world must therefore take note that without sufficient policy responses, or if such responses are scaled back too quickly, inequality can rise significantly. On the other hand, a more forceful policy effort than in the past could potentially chart a more optimistic path in terms of inequality, as some countries' COVID-19 experiences suggest.

Possible long-term, within-country distributional effect

As the pandemic is still ravaging the world, much of the attention has been on its immediate effects. However, it is also important to note that if the unequal effects of the pandemic are not promptly addressed, they could lead to serious impacts that will be visible for years to come. Some of these potential dangers are explored below.

Accumulation of disadvantages throughout the life cycle

First, adverse effects of COVID-19 could influence both the physical and socioeconomic well-being of individuals throughout the life cycle and be passed on to the next generation.

Deteriorated health conditions caused by COVID-19 can accumulate. Patients whose health is devastated during the pandemic—more likely for those with less access to quality health services—can face an extended period of diminished quality of life. While more research is needed, existing evidence suggests that COVID-19 could have long-term effects (John Hopkins Medicine, 2021). Children suffering from these health effects could also see their educational achievement affected.

Limited access to quality education, or any education, during the pandemic could put a child in a disadvantageous position after the pandemic.[5] Reduced exposure to intellectual stimuli can limit a child's future education and career opportunities. The impact would likely be the strongest for students in their foundational years of education (United Nations, 2020b). Stimulation-based analyses estimate that five months of school closure without effective compensatory action could lead to reduced effective learning that results in a lifetime earning loss of about $16,000 per student globally. There are also concerns that some of the most vulnerable students may never return to school. For example, it is reported that there are cases of young girls being forced into marriage or getting pregnant following lockdowns and quarantines, putting them at high risk of dropping out of school permanently (The Economist, 2020).

Also, the COVID-19 recession could interrupt the initial process of career progression for those who are just entering the labour market, with greater and persistent effects on those who are less advantaged. These effects include not only earnings and wage reduction, but also health effects and family formation (for example, see von Wachter (2012)). Analyses of the early 1980s recession in the United States has shown that university graduates entering the labour market during a deep recession experienced earnings reductions for up to 15 years (Kahn, 2010). Evidence from previous recessions also shows that persistent earnings losses are significantly greater for graduates predicted to begin with low earnings (Oreopoulos, von Wachter and Heisz, 2012; Schwandt and von Wachter, 2019).

Acceleration of economic structural changes that could exacerbate inequalities

Second, in addition to causing adverse health and economic effects that can cumulate over one's lifetime—effects that are disproportionately shouldered by those who are less advantaged—the pandemic has also caused structural changes to the economy that could exacerbate inequalities.

A notable development during the pandemic is the rising market power concentration experienced across some economies, which could be largely attributed to the recent bankruptcies of small and medium-sized firms (Akcigit and others, 2021). There has also been an acceleration of digital transformation of the economy, which has the potential to intensify the adverse distributional effect of these structural changes. Tech companies have thrived during the pandemic as mobility-restricting measures have pushed much of economic interaction online. Analyses based on near real-time Google search data on 182 countries have shown that demand for services that require face-to-face interaction, including hotels, restaurants and retail trade, have substantially contracted during the pandemic; whereas demand for services that can be performed remotely or help to reduce personal interactions, including information and communications technology (ICT) and delivery, have exploded (Abay, Tafere and Woldemichael, 2020). Over the course of the initial three months of the pandemic, COVID-19 has led to an increase in demand for ICT services by as much as 84 per cent in countries where there are a high number of COVID-19 cases. Moreover, more recent data suggest that this cross-sectoral reallocation shock is persistent. For example, in the United States, where the acceleration of digital transformation is highly noticeable, firm-level forecasts show that firms whose sales have benefited from the pandemic expect to see continued expansion, whereas firms that were hit most negatively would continue to

5 See LaFleur and others (2020) for an analysis of how digital divide translates into education inequality during the pandemic.

shrink (Barrero and others, 2021), which could be due to inertia of consumer behaviours. Should this trend of economic activities shifting to the digital realm continue, it could intensify the distributional effect of technological changes.

