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Sustainable Development Goals in the Republic of Korea

: Progress Report 2019

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Statistics Korea
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Preface

I feel like it yesterday that the "Sustainable Development Goals (SDGs)" was adopted at the 70th United Nations (UN) General Assembly in September 2015. Accomplishing the SDGs is due 2030, pursuing social development, economic growth, and environmental sustainability for a better future. It is already 2020, by which we have reached about one-third of the SDG milestones. How much progress have we made so far?

This spring, there were many days when it was too hard to see the crystal-clear blue sky of Korea. It was due to dust. We used to have four distinctive seasons in Korea, no longer is it the case. Spring and autumn are getting shorter; summer and winter are getting longer. It is a pity if the next generation would have to rely on YouTube to enjoy such a beautiful nature.

What should Statistics Korea do to achieve sustainable development in Korea? We do need collective wisdom, asking questions, "Are we heading in the right direction? How long must we make efforts to reach our goals based on indicators?"

In response, the UN Statistical Commission has created a Global Indicator Framework for monitoring the SDGs. However, some indicators require methodological improvement while others are hard to monitor due to lack of data. The national statistical office in each country has a mission to develop relevant statistics and establish a transparent reporting system to effectively monitor SDGs.

This report has resulted from rigorous analysis of the current status of SDGs implementation in Korea. It is based on the statistics currently available in Korea. We have assessed the level of such an implementation in Korea with that of major countries around the world. In light of global standards, we have identified what additional data is necessary and what statistical capacity is required to improve it.

I hope that this report will be useful for enhancing official statistics to accurately monitor the status of the SDGs implementation. We have set aside research on the linkage between indicators and policies that will be carried out in the near future. I reiterate that monitoring all domains covered by the SDGs requires the cooperation of various stakeholders, including government ministries, academia, research institutions and civil society. I would like to extend heart-felt gratitude to subject matter experts for their generous feedback without which this report would not have reached your hands.

April 2019

Director-General Asaph Young CHUN

Contents

Chapter 1

Overview

1. Background

In September 2015, "Transforming Our World: 2030 Agenda for Sustainable Development" was adopted at the UN General Assembly.[1] The agenda contains 17 goals and 169 targets. These are the Sustainable Development Goals. Since the adoption of the SDGs, UN Member States and International Organizations (IOs) have been busy implementing it. The Republic of Korea (ROK) has also been working to establish an implementation system through consultation among relevant ministries, and finally Korean SDGs (K-SDGs) were established at the end of December 2018. Having actively participated in the process of selecting UN SDG indicators to monitor the goal implementation, Statistics Korea (KOSTAT) has continuously reviewed the domestic statistics on global indicators[2], and the results have provided the basis for the K-SDGs indicator selection.

Based on the SDG indicators selected by the UN, this report deals with the implementation of SDGs in the ROK and explores the areas for improving and developing official statistics required to produce future global indicators. Half of the 232 global indicators are available in the Korean context. In addition, there are indicators that have already achieved their goals or are not relevant to the Korean context. Therefore, we are currently bridging the data gap between the local level to the global level by monitoring the situation based on the indicators where data are available and exploring proxy indicators to expand monitoring.

2. Scope of the Analysis

This report consists of six chapters in total, including overview and conclusions. Chapter 2 describes the meaning of data in the adoption process of SDGs. In Chapter 3, we review the current data status of SDGs in the ROK from a global perspective. In particular, we review how much data the ROK has obtained in Asia. Chapter 4 uses data to present the results of the analysis of the implementation of SDGs in the ROK. By comparing and analyzing G7 countries with the global indicators, we can understand the ROK's current status and then decide where best to focus development. Chapter 5 identifies the areas that need statistical improvement and development in the future to support the implementation of SDGs and examines the efforts required to support them.

3. Implication of the Report

This is comprehensive report covering all 17 goals. So far, the relevant authorities have published the SDGs reports for specific subjects such as SDG6 (water), SDG4 (education), and SDG3 (health). The contents of each report differed from response strategy for SDG6 (Korea Water Resources Corporation, 2017) to monitoring SDG4 (Korean National Commission for UNESCO, 2018) and establishing metadata on Health and Gender indicators (Ko Kyung-hwan et al., 2016; Jang Eun-ha et al., 2017). Some IOs, such as the Organization for Economic Cooperation and Development (OECD) and the Sustainable Development Solution Network (SDSN), are also analyzing the status of implementation of SDGs in Member States for policy support (OECD, 2017; SDSN, 2018). However, due to difference in the indicator and methodology used in the analysis depending on the IOs, it is hard to compare the results. Therefore, the report is of significance in that it examines the implementation of all 17 goals through global perspectives.

