

CHAPTER 7

Environmental Issues, Their Solutions, and Sustainable Development Goals

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Environmental Issues

To be able to understand environmental issues, we first need to examine the concept of environment. Only in a healthy environment can a living organism continue to live healthily. According to the definition published by the Ministry of Environment and Forestry in 2008, the environment is the physical, biological, social, economic, and cultural setting in which living things meet their needs, maintain their relationships, and interact with each other throughout their lives. The environment, in short, is a system of relationships. Any disruption of this relationship upsets the natural balance. According to Erten's definition in 2004, the environment is the domain in which living and non-living elements interact with each other in equilibrium. Disruption of this balance between living and non-living elements by human behavior creates environmental issues.

Environmental issues and human problems are inextricably linked today. Examination of the causes and consequences of environmental issues reveals that man is not only the creator of these problems but also the most affected by them, and the only source of their solution. Environmental issues are global issues, and the whole world is striving to find a solution. They adversely affect everyone's lives regardless of age, sex and gender, or differences in culture, belief, and income status (Erten, 2003; Erten, 2004; Erten, 2019; Escobar, 1995; Nag & Vizayakumar, 2005; Rees, 1995). The main cause of environmental issues is the disruption of the balance between the living and non-living elements that make up the environment by human behavior. We are witnessing a rapid increase in environmental issues such as plants and animals becoming extinct, environmental pollution, acid rain, garbage and waste problems, global warming, and

climate change. Scientists cite human behavior as the cause of these problems (Dunlap et al., 2000; Nordlund & Garvill 2002; Oskamp 2000; Schultz, et al., 2005). Developments in technology and industry are among the causes of environmental issues. Humans unthinkingly use natural resources to meet their unending needs due to population growth. However, these natural resources are limited. Although unthinking use of resources meets human needs, it also irreversibly harms the environment.

Another concept that affects environmental issues is globalization. Globalization has moved all the variables from the national domain to the international one. All countries now influence one another economically, politically, socially, and culturally. As a result, access to information has become easier, intercultural communication has increased, and life has become more modern (Hammond & Grosse, 2003). This communication facilitates cooperation in finding solutions to problems that affect the whole world, such as environmental issues. Although this seems to be a positive situation, globalization also plays a role in increasing environmental issues (Khor, 2001). The modern life resulting from globalization has also affected the relationship between man and nature. Man has imposed a limitless burden on nature in an effort to meet its needs. Mankind sees itself as superior to nature. Yet man is as much a part of nature as all other living things. It needs nature to live. In other words, man is not the master of nature but an integral part of it. Mankind's achievements in industry and technology have disrupted the balance between man and nature. These achievements have increased unconscious waste and consumption (Baykal & Baykal, 2008). Exploiting nature is now commonplace behavior. Examples of this irresponsible behavior include deforestation, the use of poor-quality coal, uncontrolled population growth, increased energy per capita, the use of pesticides and artificial fertilizers, hunting, irrigation without treating the water first to rid it of domestic or industrial wastes, unconscious use of fossil fuels, greenhouse gases, and not using public transportation/mass transit systems. Examples of environmental issues include air, water, and soil pollution, loss of biodiversity, plants, and animals becoming endangered or on the verge of extinction, global warming, ozone depletion, acid rain, and the climate crisis.

The Emergence of Environmental Issues

The turning point for environmental issues is the Industrial Revolution. Human welfare is improving as a result of advances in industry and technology. This in turn is causing rapid population growth. There is a corresponding, even unlimited, increase in the need for shelter, food, and energy. The natural resources to meet all these needs are limited. This shows the many human behaviors that cause environmental issues. Environmental issues have become the topic of many scientific studies in recent years. The fact that these problems are global is a matter of great concern for the whole world. This is why it is often on the world agenda. Some developments in the 1960s revealed how vitally important environmental issues are. The first of these is large-scale deaths

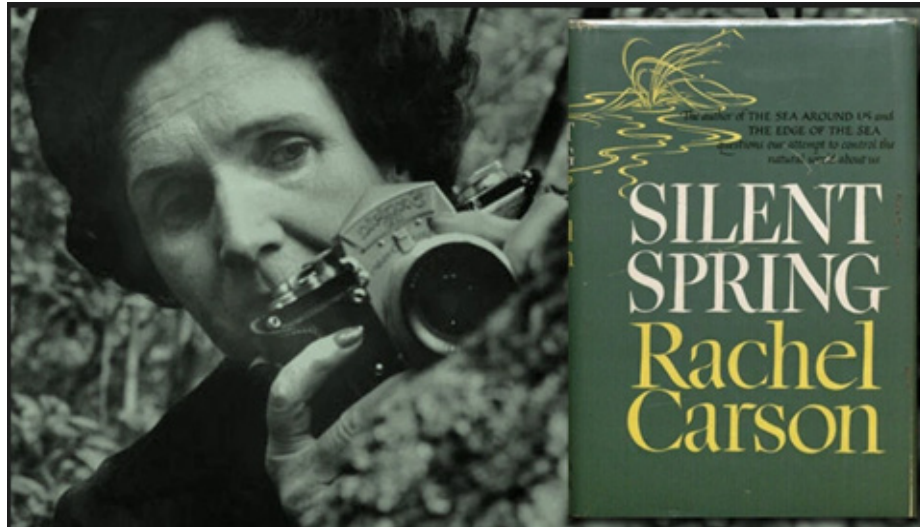
due to air pollution in Europe. One example of this is the London Fog-*The Great Smoke of London*. London had the coldest winter in 80 years in 1952. Power plants and factories also unconsciously started to use excessive coal to continue production in order to protect the city inhabitants from the cold. The decisions taken by the UK to achieve maximum efficiency and profit from coal turned London Smoke into Killer Fog. The use of poor-quality coal saw a corresponding increase in the release of sulfur dioxide and sulfuric acid. This caused local air pollution. All these harmful gases descended on the city as fog resulting in the death of 12,000 people. This and similar events have led man to start seeing himself as a being not superior to nature and to think about the future. Studies to date have shown that more than half of environmental issues emerged after 1960 (Şahin, 2020).