In recent years, there has been an increasing concern over the concentration of market power and its implications for competition and societal welfare. Some countries have taken actions to curb anticompetitive behaviours, such as abuse of market powers and collusion between market players. The EU has been proactive in this area, and some other countries are also following suit in strengthening policies to ensure healthy competition (see box V.4 for some highlights of the EU competition policy). The further increase in market power concentration during the pandemic suggests that it may be necessary to take more vigorous efforts to address it in order to mitigate aggravation of inequality.

Box V.4

European Union steps up efforts to ensure fair market competition in the COVID-19 era

In recent years, the European Union (EU) has taken high-profile actions aimed at addressing firms' anticompetitive behaviours that hamper healthy competition—a crucial step for creating a level playing field for all and ensuring sustained, welfare-enhancing innovation in the market. A major focus of the EU competition policy has been on the digital economy.

Proposed Digital Markets Act complements existing competition policy instruments

A notable development during the pandemic is the European Commission's December 2020 proposal of the Digital Markets Act (European Commission, 2020), which is expected to complement the existing competition law instruments. The proposed Act clearly sets out the obligations of large digital platforms with a list of "do's" and "don'ts". The list of do's includes allowing third parties to inter-operate with the platforms' own services in certain specific situations, and allowing their business users to access the data that they generate in their use of the platforms. The list of don'ts includes ranking products offered by the platform itself more favourably than similar products offered by third parties, and preventing consumers from linking up to businesses outside their platforms.

The proposed Act is considered a move towards stepping up efforts to create equal opportunities for firms in the digital economy, as traditional competition instruments have been inadequate in correcting skewed market structures (G'sell, 2021). With existing competition law focusing on analysing individual cases ex post, which often takes an extended period, the remedies often come too late. By imposing clearly identified ex ante rules, the European Commission aims to discourage anticompetitive behaviours early on.

Fair competition and economic recovery

Competition policies play an important role in recovery in the EU through keeping markets competitive so that they generate accurate signals regarding where investments should happen (Vestager, 2021). In this regard, an important area under the purview of the EU is State aid granted to firms, which could give them undue advantages over their competitors. It is critical to ensure that this kind of government support does not remove firms' incentives to innovate.

Sources: European Commission (2020); Graham, Israel and Negro. (2020); G'sell (2021); and Vestager (2020).

Diminished political participation of disadvantaged groups due to eroded trust in political institutions

Third, the uneven distribution of COVID-19-related harms suffered throughout a population could undermine trust in government and institutions. This would not only have implications for policy effectiveness during the pandemic, but also have lasting effects thereafter. Experience of past epidemics has shown that individuals exposed to an epidemic during their "impressionable years" (i.e., age 18–25) while living under a government that introduced delayed policy responses have a diminished confidence in political institutions and leaders—an erosion of trust that persists and tends to discourage participation in electoral processes for the long term (Eichengreen, Saka and Aksoy, 2021). Extending this result to the current pandemic situation, where COVID-19 effects have been uneven across a given population, it is possible that the less advantaged groups would become less involved in the political process, which could tilt political power even further towards those who hold more power to begin with.

Policy suggestions

The COVID-19 pandemic could be a singular event that drives an even wider wedge between the haves and the have-nots through the immediate and longer-term channels discussed in this chapter. It could also become a major turning point, if society uses this moment to unify and overcome the political economy obstacles that have hampered previous efforts to create a more inclusive society.

The world has already seen Governments take important and effective measures to mitigate the adverse effects of COVID-19, proving that while the unequalizing forces unleased by the pandemic are formidable, they are not always inevitable. With well considered courses of action, national Governments and the international community can build on this momentum and possibly reverse inequality trends and rebuild people's trust in institutions. This concluding section discusses some national and multilateral priorities that policymakers should focus on while charting the path forward.

Guiding principles

Take a whole-of-government approach

A range of policies —social protection, labour market, education and vocational training, fiscal, monetary, and market competition—need to be considered to ensure multi-dimensional responses that account for the different needs and circumstances of different social groups. Policies must also address every stage of a person's life, from birth to retirement. Policymaking guided by a life cycle perspective will help to keep those in disadvantaged social groups from moving towards poverty at each of life's various stages.