1 The official document is composed of a preamble, declaration, the sustainable development goals and targets, the means of implementation and global partnership, and the follow-up and review.

2 In this report, global indicators and national indicators refer to the SDG indicators selected by the UN and the indicators selected by each country respectively.

Also, this report is differentiated in that it deals with data strategies to improve the monitoring. It is expected to serve as a cornerstone for establishing the SDGs monitoring system in the ROK. However, we did not present any policy relevance in selecting the indicators for monitoring and presenting the results. This should be carried out through consultation with the relevant ministries in the future.

Chapter 2

SDGs and the Role of Data

1. The Blueprint of the Future We Want: SDGs

The concept of sustainable development first appeared in the official UN document, "Our Common Future" published by the World Commission for Environment and Development (WCED) in 1987,[3] but the SDGs have contributed the most to the popularization of the term. Taking a step forward from the Millennium Development Goals (MDGs), which focus on social development in developing countries, the SDGs emphasize social development, economic growth and environmental sustainability in an integrated framework. As a result, the goals and targets also expanded from eight to 17 and 21 to 169, respectively. The 17 goals are as follows:

17 Goals

The SDGs aim to end poverty in all its forms everywhere (Goal 1), to end hunger, achieve food security and improved nutrition and promote sustainable agriculture (Goal 2). The SDGs aim to ensure healthy lives and promote well-being for all ages (Goal 3), to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (Goal 4), to achieve gender equality and empower all women and girls (Goal 5). They also seek to ensure availability and sustainable management of water and sanitation for all (Goal 6) and to ensure access to affordable, reliable, sustainable and modern energy for all (Goal 7). These goals are supported by promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (Goal 8), building resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation (Goal 9). This aims to reduce inequality within and among countries (Goal 10), to make cities and human settlements inclusive, safe, resilient and sustainable (Goal 11), and to ensure sustainable consumption and production patterns (Goal 12). In addition, take urgent action to combat climate change and its impacts (Goal 13), conserve and sustainably use the oceans, seas and marine resources for sustainable development (Goal 14) and protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss (Goal 15). These goals can be achieved through promoting peaceful and inclusive system societies for sustainable development, offering access to justice for all and building effective, accountable and inclusive institutions at all levels (Goal 16), and strengthening the means of implementation and revitalize the Global Partnership for Sustainable Development (Goal 17) (UN, 2015).

3 Led by the Norwegian Prime Minister Brundtland (G.H.), it is also called the Brundtland Report. In this report, Sustainable Development is defined as, 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (UN, 1987).

Governance

The implementation of the SDGs at the global level is accomplished through the implementation at the national and regional levels. As a result, goals and targets which are consistent with each context are being established at several levels. The governance of implementing SDGs varies from country to country, but in most cases the Prime Minister's Office plays the greatest role in this. According to SDSN (2018), 14 out of the G20 (Group of 20) countries have SDGs governance. Among the G20 countries, each ministries responsible are as follows; the Prime Minister's Office is the main department in charge of eight countries, the Ministry of Economic Development is in control of five countries, the Ministry of Foreign Affairs directs four countries, and the Ministry of Environment oversees three countries. However, there are also many cases in which the ministries join together. On the other hand, it was determined that the NSO is given roles and responsibilities related to indicators to lead the work within the SDGs governance.

The ROK announced the establishment of K-SDGs in March 2018 under the leadership of the Sustainable Development Committee and the Ministry of Environment. After 9 months of open working group discussion, 214 indicators were selected. It became a practical starting point for the integrated implementation of the SDGs at the government level. KOSTAT serves as a coordinator to reduce the gap between the global and national levels. By closely monitoring the development and improvement of global indicators, the standardized method of preparing indicators agreed at the global level can be applied to domestic statistics and the national context can be reflected in the global indicator development process at the same time.

2. How to Monitor the SDGs?

The Development and Improvement Process of the Global Indicators

Reasonable indicator selection is essential for monitoring the SDGs. Thus, the UN Statistical Commission (UNSC) launched the Inter-agency and Expert Group for Sustainable Development Goal Indicators (IAEG-SDGs)[4] in March 2015 in order to support the development of indicator frameworks and the implementation of SDGs. Based on the principle of open and transparent decision making, the IAEG-SDGs strive to ensure objectivity and reliability by inviting all stakeholders, including the NSO, IOs, civil society, academia and the private sector, to participate in the process of selecting indicators. Two meetings are held each year and the results are reported to UNSC.