Figure 1.

The Great Smoke of London (<https://www.bbc.co.uk/archive/great-smog-of-london/zhjx7nb>)



Another development is Rachel Carson's book *Silent Spring*, published in 1962. Environmental issues are emphasized as a concept for the first time in this book. The author describes the damage caused to the soil by the pesticides used to get rid of agricultural pests. The book launched a great environmental movement against the use of chemicals in agriculture (Şahin, 2020).

Figure 2.*Rachel Carson & Silent Spring*

One event regarded as being instrumental in the emergence of environmental issues and their becoming current is the pessimistic view of the future painted by the reports written in the 1960s. The biggest example of this is the Club of Rome's report titled *The Limits to Growth*. The report emphasizes the significant increase in population, developments in industry, environmental issues, and the rapid disappearance of natural resources. All these variables are considered in detail on how they will affect the global economy. Finally, the launch of environmental organizations such as Greenpeace, founded to draw attention to environmental issues, played a role in bringing these problems to the agenda. This process has been accelerated by the establishment of environmentalist political parties and the fact that these parties have found significant support. In short, almost every country had to put environmental issues on the agenda in the 1960s and 1970s (Şahin, 2012).

Seeking Solutions to Environmental Issues

Living in a healthy environment is a fundamental right of every human being. According to Article 56 of the Constitution of the Republic of Turkey, *everyone has the right to live in a healthy and balanced environment. It is the duty of the state and the citizen to improve the environment, protect environmental health, and prevent pollution of the environment.* The current state of environmental issues shows that human-environment interaction is vital. Finding solutions to these issues is not simply a national concern. Environmental issues also occupy a large place on the international agenda (T.R. Ministry of Environment and Forestry, 2008). Bleak scenarios for the future increased after the 1970s fueled by the huge losses caused by environmental issues. Scenarios such as the daily increase in global warming will melt the polar ice caps. The oceans will rise as a result of the melting glaciers. The raised water levels will affect the people living in those areas. The increase in temperature will also cause drought. The climate will result

in places becoming uninhabitable. People will migrate from these areas in droves. These huge waves of migration will affect relations between countries, perhaps causing wars. Drought will also result in epidemics. All of this has made the search for solutions to environmental issues a global one.

When we look at how solutions to environmental issues have been sought throughout history, we can consider Carson's definition of environmental issues in her book *Silent Spring* in 1962 to be a turning point. Then, in **1972**, the UN held the ***United Nations Conference on the Human Environment***. This conference saw environmental issues discussed globally for the first time. Emphasis was placed on what needs to be done to leave a healthy environment for future generations. It was against this backdrop that the establishment of an international system to address environmental issues on a global scale came to the fore. The ***UN Program was established within the UN*** and under its leadership. Since its establishment, UNEP has played a key role in many important protocols and conventions. These are listed in the table below.

Table 1.

Conventions and Protocols after UNEP (MFA, 2016, Republic of Turkey Ministry of Foreign Affairs, 2023).

	Year	Convention/Protocol	Significance
1	1973	CITES Convention	International protection of endangered plants and animals
2	1979	BONN Convention	Conservation of Migratory Species of Wild Animals
3	1985	Vienna Convention	Protection of the ozone layer
4	1987	Montreal Protocol	Protection of the ozone layer
5	1989	Basel Convention	Control of the movement and disposal of hazardous wastes
6	1992	Convention on Biological Diversity	International protection of endangered plants and animals
7	1998	Rotterdam Convention	International trade in certain hazardous chemicals and pesticides
8	2001	Stockholm Convention	On persistent organic pollutants

Following the establishment of **UNEP**, the ***“International Environment Conference” was held in Tbilisi*** in 1977. One of the most important topics of the Tbilisi Declaration is environmental education. Environmental education was on the agenda at this conference, making this the first time the topic was discussed in an international context. Global cooperation is required to achieve the goals and objectives of environmental education (UNESCO, 1977). Besides, the main purpose of environmental education

is to raise generations who will find solutions to environmental issues. Environmental education is an important tool for providing individuals with all the knowledge, skills, values, and attitudes required to adopt environmentally friendly behaviors (Erten, 2002; 2004). The **1987 Brundtland (*Our Common Future*) Report** introduced the concept of sustainable development. Similarly, this report drew attention to such environmental issues as global warming, drought, and the depletion of the ozone layer. The **Rio Declaration** was published in **1992** followed by the Climate Crisis Convention, the Biodiversity Framework Convention, and the Agenda 21 Plans. **Agenda 21** in **1992** resulted in an international consensus being reached on the principles of sustainable development. The concepts of Education and community awareness for Sustainable Development were introduced here. The international agenda in the 2000s focused more on climate change. The **Kyoto Protocol** of **2005** aims to address climate change and reduce greenhouse gas emissions. The **Paris Agreement** of **2015** is an international agreement to prevent a climate crisis signed under the UN Framework Convention on Climate Change.

Is Climate Change the Most Important Environmental Issue?

When we look at the search for solutions to environmental issues from an international perspective, we see that the most emphasized issue in recent years is climate change (Köseoğlu & Erten, 2022). This is why the climate crisis was treated as a major topic at all meetings on environmental issues from the Rio Convention in 1992 to the Paris Agreement in 2015. The Ministry of Environment and Urbanization of the Republic of Turkey even changed its name to the Ministry of Environment, Urbanization and Climate Change of the Republic of Turkey in 2022 to reflect this. A course on Environmental Education and Climate Change has been added to all secondary school curricula. All this highlights why climate change should be treated as a separate topic.