Under the whole-of-government approach, policymakers should be guided by three priorities: (i) promote equal access to opportunities; (ii) institute a macroeconomic policy environment conducive to reducing inequality; and (iii) tackle prejudice and discrimination, and promote the participation of disadvantaged groups in economic, social and political life (UN DESA, 2020b).

Beware of unintended consequences

Policymakers must also account for unintended consequences. There are instances when measures that support growth are not always consistent with the goal of reducing inequality. For example, expansionary monetary policies that seek to boost an economy through improving liquidity could serve as an unequalizing force. Loose monetary conditions contribute to stronger stock market performance, with income from financial assets accumulating mostly among wealthy households (Coibion and others, 2017). Loose monetary stances also produce inflationary pressure, which could transfer purchasing power away from low-income households that tend to hold more currency than higher-income households (Albanesi, 2007).

Make temporary policy support permanent

The duration of the policy support provided in response to COVID-19 is important: if the support is withdrawn before a broad-based recovery, many of its beneficiaries will fall back into poverty, with implications for inequality. But even if countries can afford to maintain these rescue measures until the end of the pandemic, these one-off interventions of limited duration do little to address the structural causes of inequality. It is therefore important to build on these emergency interventions and make the temporary improvements in the provision of public services permanent, strengthening the resilience of vulnerable groups against future shocks. Equally important for policymakers is to consider policy measures—such as education and vocational training and competition policies—that address the structural factors driving inequality.

Specific policies

This section focuses on aspects of policies that address inequality-related issues, as highlighted by country experiences with the pandemic.

Vaccine production and distribution

Expanded vaccine production is crucial to the recovery of all countries and to ensure that no country or community is left behind. Accelerated progress towards widespread vaccination in all countries is essential to minimizing the adverse distributional effects of the pandemic. The expanded vaccine production requires countries and firms that control the global vaccine supply to urgently share three things: financial resources; vaccines doses with COVAX; and knowledge regarding how to scale up vaccine production and fair distribution quickly and massively (Ghebreyesus, 2021). Voluntary licensing with technology transfers—which involves a vaccine-patent-owning company licensing another manufacturer to produce vaccines, usually for a fee—is an option. Governments of countries with vaccine-producing firms can facilitate this process by offering some compensation to these firms for sharing their intellectual property. Another, more transparent option is for firms to share licenses through the COVID-19 Technology Access Pool, which is a coordinated global mechanism initiated by the World Health Organization last year. Yet another option—and the boldest one—is to waive intellectual property rights on COVID-19 products through a World Trade Organization agreement that levels the playing field in vaccine production and distribution.

Social protection

A recurrent finding from analysing countries' COVID-19 experiences is that social protection is essential to mitigating the negative effect of the pandemic on economic distribution. Social protection reduces households' need to rely on negative coping strategies—such as asset sale or taking children out of schools—to absorb negative shocks such as COVID-19 (Kind and Lee, 2021). However, some social protection programmes are only available to poorer households, leaving out some households higher up on the income ladder that also need the support. This highlights what should be a key policy priority: putting in place universal social protection floors that create fundamental resilience for everyone in the society—not only those who need the support now, but also those who might need it in the future.

The COVID-19 experience has illustrated Governments' options and flexibility in extending the delivery capabilities of social protection programmes, which include relaxing eligibility criteria, simplifying application processes, and introducing flexible payment schedules (Barca, 2020). It is also necessary to explore options for leveraging existing social protection systems to further support the economic well-being of their participants. This involves complementing cash and in-kind transfers with skill training, coaching, financial access and links to market support (Andrews and others, 2021).

Labour market policies

The COVID-19 experience, such as that of Germany, showed that short-term work schemes that subsidize firms for keeping workers at reduced working hours helps to mitigate the adverse distributional effect of the pandemic. There are, however, several issues to consider in implementing a short-time work scheme, including its duration, the rigidity it may introduce into the labour market, moral hazard, and disparity in application.