The indicator selection goes back prior to the adoption of the SDGs. Based on the SDGs draft proposed by the Open Working Group in September 2014, the UN Statistics Division (UNSD) gathered and reviewed opinions of IOs and countries and prepared over 300 indicators. Since then, the IAEG-SDGs have selected 241 indicators (230 excluding duplicate indicators[5]) through face-to-face meetings and online consultation. The IAEG-SDGs then submitted them to the 47th UNSC in March 2016. The UNSC agreed to the indicator framework on the premise of technical improvement, and the IAEG-SDGs submitted a revision composed of 244 indicators (232 excluding duplicate indicators) to the 48th UNSC (March 2017) to further review for a year. This revision was finally adopted by the UN General Assembly in July by the UN Economic and Social Council (UNECOSOC) in June 2017.

The IAEG-SDGs are working to develop an indicator framework by continuously monitoring data availability and methodology development. In particular, the

4 Members of this group are elected through the regional mechanism of the UN and act on behalf of each region for two years. As of 2018, the representatives of NSO are participating as members. The Asia-Pacific Member States include China, Kyrgyzstan, Fiji, Samoa, the Philippines and India.

5 The IAEG-SDGs allowed duplication only for some indicators in order to take into account the linkages between goals and to minimize the burden of national reporting. These are called multipurpose indicators.

indicators will be revised, deleted and added in the Comprehensive Review (2020/2025) which is conducted every five years when development of Tier 3 indicator methodology has stalled, and the current indicator does not map well to the target or only partially monitors it.

Global Indicators Framework

The 169 targets are divided into goal targets (126) and means of implementation (43) required to achieve the targets.[6] 244 indicators can also be divided into 194 goal indicators and 50 means of implementation indicators. For efficient indicator management, the IAEG-SDGs appoint custodian agencies for each indicator to be responsible for the entire process, from methodology development to data collection and reporting.

Number of Targets and Indicators by Goals

(Unit: Number)

Goals	Target	Means of implementation	Indicator	Means of implementation
1. No poverty	7	2	14	4
2. Zero hunger	8	3	13	4
3. Good health and well-being	13	4	27	6
4. Quality education	10	3	11	3
5. Gender equality	9	3	14	4
6. Clean water and sanitation	8	2	11	2
7. Affordable and clean energy	5	2	6	2
8. Decent work and economic growth	12	2	17	2
9. Industry, innovation and infrastructure	8	3	12	3
10. Reduced inequalities	10	3	11	3
11. Sustainable cities and communities	10	3	15	4
12. Responsible consumption and production	11	3	13	3
13. Climate action	5	2	8	2
14. Life below water	10	3	10	3
15. Life on land	12	3	14	3
16. Peace, justice and strong institutions	12	2	23	2
17. Partnerships for the goals	19	0	25	0
Total	169	43	244	50

In addition, the indicators were classified into three tiers according to the development of indicator calculation methodology and data availability. Tier 1 refers to an indicator that is conceptually clear, has an internationally established methodology with available standards, and data are regularly produced by countries for at least 50 per cent of countries and of the population in every region where the indicator is relevant. Tier 2 refers to an indicator that is conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries, and Tier 3 refers to an indicator that does not have internationally established methodology or standards available for the indicator yet, but methodology/standards are being (or will be) developed or tested. According to this classification, among the 232 indicators, 93, 72 and 62 belong to Tier 1, Tier 2 and Tier 3, respectively. For five indicators, it is divided into two or more tiers[7]. It can be seen that the case where the indicator can be calculated at the global level (Tier 1) is about 40% of all indicators.

Tier Classification of Global Indicators

(Unit: %) (As of October 2018)

Category	Contents	Number of Indicators (%)
Tier 1	Indicator is conceptually clear, has an internationally established methodology and standards are available, and data are regularly produced by countries for at least 50 per cent of countries and of the population in every region where the indicator is relevant.	93(40.1)
Tier 2	Indicator is conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries.	72(31.0)
Tier 3	No internationally established methodology or standards are yet available for the indicator, but methodology/standards are being (or will be) developed or tested.	62(26.7)
Multi-tier	Different components of the indicator are classified into different tiers.	5(2.2)
Total		232(100)

6 Targets and indicators of the nature of the means of implementation are indicated by letters in the target and indicator numbers. E.g.) Target 1.a, Indicator 1.a.1.

7 For example, indicator 4.1.1 is the 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 are classified into Tier 3 and Tier 2, respectively.

Monitoring and Evaluation

Goals and targets are monitored based on indicators, and the results are provided as basic information to the High Level Political Forum (HLPF), which monitors the implementation of SDGs at the global level. To this end, the SDG Progress Report, which is prepared under the UN Secretary-General and the Global Sustainable Development Report (published every four years) are published. In addition, each country submits a Voluntary National Review (VNR), which includes the degree to which goals and targets are achieved based on specific statistical figures, providing policy makers with the driving force for policy making to achieve their goals.