According to the UN Framework Convention on Climate Change, climate change is the changes that occur in the climate as a result of human behaviors that adversely affect the balance of the global atmosphere in addition to naturally occurring changes in the climate (UNEP, 1975). According to this definition, human behavior is the main cause of climate change. The disruption by human hands of the balance between the living and non-living elements that make up the environment is already creating environmental issues. Although these changes in the climate seem to be an environmental issue in itself, they are the result of many existing environmental issues. The most important consequence of climate change caused by human behavior is global warming. Climate change and global warming are two interrelated concepts. Climate change emerges as a larger concept that includes global warming and cooling. The Earth's temperature has risen then fallen many times throughout the planet's history. This is a natural process that occurs due to the way nature functions. But the reason for the increase we are seeing in the Earth's temperature today is man. This is why the change is unlike any other before it. The Earth's temperature has been gradually rising since the beginning of industrialization

in 1800, in particular (Şahin, 2012). The destruction of forests and the unconscious and excessive use of fossil fuels increase the amounts of methane, carbon dioxide, ozone, and dinitrogen monoxide in the atmosphere. These gases keep the temperature of the Earth at 14 degrees Celsius. The change in the ratio of these gases in the atmosphere directly affects the temperature of the Earth. These effects result in the climate crisis (Erten, 2004). The possible consequences of climate change include the following:

- Unusual temperature changes will adversely affect vital health, increasing epidemics and mass mortality rates. The inexorable increase in temperature will lead to drought and desertification.
- Extraordinary changes in the seasons will cause melting in areas with permanent snow and ice cover, resulting in disasters such as avalanches, floods, and high waters. As the seas rise, the relatively low areas where there is habitation and agriculture will end up underwater.
- The melting glaciers and large currents in the oceans will affect the salinity of the seas and disrupt the order of the currents. This in turn will cause irregularities in the normal formation of climates.
- Changes in sea currents will adversely affect marine ecosystems and impact life in those regions. Mankind can expect to encounter great hardships, particularly in finding sources of drinking water (Candan & Erten, 2015).

This is why the biggest step man can take to leave a habitable planet for future generations is to seek solutions not only to climate change but also to all environmental issues. But this step can only be taken with environmentally friendly societies. This is possible by raising the individuals who make up the societies, the teachers who raise them, and the teacher candidates who will go on to raise them in an environmentally friendly way.

The United Nation's Sustainable Development Goals for 2030

When we examine the steps taken to find solutions to environmental issues, we see that the concepts of sustainability and sustainable development are frequently articulated after the 1990s (Çayırtaş & Sayı, 2021). The Brundtland Report, organized by the UN in 1987, is where these concepts were first put forward. This report states that mankind needs to consider the resources of future generations while meeting its needs today. These resources are the most important legacy we will leave for the future (Singh, 2020; United Nations, 1987). In other words, sustainable development is a model for how to protect the environment while meeting human needs. Economic and ecological development should be mutually supportive. The Rio Declaration in 1992 builds on the 1987 report and takes it further. It states that sustainable development has three pillars. These are the economic dimension, the social dimension, and the environmental

dimension (Choudhary & Gokarn, 2013; Meakin, 1992; Bebbington & Unerman, 2018). Knowledge and awareness of sustainable development are key to solving environmental issues. The search for solutions to environmental issues is a global responsibility. The whole world needs to collaborate on this. The UN's Sustainable Development Goals are an important example of such collaboration. They have been adopted by 193 UN members and should be achieved by the end of 2030. Constituting a global and universal call to action, the goals were first adopted in 2016. The Paris Agreement is regarded as the starting point for the UN Sustainable Development Goals. This agreement entered into force in 2015 intending to find a global solution to climate change, which seriously affects human existence. In the period before the Paris Agreement, the UN Millennium Development Goals, covering the years 2000-2015, pursued the same goal. The Sustainable Development Goals are an improved version of the same goals that were introduced by the OECD in 1996 (Bebbington & Unerman, 2018). The Sustainable Development Goals have 17 main objectives and 169 related sub-objectives. The following figure and table present these objectives in detail.

Figure 3.

Sustainable Development Goals



Table 2
Sustainable Development Goals

Goal Number	Goal Name	Number of Countries Capable	Description
1	No Poverty	31	End poverty in all its forms everywhere by 2030
2	Zero Hunger	0	- End hunger, achieve food security, improve nutrition, and promote sustainable agriculture
3	Good Health and Well-Being	0	Ensure healthy lives and promote well-being for all at all ages.
4	Quality Education	16	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
5	Gender Equality	5	Achieve gender equality and empower all women and girls
6	Clean Water and Sanitation	0	Ensure availability and sustainable management of water and sanitation for all
7	Affordable and Clean Energy	11	Ensure access to affordable, reliable, sustainable, and modern energy for all
8	Decent Work and Economic Growth	2	Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all
9	Industry, Innovation and Infrastructure	1	Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation
10	Reducing Inequality	9	Reduce inequality within and among countries
11	Sustainable Cities and Communities	0	Make cities and human settlements inclusive, safe, resilient, and sustainable
12	Responsible Consumption and Production	26	Ensure sustainable consumption and production patterns
13	Climate Action	20	Take urgent action to combat climate change and its impacts

14	Life Below Water	0	Conserve and sustainably use the oceans, seas, and marine resources for sustainable development
15	Life on Land	4	Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt reverse land degradation, and halt biodiversity loss
16	Peace, Justice and Strong Institutions	2	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels
17	Partnerships for Goals	1	Strengthening the means for implementation and revitalizing the Global Partnership for Sustainable Development

The table above was prepared according to 2023 data. When the relevant table is examined, it is seen that the situation is not very bright all over the world. The Poverty Reduction goal has been achieved the most. The number of countries achieving this goal is 31. Considering that there are 193 countries that have accepted these goals, it can be seen that the realization rate of the most successful goal is only 16%. It is known that all countries create action plans to achieve these goals. There are five codes (blue, green, yellow, orange and red) according to the level of realization of Sustainable Development Goals. Thanks to these codes, the level of realization of the 17 goals can be easily understood on a country basis. The explanations of these codes are as follows:

Table 3.
Codes for Sustainable Development Goals

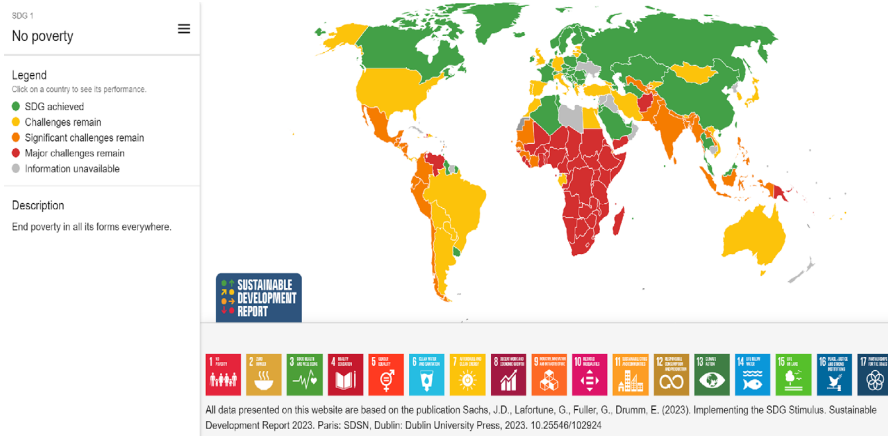
Code Number	Code	Description
1	Green	SDG achieved
2	Yellow	Challenges remain
3	Orange	Significant challenges remain
4	Red	Major challenges remain
5	Blue	Information unavailable

The blue code indicates that the information unavailable, the green code indicates that the information has been achieved, the yellow code indicates that challenges remain, the orange code indicates that significant challenges remain, and the red code indicates that major challenges remain. Everyone can access up-to-date information about the 2022 Sustainable Development Report prepared by the University of Cambridge from

the official website prepared specifically for this report (<https://dashboards.sdgindex.org/>). As an example, the situation of the No Poverty goal in the world is given in the picture below.

Figure 4.

Report of the No Poverty goal in 2023



Türkiye's Current Situation on Sustainable Development Goals

While Türkiye moves its country forward economically and socially in its development journey from past to future, it also prioritizes the protection and improvement of the environment in line with its global responsibilities. In this context, Turkey emphasizes at every opportunity that it is ready to contribute to a sustainable world since the adoption of the 2030 Sustainable Development Agenda. Türkiye's position on Sustainable Development Goals is summarized below.

Figure 5.

Türkiye's position on Sustainable Development Goals

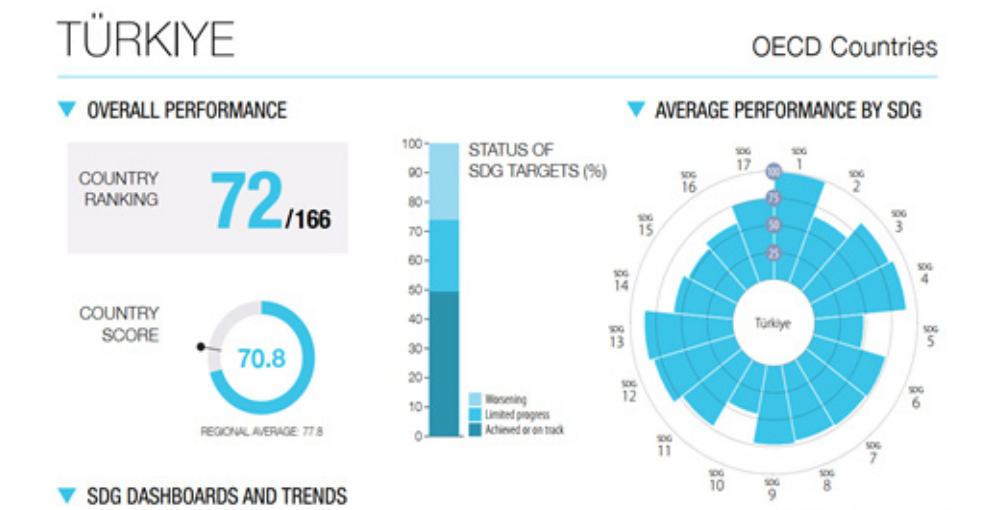


Table 4.
Türkiye's position on Sustainable Development Goals

Goal Number	Goal Name	Turkey's Code	Goal Number	Goal Name	Turkey's Code
1	No Poverty	Code Yellow	10	Reducing Inequality	Code Red
2	Zero Hunger	Code Orange	11	Sustainable Cities and Communities	Code Orange
3	Good Health and Well-being	Code Red	12	Responsible Consumption and Production	Code Yellow
4	Quality Education	Code Orange	13	Climate Action	Code Red
5	Gender Equality	Code Red	14	Life Below Water	Code Red
6	Clean Water and Sanitation	Code Orange	15	Life on Land	Code Red
7	Affordable and Clean Energy	Code Yellow	16	Peace, Justice and Strong Institutions	Code Red
8	Decent Work and Economic Growth	Code Red	17	Partnerships for Goals	Code Orange
9	Industry, Innovation and Infrastructure	Code Red			

When the relevant table is analyzed, it is seen that Türkiye has not achieved the green code in any of the 17 goals by 2023. Again, none of the 17 goals is marked with a blue code. This is an indication that the data is open for all 17 goals. When the relevant table is analyzed, it is seen that Türkiye is marked with a yellow code in three goals. This shows that there are still significant challenges in poverty reduction, Affordable and Clean Energy and responsible consumption and production. There are five goals where Türkiye is struggling with great difficulties to achieve the goal. These goals are zero hunger, quality education, clean water and sanitation, sustainable cities and communities, and partnerships for the goals. These goals are marked with an orange code. Current data shows that Türkiye is still struggling with major challenges in 9 of the 17 goals. All these goals are marked with code red. Gender equality, decent work and economic growth, industry, innovation and infrastructure, reducing inequality, climate action, Life Below Water, life on land, peace, justice and strong institutions are the goals marked with code red.

When current developments are examined, there is significant progress for Türkiye in the goals of No Poverty, Good Health and Well-being, Clean Water and Sanitation,

Industry, Innovation and Infrastructure and Sustainable Cities and Communities. Unfortunately, there is no progress in other goals. However, efforts on this issue continue. It is anticipated that as the country develops technically and economically, there will be developments towards these goals. Turkey has come a long way with the impact of social policies implemented on issues such as reducing poverty, providing access to basic services, eliminating inequalities, and protecting vulnerable groups. In particular, policies aimed at reducing interregional infrastructure differences and spreading technological opportunities throughout the country have created an inclusive development path. In the next process; Efforts will be focused on continuing progress and further improving the quality of services provided. In line with the principle of equity, efforts will continue to spread the effects of welfare increase in a balanced manner to all segments of society, especially vulnerable groups (TR Presidency of Strategy and Budget, 2019).