The broad and deep labour market challenges confronting many countries mean policy actions must go beyond short-term schemes. Efforts need to be directed at investing in the institutions of work—from collective representation to labour market regulations—that have been weakened over the past decades (Global Commission on the Future of Work, 2019). Investment in retraining and reskilling programmes can boost re-employment prospects for adaptable workers whose job duties may see long-term changes because of the pandemic. Meanwhile, expanding access to the Internet and promoting financial inclusion will be important for an increasingly digital world of work. At the same time, policymakers must be mindful that a focus on reducing inequality through investments in human capital alone will not be enough to reduce overall inequality if there are not enough decent jobs available.

Fiscal policies

The *Sustainable Development Goals Report 2021* stressed the increased importance of fiscal policies in reducing inequality during the COVID-19 crisis. Unlike monetary policies that are rather inflexible in terms of their scope of effect, fiscal stimulus and recovery measures can better target vulnerable population groups and sectors, and invest in areas that help to promote sustainable development (UN DESA, 2020a).

Targeted fiscal measures must aim at reducing the risks borne by vulnerable firms and households, incentivizing them to consume and invest. An example are loans and mortgages for which the amount and timing of payments are conditional on future income of the borrowers (Stiglitz and Rashid, 2020). These would allow Governments to share

some of the risks that households bear in using such financial instruments, encouraging the latter to consume or invest. Another example are the spending vouchers introduced in China that are valid for purchases of certain products and within only a specified time frame, and thus could be effective in boosting consumption immediately. A variation of such a scheme under which the provision of vouchers is targeted at poor households could help to address the pandemic's uneven effect on consumption.

Monetary policies

In the public policy discourse, monetary policies traditionally do not play a prominent role in addressing inequality. Some believe that monetary policy is most effective at contributing to a more equitable society when it seeks to fulfill its usual mandate of maintaining price and financial market stability, as high inflation and long periods of financial instability tend to hurt poor households more (Bank for International Settlements, 2021). There is evidence from the past to support the assertion that central banks, in fulfilling their traditional mandate, have helped to reduce economic inequality by introducing expansionary monetary policies in economic downturns (Coibion and others, 2017; Ostry Loungani and Berg, 2019). There are, however, increasing calls for central banks around the world to consider going beyond their main traditional role of maintaining price stability and be more mindful of the distributional effects of their policies; adopt exchange rate policies that are more consistent with inclusive economic outcomes; or promote investment in human capital and sustainable development sectors.

Competition policies

The pandemic has accelerated the expansion of the digital economy and the increase in market power concentration, which could have major implications for how economic resources are being distributed. In view of this, in addition to stepping up efforts to enforce merger control and prevent abuse of dominant market position, there needs to be a more proactive approach to addressing concentration of market power in the increasingly digital economy. The EU proposal of clearly identifying a list of market behaviours that are considered anticompetitive—accounting for the way in which markets are changing in the digital economy era—is a step towards a more comprehensive approach to combating excessive market concentration. The introduction of ex ante rules complements the existing competition policy instruments that focus on case-by-case ex post analyses. Another forward-looking idea is to have Governments set up a Digital Authority (DA) that oversees all aspects of the digital economy and will have multiple functions, which include complementing the existing competition authorities in limiting or even pre-empting competitive harm in the digital markets (Zingales and Lancieri, 2019). The DA should adopt an anticipatory regulatory approach that will maintain the stability of the business environment by making clear what conduct will be allowed and how enforcement of regulations will be implemented.

Significant fiscal space and data gaps need to be bridged to sustain policy efforts

The policy responses discussed above will not be possible to implement without sufficient fiscal space. The huge inequality in fiscal space across countries means that countries cannot be equally committed to such policy efforts from a fiscal standpoint. Addressing inequality is therefore partly contingent on closing the between-country fiscal space gap.

At the national level, progressive taxation and temporary COVID-19 recovery contributions that are raised on high incomes or wealth can help to meet the extraordinary financing needs following the pandemic and open new avenues for expanding fiscal space in some countries. Policymakers could consider imposing the "solidarity" tax on pandemic "winners" and the wealthy, as proposed by the IMF (i.e., high earners and companies that prospered in the coronavirus crisis should pay additional tax to show solidarity with those who were hit hardest by the pandemic (Klemm and others, 2021)).[6] History has shown that a surcharge or surtax to income tax for higher-income households are the easiest and quickest options. The revenue generated through these schemes should be spent to offer relief to the ones who suffered employment and income losses caused by the pandemic.