3. The Role of Data in the SDGs

The importance of data is unprecedentedly emphasized in the process of implementing the SDGs. First of all, the SDGs did not just declare their goals, but provided a means to achieve their goals as a separate 17th goal, presenting 'data' with resources and technology as the means of implementation. The related targets are as follows:

- 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
- 17.19 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

These targets address two important issues that need to be pursued in the statistical development process over the next 15 years. First, data disaggregation is to break away from practices that have been so far focused on producing and interpreting mean at the national level.

The mean is a representative statistic, but a larger variance can lead to greater distortion of society. Data disaggregation focuses on distribution rather than growth. In other words, it is to show vulnerable groups such as low-income, women[8], children, the elderly, immigrants, and the disabled who have been hidden behind the national average, and draw them to policy targets by producing statistics disaggregated depending on income, sex, age, migration status, disability, region, etc. This is a strategy that implements the 2030 Agenda principle of inclusiveness which seeks to 'leave no one behind'.

The second is about the development of measures for sustainable development performance. Since the 1990s, quality of life and sustainability have emerged as important issues, and international efforts to overcome the economic centered GDP limits are actively underway. The OECD's 'Better Life Initiative' and the European Union's 'GDP and Beyond' are the examples. The SDGs can be said to be on this extension line. Developing measures of sustainable development performance to disaggregate data and complement GDP is likely to be the norm in the process of developing official statistics.[9]

In addition, the SDGs were prepared by the IAEG-SDGs, a group of NSO based on the position that the Indicator Framework should be developed independently and scientifically. The proposals developed by this group are being strengthened by adoption by the ECOSOC and the General Assembly, beyond the UNSC.

8 Although still controversial, sex refers to women and men according to biological characteristics, and gender refers to women and men according to social factors (Mikkola, 2017). During the translation of the SDGs indicators, those were translated into female and woman based on the English original text. In other cases, one of the two terms was used depending on the context.

9 Some of the content from Park Youngshil et al. (2017) were summarized.

The ROK's Data in Global DB

The SDGs Global Database contains data for 2000-2018 from countries around the world. As of September 10, 2018, there are 356 data and 1,0723,285 observations for 144 of the 232 indicators.[10] The data is classified into five types depending on how it is created. IOs may use data produced in the country as they are originally provided. In some cases, however, they adjust, estimate, or model individual country data according to international standards and definitions. The data nature of the SDGs indicators is classified based on the above is as follows:

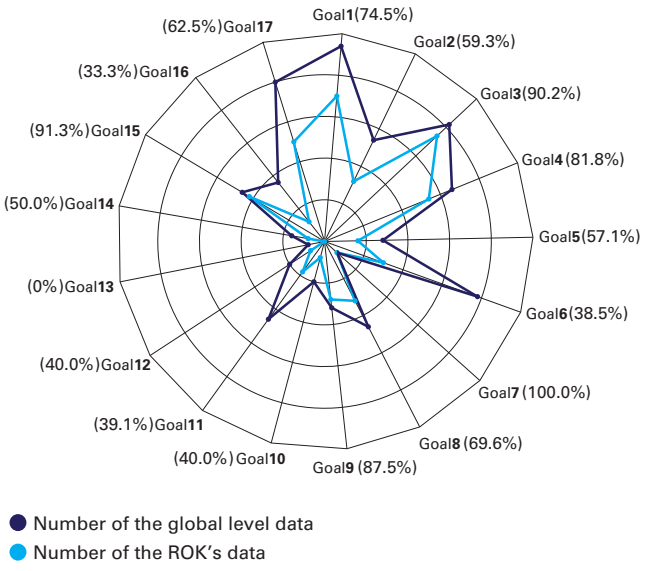
Type of Data Nature

Type	Definition
C (Country Data)	The figure is the one produced and disseminated by the country
CA (Country Adjusted)	The figure is the one produced and provided by the country, but adjusted by the international agency for international comparability
E (Estimated)	The figure is estimated by the international agency, when corresponding country data on a specific year or set of years are not available, or when multiple sources exist, or there are issues of data quality.
M (Modeled)	The figure is by the agency when there is a complete lack of data on the variable being estimated.
G (Global Monitoring)	The figure is regularly produced by the designated agency for the global monitoring, based on country data.

The ROK has 245 data and 5,558 observations for 109 indicators. In the nature of 245 data, C, CA, E, M and G have 91, 12, 45, 6 and 12, respectively. The methodology for 44 of the remaining data is still unknown, and 35 are unclassified. How much is the ROK's 245 data are compared to that of other countries? To understand the current situation, we observed Asian countries and G7(Group of 7) countries as well (see the graph on the next page). The data gap between countries in East Asia where the ROK belongs was found to be larger than that of other regions, and the ROK belongs with countries with a large number of data. On the other hand, the Democratic People's Republic of Korea has 129 data, about half that of the ROK. G7 countries have about 200 data, showing the relatively even distribution.