Figure 6.

Türkiye's position on Sustainable Development Goals

SDG DASHBOARDS AND TRENDS



Note: The full title of each SDG is available here: <https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals>

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Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development

Sustainable Development Goal indicators should be disaggregated, where relevant, by income, sex, age, race, ethnicity, migratory status, disability and geographic location, or other characteristics, in accordance with the Fundamental Principles of Official Statistics.¹

<i>Goals and targets (from the 2030 Agenda for Sustainable Development)</i>	<i>Indicators</i>
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	1.1.1 Proportion of the population living below the international poverty line by sex, age, employment status and geographic location (urban/rural)
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	1.2.1 Proportion of population living below the national poverty line, by sex and age 1.2.2 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	1.3.1 Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and 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	1.4.1 Proportion of population living in households with access to basic services 1.4.2 Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure
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	1.5.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population 1.5.2 Direct economic loss attributed to disasters in relation to global gross domestic product (GDP) 1.5.3 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030

¹ Resolution 68/261.

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<i>Goals and targets (from the 2030 Agenda for Sustainable Development)</i>	<i>Indicators</i>
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	1.5.4 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies 1.a.1 Total official development assistance grants from all donors that focus on poverty reduction as a share of the recipient country's gross national income 1.a.2 Proportion of total government spending on essential services (education, health and social protection)
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	1.b.1 Pro-poor public social spending
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	2.1.1 Prevalence of undernourishment 2.1.2 Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)
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	2.2.1 Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age 2.2.2 Prevalence of malnutrition (weight for height $>+2$ or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight) 2.2.3 Prevalence of anaemia in women aged 15 to 49 years, by pregnancy status (percentage)
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	2.3.1 Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size 2.3.2 Average income of small-scale food producers, by sex and indigenous status
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	2.4.1 Proportion of agricultural area under productive and sustainable agriculture

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<i>Goals and targets (from the 2030 Agenda for Sustainable Development)</i>	<i>Indicators</i>
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	2.5.1 Number of (a) plant and (b) animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities 2.5.2 Proportion of local breeds classified as being at risk of extinction
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.a.1 The agriculture orientation index for government expenditures 2.a.2 Total official flows (official development assistance plus other official flows) to the agriculture sector
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.b.1 Agricultural export subsidies
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	2.c.1 Indicator of food price anomalies
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	3.1.1 Maternal mortality ratio 3.1.2 Proportion of births attended by skilled health personnel
3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	3.2.1 Under-5 mortality rate 3.2.2 Neonatal mortality rate
3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	3.3.1 Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations 3.3.2 Tuberculosis incidence per 100,000 population 3.3.3 Malaria incidence per 1,000 population 3.3.4 Hepatitis B incidence per 100,000 population 3.3.5 Number of people requiring interventions against neglected tropical diseases 3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease

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<i>Goals and targets (from the 2030 Agenda for Sustainable Development)</i>	<i>Indicators</i>
3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	3.4.2 Suicide mortality rate
3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol	3.5.1 Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders 3.5.2 Alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol
3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents	3.6.1 Death rate due to road traffic injuries
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	3.7.1 Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods 3.7.2 Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1,000 women in that age group
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	3.8.1 Coverage of essential health services 3.8.2 Proportion of population with large household expenditures on health as a share of total household expenditure or income
3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	3.9.1 Mortality rate attributed to household and ambient air pollution 3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services) 3.9.3 Mortality rate attributed to unintentional poisoning
3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate	3.a.1 Age-standardized prevalence of current tobacco use among persons aged 15 years and older
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.b.1 Proportion of the target population covered by all vaccines included in their national programme 3.b.2 Total net official development assistance to medical research and basic health sectors 3.b.3 Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis

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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.c.1 Health worker density and distribution

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

3.d.1 International Health Regulations (IHR) capacity and health emergency preparedness

3.d.2 Percentage of bloodstream infections due to selected antimicrobial-resistant organisms

Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

4.1.1 Proportion of children and young people (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex

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

4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education

4.2.1 Proportion of children aged 24–59 months who are developmentally on track in health, learning and psychosocial well-being, by sex

4.2.2 Participation rate in organized learning (one year before the official primary entry age), by sex

4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university

4.3.1 Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex

4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

4.4.1 Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill

4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations

4.5.1 Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated

4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy

4.6.1 Proportion of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex

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<i>Goals and targets (from the 2030 Agenda for Sustainable Development)</i>	<i>Indicators</i>
4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	4.7.1 Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment
4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all	4.a.1 Proportion of schools offering basic services, by type of service
4.b By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries	4.b.1 Volume of official development assistance flows for scholarships by sector and type of study
4.c By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States	4.c.1 Proportion of teachers with the minimum required qualifications, by education level
Goal 5. Achieve gender equality and empower all women and girls	
5.1 End all forms of discrimination against all women and girls everywhere	5.1.1 Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex
5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation	5.2.1 Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age 5.2.2 Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner in the previous 12 months, by age and place of occurrence
5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation	5.3.1 Proportion of women aged 20–24 years who were married or in a union before age 15 and before age 18 5.3.2 Proportion of girls and women aged 15–49 years who have undergone female genital mutilation, by age

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5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate	5.4.1 Proportion of time spent on unpaid domestic and care work, by sex, age and location
5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life	5.5.1 Proportion of seats held by women in (a) national parliaments and (b) local governments 5.5.2 Proportion of women in managerial positions
5.6 Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences	5.6.1 Proportion of women aged 15–49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care 5.6.2 Number of countries with laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexual and reproductive health care, information and education
5.a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws	5.a.1 (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure 5.a.2 Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control
5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women	5.b.1 Proportion of individuals who own a mobile telephone, by sex
5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels	5.c.1 Proportion of countries with systems to track and make public allocations for gender equality and women's empowerment
Goal 6. Ensure availability and sustainable management of water and sanitation for all	
6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all	6.1.1 Proportion of population using safely managed drinking water services
6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations	6.2.1 Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water