At the international level, some measures on which countries could work together to narrow the between-country fiscal space gap include capital account management to prevent capital flight; deep and comprehensive debt restructuring with compulsory involvement of private creditors; recapitalization of multilateral development banks as crucial instruments for financing development, while better aligning their lending to SDGs; and greater international tax cooperation, as countries welcomed recent steps towards a global minimum corporate tax.

There is also a data divide between countries that has led to differentiation in Governments' abilities to respond to the pandemic. For many developing countries, institutional and technological infrastructures were not adequate for gathering and monitoring health data in real time to support rapid decision-making. Narrowing the global gap of data capabilities would require international support to bolster the data infrastructures and talents of these countries.

Convert the opportunity for solidarity into a tipping point for creating more inclusive institutions

Addressing inequality is a political choice and requires comprehensive consideration of all the main dynamics in the political economy. Among the many shocks that the COVID-19 crisis has created is the shake-up of the political economy calculus, as the pandemic heightens the awareness of inequality and the plights of the vulnerable members in our society. It has created a moment in which different groups of stakeholders could potentially see their interests converge and introduce bolder institutional reforms aimed at improving inclusiveness in the decision-making processes and reducing inequality.

Rapid actions are desirable; society will be more effective at redressing inequalities if we act now, before this opportunity for solidarity fizzles and imbalances in economic power become further entrenched politically. Priorities in this regard include improving gender equality in political representation and enabling local communities and organizations to provide more context-specific support.

In some cases, redesigning of institutions provides a longer-term solution for maintaining social cohesiveness, as mere ex post compensation to those that suffer disproportionately in this unequal world might no longer be sufficient to heal the political divide (Besley, 2021). Among the desirable traits that institutions should possess are inclusiveness and the ability to align individuals' objectives with that of the society. Institutions must protect politically excluded groups and allow them to be fully heard. Institutional changes in the direction of inclusiveness would require a society that strongly upholds inclusive

6 See Klemm and others (2021) for historical examples of this type of temporary contribution.

values. Development of a strong civil society that allows different groups to express and to interact would be an important step in allowing such values to take root in the society.

Efforts to redesign institutions should also be informed by the observation that a social system functions best when individuals internalize the social objectives (Saez, 2021). For example, means-tested support for those in need would be most effective if recipients do not try to game the system; likewise, a tax system is most effective when taxpayers do not engage in tax avoidance. If such tendencies to take advantage of the system are allowed to prevail, it creates a perception of unfairness and undermines trust in the system itself, which could lead to its eventual demise. Institutional design that minimizes such tendencies is therefore important in ensuring that inclusive institutions can consistently deliver inclusive outcomes.

Chapter VI

The way forward

Policies emerging from the review of the individual Sustainable Development Goals (SDGs) were presented at the end of the respective chapters of the *Sustainable Development Outlook 2021*. However, as the interlinkages noted in chapter I suggest, the effects of many of these policies reach beyond the particular SDGs under which they have been listed. This chapter charts a way forward to achieving the SDGs by focusing on the strategies, principles and policies that are cross-cutting in nature, thereby allowing synergies to play out and accelerate progress across a broad front—all within the unexpected context of the COVID-19 pandemic.

Accelerate vaccination by making the COVID-19 vaccine a public good

The international community should accelerate vaccination by making vaccines a public good. Experience has shown that vaccination on a mass scale, leading to herd immunity, is the most effective strategy for bringing the COVID-19 pandemic under control—without which progress towards achieving the SDGs cannot be fully resumed. While considerable progress has been made in vaccination, much more needs to be done. In particular, countries that are not themselves producers of vaccines are facing the problem of availability of vaccines. More efforts are needed to overcome this constraint. Options for rapidly increasing the global vaccine supply include relaxing conditions of the Trade-Related Aspects of Intellectual Property Rights agreement that relate to COVID-19 vaccines, and sharing licenses through the WHO COVID-19 Technology Pool. The COVID-19 Vaccines Global Access (COVAX) Facility can play an important role in this regard and should be fully funded and accelerated. Furthermore, countries with firms producing COVID-19 vaccines may consider compensating these firms for their patented rights in order to facilitate the sharing of vaccine formulas with pharmaceutical firms in other countries that have the capacity to manufacture vaccines. In this context, enlightened self-interest can be a motivating factor. What COVID-19 has shown clearly is that no nation can be safe from the pandemic unless other nations are also safe. The process of vaccine distribution should prioritize countries that lag behind in vaccination, and especially those that do not have the capacity to manufacture vaccines, even with licensing.