Can the ROK be called a data-developed country because its number of data is at the top of the countries compared? It is difficult to assess the country's statistical capacity based on the number of data. This is because there is a difference in the content of data required for each country. As can be seen below, the amount of data that ROK possesses varies considerably by each of the 17 goals. Comparing the number of the ROK's data to that of the global level, it shows more than 80% of the data accumulation rate in Goal 3, Goal 4, Goal 7, Goal 9, and Goal 15. On the other hand, the data accumulation rates of Goal 6, Goal 10, Goal 11, Goal 12, Goal 13, Goal 14, and Goal 16 are less than 50%.

Number and Accumulation Rate of Data in Global DB

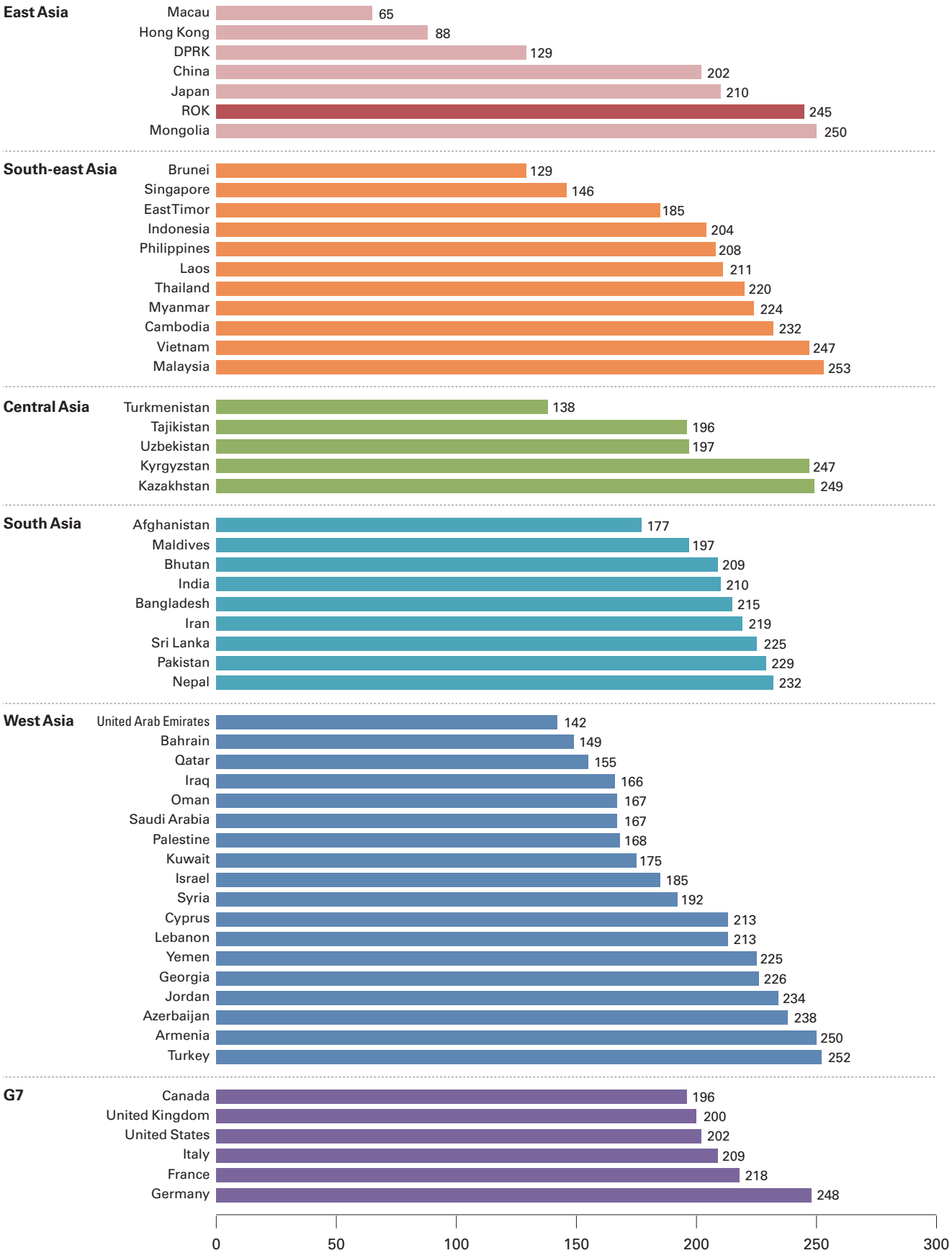


Note: Accumulation rate is calculated as (Number of the ROK's data / Number of the global level data) X 100

10 Since data is constantly updated, the number of available data, the number of observations, and the year of retention may vary depending on when the site is accessed (https://unstats.un.org/sdgs/indicators/database).