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<i>Goals and targets (from the 2030 Agenda for Sustainable Development)</i>	<i>Indicators</i>
6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	6.3.1 Proportion of domestic and industrial wastewater flows safely treated 6.3.2 Proportion of bodies of water with good ambient water quality
6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	6.4.1 Change in water-use efficiency over time 6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources
6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	6.5.1 Degree of integrated water resources management 6.5.2 Proportion of transboundary basin area with an operational arrangement for water cooperation
6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	6.6.1 Change in the extent of water-related ecosystems over time
6.a By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies	6.a.1 Amount of water- and sanitation-related official development assistance that is part of a government-coordinated spending plan
6.b Support and strengthen the participation of local communities in improving water and sanitation management	6.b.1 Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	
7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	7.1.1 Proportion of population with access to electricity 7.1.2 Proportion of population with primary reliance on clean fuels and technology
7.2 By 2030, increase substantially the share of renewable energy in the global energy mix	7.2.1 Renewable energy share in the total final energy consumption
7.3 By 2030, double the global rate of improvement in energy efficiency	7.3.1 Energy intensity measured in terms of primary energy and GDP
7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology	7.a.1 International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems

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7.b By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States and landlocked developing countries, in accordance with their respective programmes of support

7.b.1 Installed renewable energy-generating capacity in developing countries (in watts per capita)

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

8.1.1 Annual growth rate of real GDP per capita

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

8.2.1 Annual growth rate of real GDP per employed person

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

8.3.1 Proportion of informal employment in total employment, by sector and sex

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

8.4.1 Material footprint, material footprint per capita, and material footprint per GDP

8.4.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP

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

8.5.1 Average hourly earnings of employees, by sex, age, occupation and persons with disabilities

8.5.2 Unemployment rate, by sex, age and persons with disabilities

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

8.6.1 Proportion of youth (aged 15–24 years) not in education, employment 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

8.7.1 Proportion and number of children aged 5–17 years engaged in child labour, by sex and age

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<i>Goals and targets (from the 2030 Agenda for Sustainable Development)</i>	<i>Indicators</i>
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	8.8.1 Fatal and non-fatal occupational injuries per 100,000 workers, by sex and migrant status 8.8.2 Level of national compliance with labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation, by sex and migrant status
8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	8.9.1 Tourism direct GDP as a proportion of total GDP and in growth rate
8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all	8.10.1 (a) Number of commercial bank branches per 100,000 adults and (b) number of automated teller machines (ATMs) per 100,000 adults 8.10.2 Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider
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.a.1 Aid for Trade commitments and disbursements
8.b By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization	8.b.1 Existence of a developed and operationalized national strategy for youth employment, as a distinct strategy or as part of a national employment strategy
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	
9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	9.1.1 Proportion of the rural population who live within 2 km of an all-season road 9.1.2 Passenger and freight volumes, by mode of transport
9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries	9.2.1 Manufacturing value added as a proportion of GDP and per capita 9.2.2 Manufacturing employment as a proportion of total employment
9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets	9.3.1 Proportion of small-scale industries in total industry value added 9.3.2 Proportion of small-scale industries with a loan or line of credit

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<i>Goals and targets (from the 2030 Agenda for Sustainable Development)</i>	<i>Indicators</i>
9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities	9.4.1 CO ₂ emission per unit of value added
9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending	9.5.1 Research and development expenditure as a proportion of GDP 9.5.2 Researchers (in full-time equivalent) per million inhabitants
9.a Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States	9.a.1 Total official international support (official development assistance plus other official flows) to infrastructure
9.b Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities	9.b.1 Proportion of medium and high-tech industry value added in total value added
9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020	9.c.1 Proportion of population covered by a mobile network, by technology
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	10.1.1 Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population and the total population
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	10.2.1 Proportion of people living below 50 per cent of median income, by sex, age and persons with disabilities
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	10.3.1 Proportion of population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law
	10.4.1 Labour share of GDP

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<i>Goals and targets (from the 2030 Agenda for Sustainable Development)</i>	<i>Indicators</i>
10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality	10.4.2 Redistributive impact of fiscal policy ²
10.5 Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations	10.5.1 Financial Soundness Indicators
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	10.6.1 Proportion of members and voting rights of developing countries in international organizations
10.7 Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies	10.7.1 Recruitment cost borne by employee as a proportion of monthly income earned in country of destination 10.7.2 Proportion of countries with migration policies that facilitate orderly, safe, regular and responsible migration and mobility of people 10.7.3 Number of people who died or disappeared in the process of migration towards an international destination 10.7.4 Proportion of the population who are refugees, by country of origin
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.a.1 Proportion of tariff lines applied to imports from least developed countries and developing countries with zero-tariff
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.b.1 Total resource flows for development, by recipient and donor countries and type of flow (e.g. official development assistance, foreign direct investment and other flows)
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	10.c.1 Remittance costs as a proportion of the amount remitted
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	
11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums	11.1.1 Proportion of urban population living in slums, informal settlements or inadequate housing

² The Gini Coefficient will be reported as a second series in the database, as it is a component of this indicator.