Strengthen access to quality and affordable universal health coverage

All countries should either create or strengthen existing systems of universal health coverage (*UHC*). The COVID-19 experience has also shown that no part of the population of a country can be safe from the pandemic unless other parts are also safe. Adequate health care therefore needs to be ensured for all the people of a country. Enlightened self-interest, again, can be a motivating factor. The COVID-19 experience has also shown that developing countries with UHC in place, however rudimentary, did better than countries of comparable income levels in confronting the pandemic. This highlights the importance of SDG target 3.8, which calls upon all countries to establish UHC. The cross-country experience demonstrates that countries with low per capita income can also provide UHC, beginning with a robust universal primary health-care system, ensuring child and maternal health care, and building on it over time to make it more comprehensive and of higher quality while maintaining affordability. Emphasis

should be placed on prevention and preparedness, to minimize cases of full-blown disease that cause significant health damage and require expensive treatment. Appropriate attention should be given to both communicable and non-communicable diseases. Such a gradual, multi-phased approach agrees well with SDG target 3.8 that calls for "access to quality essential health-care services and access to safe, effective, quality, and affordable essential medicines and vaccines for all". In the immediate future, steps should be taken to overcome the shortfalls in various immunization and other health-care programmes caused by COVID-19 in order to avoid their adverse effects.

Put in place universal and flexible social protection

All countries should either create or bolster existing systems of universal social protection. The experience of COVID-19 has shown that countries with universal social protection systems did better, among comparable countries, in dealing with the pandemic. It allowed the financial assistance for the needy to be scaled up quickly to offset the negative effects of the crisis. The experience also shows that low-income countries can have universal social protection systems as well, systems that are appropriate to their national conditions, as called for by SDG target 1.3. Additionally, experience indicates that social protection systems should be based on the principle of universality, unencumbered by residence requirements and other such limitations.

Choose the appropriate path to structural transformation aimed at growth, equity and protection of the environment

Countries need to make a judicious choice from among the alternative paths to structural transformation. Globalization and the technological revolution have opened up a variety of paths to structural transformation. Countries must choose the path that is best for them, keeping in mind their current conditions and future prospects. No matter which particular path is chosen, the transformation should aim at ensuring that growth is sustained, socially inclusive, and environmentally sustainable. To meet these requirements, economic growth has to focus on building human capital, expanding employment, and decoupling from natural resource requirements. Investment in education, training, science and technology, and research and development, among other strategic areas, need to be emphasized, because the role of knowledge will only increase over time, no matter which path to structural transformation a country chooses. All types of discrimination in employment—those based on gender, age, race, ethnicity, religion, and other aspects of identity—have to be avoided, and equal pay for equal work has to be ensured. Education, training and employment of young people should be emphasized in order to build and ensure a productive labour force for the future. Attention needs to be paid to expansion of employment opportunities for the elderly, who are comprising an increasing share of the population with time.

In the immediate future, attention needs to be paid to the recovery of employment that was lost due to COVID-19, and to overcoming the shortfalls resulting from the pandemic in education, training, and other human capital building processes. The setbacks

in employment and human capital development must not be allowed to adversely affect the relevant long-term trajectories.

Raise international solidarity to a higher level

International solidarity needs to be raised to a new level, both to overcome the setbacks caused by COVID-19 and to ensure progress towards the SDGs in the years ahead. The overarching lesson of COVID-19, as noted at the very outset of this Report, has been a reinforcement of the awareness that we are all in this world together, both within a country and globally. Recognition of this reality is making people see more clearly the imperative for all nations to band together for survival. Efforts must therefore focus on making use of this recognition to bring about changes in the international arena that have proved difficult so far.