Number of Data in Global DB of Asian Countries and G7 Countries

(Unit:number)



Note 1: Country standards are based on the UNSD's 'Standard country or Area Codes for statistical use'
2: Japan among the G7 countries is presented in the East Asia category

Chapter 4

The Progress of SDGs in the ROK

This report used data contained in the DB to examine the implementation of SDGs in the ROK. The analysis indicators were limited to cases where the data can be compared between time points since there are data from at least two points in time after 2000 among the data with Korean data in the global DB. However, qualitative indicators asking if and how law, institutions and policies are enforced (e.g. the number of countries adopting and implementing constitutions, laws and policies that ensure public access to information). Also, cases with no recent data since 2010 were excluded from the analysis. Through this process, 30 global indicators were finally selected for the analysis. This allowed for proxy statistics to be used to help measure the corresponding concept, either in combination with Korean data in the global DB or in the absence of Korean data in the global DB. Proxy statistics were used in 24 indicators. The table below specifically summarizes the number of indicators used in the implementation analysis for each goal.

The international comparison was carried out for Canada, France, Germany, Italy, Japan, the United Kingdom (U.K.) and the United States (U.S.), which are the G7 countries (in alphabetical order). A comparison with the OECD and the G20 countries to which the ROK belongs can also be considered, but there is a concern that the analysis will be inconsistent because not all this organization's member states data are included. Although questions about the political disposition of the G7 countries may be raised, we performed comparisons with the G7 countries only for the statistical purpose. In interpreting the results of the analysis, note the following:

First, since the analysis is based only on the statistics available for each goal, the analysis results should not be interpreted as an evaluation of the overall implementation of the goal. In order to reduce such misunderstandings, the indicators used in the analysis were displayed in a diagram and presented before each goal analysis. Second, the ROK's data contained in the global DB is sometimes used as it is, but sometimes it is adjusted, estimated, and modeled for international comparison. This data is different from the domestic statistics. Third, if there are multiple sources of data in one indicator, the data with long time series and high possibility of disaggregation among official statistics was analyzed. Fourth, in the case of international comparison, the year of comparison and source may differ depending on the time of data availability and the type of survey. Fifth, the figures used in this report are rounded, and the sum and total of the details are inconsistent in some cases.

Number of Indicators used in the Analysis

(Unit: number)

Goals	Total number of indicators		Number of analysis indicators		
		Data available		Global data	Proxy
1. No poverty	14	6	3	1	2
2. Zero hunger	13	6	5	1	4
3. Good health and well-being	27	22	6	6	0
4. Quality education	11	7	4	4	3
5. Gender equality	14	4	3	3	0
6. Clean water and sanitation	11	7	3	1	2
7. Affordable and clean energy	6	4	2	2	1
8. Decent work and economic growth	17	9	3	3	0
9. Industry, innovation and infrastructure	12	9	4	4	0
10. Reduced inequalities	11	3	1	1	1
11. Sustainable cities and communities	15	5	3	1	2
12. Responsible consumption and production	13	2	3	0	3
13. Climate action	8	3	1	0	1
14. Life below water	10	2	2	0	2
15. Life on land	14	6	2	1	1
16. Peace and justice	23	5	3	1	2
17. Partnerships for the goals	25	9	1	1	0
Total	244	109	49	30	24

End poverty in all its forms everywhere

Eliminating poverty is as important in the global development agenda as in the national development agenda. The absolute poverty rate based on the international standards was reduced by more than half, 25.6% in 2002 to 10.0% in 2015. But one out of ten still lives on less than $ 1.9 a day. Thus, SDGs are pushing ahead with No Poverty as their first goal. In particular, it is trying to eliminate poverty at various levels as well as poverty based on income. To this end, they are trying to build a social security system and protect the poor and vulnerable by strengthening access to social services, and reduce vulnerabilities from risk factors such as disasters by building a resilience mechanism.