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11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities
11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries	11.3.1 Ratio of land consumption rate to population growth rate 11.3.2 Proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically
11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage	11.4.1 Total per capita expenditure on the preservation, protection and conservation of all cultural and natural heritage, by source of funding (public, private), type of heritage (cultural, natural) and level of government (national, regional, and local/municipal)
11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations	11.5.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population 11.5.2 Direct economic loss attributed to disasters in relation to global gross domestic product (GDP) 11.5.3 (a) Damage to critical infrastructure and (b) number of disruptions to basic services, attributed to disasters
11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	11.6.1 Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities 11.6.2 Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)
11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities	11.7.1 Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities 11.7.2 Proportion of persons victim of physical or sexual harassment, by sex, age, disability status and place of occurrence, in the previous 12 months
11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning	11.a.1 Number of countries that have national urban policies or regional development plans that (a) respond to population dynamics; (b) ensure balanced territorial development; and (c) increase local fiscal space
11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource	11.b.1 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030

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Goals and targets (from the 2030 Agenda for Sustainable Development)	Indicators
efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels	11.b.2 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies
11.c Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials	<i>No suitable replacement indicator was proposed. The global statistical community is encouraged to work to develop an indicator that could be proposed for the 2025 comprehensive review. See E/CN.3/2020/2, paragraph 23</i>
Goal 12. Ensure sustainable consumption and production patterns	
12.1 Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries	12.1.1 Number of countries developing, adopting or implementing policy instruments aimed at supporting the shift to sustainable consumption and production
12.2 By 2030, achieve the sustainable management and efficient use of natural resources	12.2.1 Material footprint, material footprint per capita, and material footprint per GDP 12.2.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP
12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses	12.3.1 (a) Food loss index and (b) food waste index
12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment	12.4.1 Number of parties to international multilateral environmental agreements on hazardous waste, and other chemicals that meet their commitments and obligations in transmitting information as required by each relevant agreement 12.4.2 (a) Hazardous waste generated per capita; and (b) proportion of hazardous waste treated, by type of treatment
12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	12.5.1 National recycling rate, tons of material recycled
12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle	12.6.1 Number of companies publishing sustainability reports
12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities	12.7.1 Number of countries implementing sustainable public procurement policies and action plans
12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	12.8.1 Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment

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<i>Goals and targets (from the 2030 Agenda for Sustainable Development)</i>	<i>Indicators</i>
12.a Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production	12.a.1 Installed renewable energy-generating capacity in developing countries (in watts per capita)
12.b Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products	12.b.1 Implementation of standard accounting tools to monitor the economic and environmental aspects of tourism sustainability
12.c Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities	12.c.1 Amount of fossil-fuel subsidies (production and consumption) per unit of GDP
Goal 13. Take urgent action to combat climate change and its impacts³	
13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	13.1.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population 13.1.2 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030 13.1.3 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies
13.2 Integrate climate change measures into national policies, strategies and planning	13.2.1 Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change 13.2.2 Total greenhouse gas emissions per year
13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	13.3.1 Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment

³ Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.

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Goals and targets (from the 2030 Agenda for Sustainable Development)

Indicators

13.a Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible

13.a.1 Amounts provided and mobilized in United States dollars per year in relation to the continued existing collective mobilization goal of the \$100 billion commitment through to 2025

13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities

13.b.1 Number of least developed countries and small island developing States with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change

Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

14.1.1 (a) Index of coastal eutrophication; and (b) plastic debris density

14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans

14.2.1 Number of countries using ecosystem-based approaches to managing marine areas

14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels

14.3.1 Average marine acidity (pH) measured at agreed suite of representative sampling stations

14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics

14.4.1 Proportion of fish stocks within biologically sustainable levels

14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information

14.5.1 Coverage of protected areas in relation to marine areas

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Goals and targets (from the 2030 Agenda for Sustainable Development)

Indicators

14.6 By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation⁴

14.6.1 Degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing

14.7 By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism

14.7.1 Sustainable fisheries as a proportion of GDP in small island developing States, least developed countries and all countries

14.a Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries

14.a.1 Proportion of total research budget allocated to research in the field of marine technology

14.b Provide access for small-scale artisanal fishers to marine resources and markets

14.b.1 Degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries

14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of "The future we want"

14.c.1 Number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in the United Nations Convention on the Law of the Sea, for the conservation and sustainable use of the oceans and their resources

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

15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

15.1.1 Forest area as a proportion of total land area

15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type

⁴ Taking into account ongoing World Trade Organization negotiations, the Doha Development Agenda and the Hong Kong ministerial mandate.

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<i>Goals and targets (from the 2030 Agenda for Sustainable Development)</i>	<i>Indicators</i>
15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	15.2.1 Progress towards sustainable forest management
15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	15.3.1 Proportion of land that is degraded over total land area
15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development	15.4.1 Coverage by protected areas of important sites for mountain biodiversity 15.4.2 (a) Mountain Green Cover Index and (b) proportion of degraded mountain land
15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	15.5.1 Red List Index
15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed	15.6.1 Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits
15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products	15.7.1 Proportion of traded wildlife that was poached or illicitly trafficked
15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species	15.8.1 Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species
15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	15.9.1 (a) Number of countries that have established national targets in accordance with or similar to Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011–2020 in their national biodiversity strategy and action plans and the progress reported towards these targets; and (b) integration of biodiversity into national accounting and reporting systems, defined as implementation of the System of Environmental-Economic Accounting
15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems	15.a.1 (a) Official development assistance on conservation and sustainable use of biodiversity; and (b) revenue generated and finance mobilized from biodiversity-relevant economic instruments

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Indicators

15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation

15.b.1 (a) Official development assistance on conservation and sustainable use of biodiversity; and (b) revenue generated and finance mobilized from biodiversity-relevant economic instruments

15.c Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities

15.c.1 Proportion of traded wildlife that was poached or illicitly trafficked

Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

16.1 Significantly reduce all forms of violence and related death rates everywhere

16.1.1 Number of victims of intentional homicide per 100,000 population, by sex and age

16.1.2 Conflict-related deaths per 100,000 population, by sex, age and cause

16.1.3 Proportion of population subjected to (a) physical violence, (b) psychological violence and (c) sexual violence in the previous 12 months

16.1.4 Proportion of population that feel safe walking alone around the area they live after dark

16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children

16.2.1 Proportion of children aged 1–17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month

16.2.2 Number of victims of human trafficking per 100,000 population, by sex, age and form of exploitation

16.2.3 Proportion of young women and men aged 18–29 years who experienced sexual violence by age 18

16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all

16.3.1 Proportion of victims of violence in the previous 12 months who reported their victimization to competent authorities or other officially recognized conflict resolution mechanisms

16.3.2 Unsentenced detainees as a proportion of overall prison population

16.3.3 Proportion of the population who have experienced a dispute in the past two years and who accessed a formal or informal dispute resolution mechanism, by type of mechanism