In the immediate future, apart from making vaccines a public good, wealthy nations need to support low-income developing countries' efforts to have more fiscal space for undertaking the social protection and stimulus programmes needed to tide them over through the COVID-19 crisis and for making progress towards achieving the SDGs. To this end, the international community needs to facilitate comprehensive debt restructuring with participation of private creditors; recapitalize multilateral development banks; and support greater international tax cooperation, including moving towards a global minimum corporate tax. Once the immediate crisis has been contained, wealthy countries need to help low-income developing countries set up universal health-care and social protection systems. The renewed sense of solidarity should also be used to reorganize international trade and financial institutions based on more equitable principles, which can allow the voices of developing countries to be better heard and their needs better addressed.

Share the Earth equitably with other species

It is necessary to stop further encroachment and loss of animal habitats. Protecting animal habitats protects the human race from the new existential threat posed by the recurrence of zoonotic epidemics and pandemics such as COVID-19. The continuing loss of forests and wilderness—resulting from unbridled expansion of agriculture, industry, and other commercial enterprises, and human habitats—and the relentless pursuit of higher levels of material consumption is leading to risky overlaps between human and animal habitats, allowing easy transfer of viruses from the latter to the former, causing epidemics and pandemics. The international community therefore should make a forceful move towards putting an end to further loss of forests and wilderness and restoring some of what has already been lost. The Earth should be more equitably shared with non-human species in the interest of the survival of the human species itself.

More vigorous steps need to be taken to stop the loss and wastage of food. Wasted food accounts for about 20 per cent of the total food produced (United Nations Environment Programme, 2021a). Progress in reducing food wastage can increase food availability for the hungry and malnourished, and it can also greatly reduce land, water and other resource requirements for food production, allowing more space for animal habitats. Similarly, more efforts need to be made towards promotion of healthy diets, which can both reduce material resource requirements and help to reduce obesity, which has become a major health problem in many countries and leads to other diseases.

Make use of the crisis to overcome political barriers to difficult policy changes

Societies should try to make use of the COVID-19 crisis to overcome political barriers to moving towards a more equitable society. Experience shows that a combination of growth with equity is necessary for achieving reduction of poverty and for setting up universal systems of social protection and health care, based on progressive taxation systems, policies, and institutions. History shows that crisis often creates the opportunity to make changes not possible during normal times. The ephemeral nature of life and the dependence of one on all for being safe from a deadly virus—realities that were witnessed and reinforced during COVID-19—may enable people to see things differently and make them ready for changes that faced political barriers in pre-COVID-19 years. Policymakers should make use of these possibilities to facilitate progress towards achieving the SDGs.

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Sustainable Development Outlook 2021
From anguish to determination

The COVID-19 pandemic has renewed the global awareness that we are all in this together. The pandemic has set back progress on achieving the Sustainable Development Goals (SDGs), but it has also made it possible for the international community to see the pursuit of sustainable development in a new light, and to learn from both successes and challenges of the pandemic to reinvigorate efforts towards achieving the SDGs.

The *Sustainable Development Outlook 2021* charts a way forward for the world community to achieve the SDGs, despite the setback caused by COVID-19. In doing so, it focuses on SDG 1 (poverty), SDG 2 (hunger), SDG 3 (health and well-being), SDG 8 (growth and employment), SDG 10 (inequality), and their interlinkages. In each case, *Sustainable Development Outlook 2021* presents in-depth analyses, based on country case studies and the relevant literature, and uses the findings to present plausible future scenarios under different assumptions.

In charting out the way forward, *Sustainable Development Outlook 2021* focuses on policy efforts that are cross-cutting in nature and have positive effects on multiple SDGs. It thus calls for accelerating vaccination by making the COVID-19 vaccine a public good; strengthening access to quality and affordable universal health coverage and social protection; pursuing structural transformation aimed at growth, equity and environmental protection; strengthening international solidarity; sharing the Earth equitably with other species; and making use of the crisis to overcome political barriers to difficult policy changes.

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