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 population below the international poverty line, by sex, age, employment status and geographical 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 ▲ **Relative poverty rate**
	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 ▲ **Recipient rate of national basic living security**
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
	1.5.4 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies
1.a	**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.a.1 Proportion of domestically generated resources allocated by the government directly to poverty reduction programmes
	1.a.2 Proportion of total government spending on essential services (education, health and social protection)
	1.a.3 Sum of total grants and non-debt-creating inflows directly allocated to poverty reduction programmes as a proportion of GDP
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 Proportion of government recurrent and capital spending to sectors that disproportionately benefit women, the poor and vulnerable groups

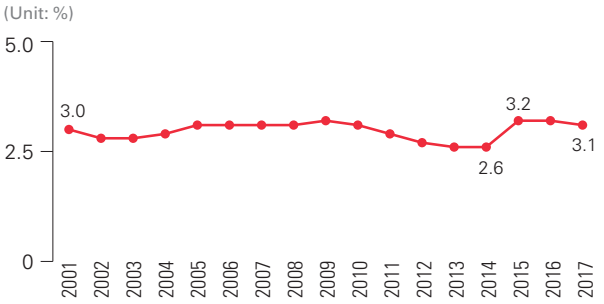
ROK's data updated in global DB ☐ Indicator used for analysis ▲ Proxy indicator[11]

11 Official title of individual targets may somewhat different. The exact name of each targets or indicators can be found in the appendix, list of UN SDG indicators.

Establishment of Social Security System

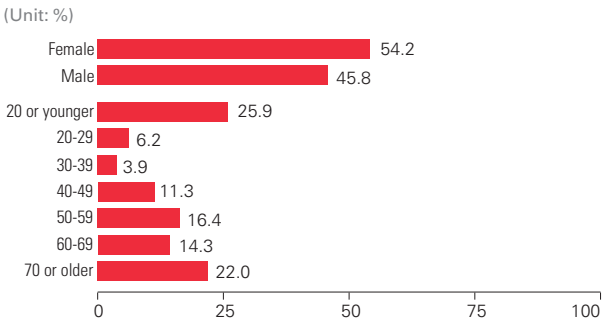
Social protection, or social security, is a human right and is defined as the set of policies and programmes designed to reduce and prevent poverty and vulnerability throughout the life cycle (ILO, 2018). National Basic Living Security System is a representative public assistance system in the ROK that provides living expenses, housing expenses, medical expenses, and education expenses to poor households. The minimum cost of living was used as a criterion for selecting recipients, but the concept of relative poverty was introduced from July 2015 (Ministry of Health and Welfare, 2018). The recipient rate of the National Basic Living Security System has declined since 2009, down to 2.6% in 2014, but rebounded to 3.2% in 2015 due to revision of system. According to the age distribution of general recipients, the sum of those under 20 and those aged 70 or older accounted for almost half of the total recipients, and female accounted for more than male.

Recipient Rate of National Basic Living Security



Source: Ministry of Health and Welfare, Social Security Fact Book 2017
Note : Recipient rate is calculated by summing ordinary and facility recipients

Ordinary Recipients by Sex and Age: 2017



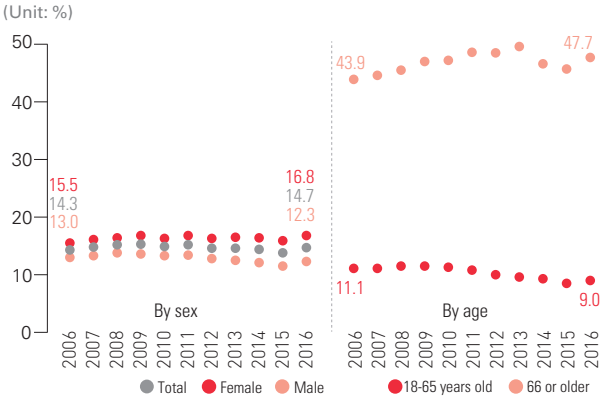
Source: Ministry of Health and Welfare, Social Security Fact Book 2017

Poverty

The relative poverty rate based on below 50% of median income was found to be 14.7% based on disposable income in 2016. It is up 0.4%p compared to 2006, 10 years ago. By age group, the relative poverty rate for retired people aged 66 or older was 47.7% in 2016, more than five times higher than working age group aged 18-65 (9.0%). On the other hand, female's relative poverty rate was found to be consistently higher than male's in all years.

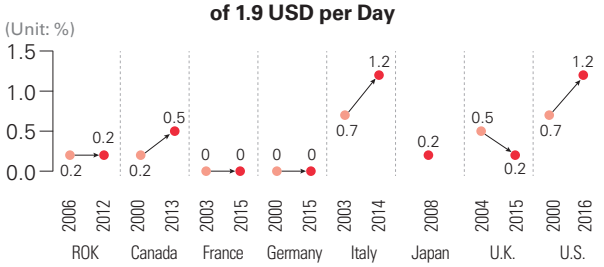
Poverty is also being tracked at the global level. The World Bank defines the poverty line as $ 1.9 a day, based on 2011 international prices (IAEG-SDGs, 2018a). According to this, the poverty rate in the ROK was estimated to be 0.2% in 2012. Compared with major countries, the poverty rate of France (2015), Germany (2015), Canada (2013), U.S. (2016) and Italy (2014) was found to be 0%, 0%, 0.5%, 1.2% and 1.2%, respectively.