16.4.1 Total value of inward and outward illicit financial flows (in current United States dollars)

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<i>Goals and targets (from the 2030 Agenda for Sustainable Development)</i>	<i>Indicators</i>
16.4 By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime	16.4.2 Proportion of seized, found or surrendered arms whose illicit origin or context has been traced or established by a competent authority in line with international instruments
16.5 Substantially reduce corruption and bribery in all their forms	16.5.1 Proportion of persons who had at least one contact with a public official and who paid a bribe to a public official, or were asked for a bribe by those public officials, during the previous 12 months 16.5.2 Proportion of businesses that had at least one contact with a public official and that paid a bribe to a public official, or were asked for a bribe by those public officials during the previous 12 months
16.6 Develop effective, accountable and transparent institutions at all levels	16.6.1 Primary government expenditures as a proportion of original approved budget, by sector (or by budget codes or similar) 16.6.2 Proportion of population satisfied with their last experience of public services
16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels	16.7.1 Proportions of positions in national and local institutions, including (a) the legislatures; (b) the public service; and (c) the judiciary, compared to national distributions, by sex, age, persons with disabilities and population groups 16.7.2 Proportion of population who believe decision-making is inclusive and responsive, by sex, age, disability and population group
16.8 Broaden and strengthen the participation of developing countries in the institutions of global governance	16.8.1 Proportion of members and voting rights of developing countries in international organizations
16.9 By 2030, provide legal identity for all, including birth registration	16.9.1 Proportion of children under 5 years of age whose births have been registered with a civil authority, by age
16.10 Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements	16.10.1 Number of verified cases of killing, kidnapping, enforced disappearance, arbitrary detention and torture of journalists, associated media personnel, trade unionists and human rights advocates in the previous 12 months 16.10.2 Number of countries that adopt and implement constitutional, statutory and/or policy guarantees for public access to information
16.a Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime	16.a.1 Existence of independent national human rights institutions in compliance with the Paris Principles

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16.b Promote and enforce non-discriminatory laws and policies for sustainable development

16.b.1 Proportion of population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law

Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

Finance

17.1 Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection

17.1.1 Total government revenue as a proportion of GDP, by source

17.1.2 Proportion of domestic budget funded by domestic taxes

17.2 Developed countries to implement fully their official development assistance commitments, including the commitment by many developed countries to achieve the target of 0.7 per cent of gross national income for official development assistance (ODA/GNI) to developing countries and 0.15 to 0.20 per cent of ODA/GNI to least developed countries; ODA providers are encouraged to consider setting a target to provide at least 0.20 per cent of ODA/GNI to least developed countries

17.2.1 Net official development assistance, total and to least developed countries, as a proportion of the Organization for Economic Cooperation and Development (OECD) Development Assistance Committee donors' gross national income (GNI)

17.3 Mobilize additional financial resources for developing countries from multiple sources

17.3.1 Additional financial resources mobilized for developing countries from multiple sources

17.3.2 Volume of remittances (in United States dollars) as a proportion of total GDP

17.4 Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress

17.4.1 Debt service as a proportion of exports of goods and services

17.5 Adopt and implement investment promotion regimes for least developed countries

17.5.1 Number of countries that adopt and implement investment promotion regimes for developing countries, including the least developed countries

Technology

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<i>Goals and targets (from the 2030 Agenda for Sustainable Development)</i>	<i>Indicators</i>
17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge-sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism	17.6.1 Fixed Internet broadband subscriptions per 100 inhabitants, by speed ⁵
17.7 Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed	17.7.1 Total amount of funding for developing countries to promote the development, transfer, dissemination and diffusion of environmentally sound technologies
17.8 Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology	17.8.1 Proportion of individuals using the Internet
Capacity-building	
17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the Sustainable Development Goals, including through North-South, South-South and triangular cooperation	17.9.1 Dollar value of financial and technical assistance (including through North-South, South-South and triangular cooperation) committed to developing countries
Trade	
17.10 Promote a universal, rules-based, open, non-discriminatory and equitable multilateral trading system under the World Trade Organization, including through the conclusion of negotiations under its Doha Development Agenda	17.10.1 Worldwide weighted tariff-average
17.11 Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020	17.11.1 Developing countries' and least developed countries' share of global exports
17.12 Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with World Trade Organization decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access	17.12.1 Weighted average tariffs faced by developing countries, least developed countries and small island developing States
Systemic issues	
<i>Policy and institutional coherence</i>	

⁵ The current indicator 17.6.1 was previously listed as 17.6.2

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<i>Goals and targets (from the 2030 Agenda for Sustainable Development)</i>	<i>Indicators</i>
17.13 Enhance global macroeconomic stability, including through policy coordination and policy coherence	17.13.1 Macroeconomic Dashboard
17.14 Enhance policy coherence for sustainable development	17.14.1 Number of countries with mechanisms in place to enhance policy coherence of sustainable development
17.15 Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development	17.15.1 Extent of use of country-owned results frameworks and planning tools by providers of development cooperation
<i>Multi-stakeholder partnerships</i>	
17.16 Enhance the Global Partnership for Sustainable Development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the Sustainable Development Goals in all countries, in particular developing countries	17.16.1 Number of countries reporting progress in multi-stakeholder development effectiveness monitoring frameworks that support the achievement of the Sustainable Development Goals
17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships	17.17.1 Amount in United States dollars committed to public-private partnerships for infrastructure
<i>Data, monitoring and accountability</i>	
17.18 By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts	17.18.1 Statistical capacity indicator for Sustainable Development Goal monitoring 17.18.2 Number of countries that have national statistical legislation that complies with the Fundamental Principles of Official Statistics 17.18.3 Number of countries with a national statistical plan that is fully funded and under implementation, by source of funding
17.19 By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries	17.19.1 Dollar value of all resources made available to strengthen statistical capacity in developing countries 17.19.2 Proportion of countries that (a) have conducted at least one population and housing census in the last 10 years; and (b) have achieved 100 per cent birth registration and 80 per cent death registration