Relative Poverty Rate based on Disposable Income



Source: KOSTAT, Combined data between Household Income and Expenditure Survey and Farm Household Economy Survey
Not 1: Based on the equivalized income calculated by dividing household income by the square root of the number of members of household, so that the welfare level can be compared between households with different number of household members
2: Disposable Income = Market Income + Public Transfer Income - Public Transfer Expenditure
3: From 2016, official distribution indicator data source was changed to Survey of Household Financial and Living Conditions

Proportion of Population below International Poverty Line of 1.9 USD per Day



Source: World Bank, World Development Indicators Database

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

SDG2 aims to overcome starvation and malnutrition, which are fundamental issues to be resolved for sustainable development. According to "The State of Food Security and Nutrition in the World (2018)" co-published by the Food and Agriculture Organization (FAO) and the World Food Program (WFP), 821 million people, more than 10% of the world's population, have chronic food shortages as of 2017 and this hunger population is increasing every year. Beyond simply supplying and consuming sufficient food, SDGs also address increasing food access, providing sustainable and sufficient quality nutrition, and securing a food production system to end hunger.

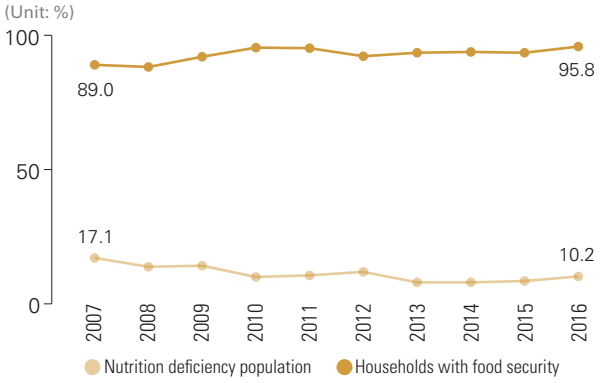
2.1	**By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round**
	2.1.1 Prevalence of undernourishment ▲ **Prevalence of nutrition deficiency**
	2.1.2 Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES) ▲ **Percentage of households with food security**
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)
2.3	**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 ▲ **Agricultural labour productivity**
	2.3.2 Average income of small-scale food producers, by sex and indigenous status ▲ **Farm household income**
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
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 plant and 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, not at risk or at unknown level of 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

ROK's data updated in global DB Indicator used for analysis ▲ Proxy indicator

Nutrition and Food Supply

The percentage of nutrition deficiency population calculated based on nutrient intake of Koreans was 10.2% in 2016, 6.9%p down compared to 17.1% in 2007. However, the percentage of female's nutrition deficiency was 14.6%, more than twice that of male. By age group, the percentage was highest in adolescence. During the same period the percentage of households with food security increased from 89.0% in 2007 to 95.8% in 2016, which means that the percentage of households that are economically hard and lack food sometimes or often has decreased from 11.0% to 4.2%.

Percentage of Nutrition Deficiency Population and Households with Food Security

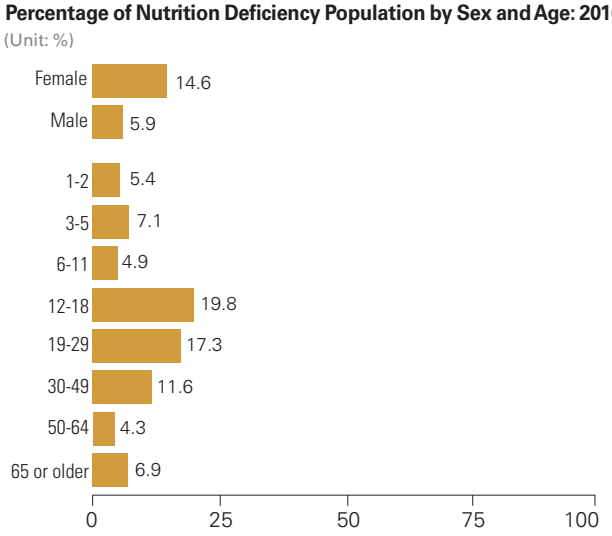


Source: Korea Centers for Disease Control and Prevention, 2016 2016 National Health Statistics

Note 1: The nutrition deficiency population means that the energy intake is less than 75% of the required estimate and the intake of calcium, iron, vitamin A and riboflavin is less than the average requirement according to 2015 Korean Nutrient Intake of the Ministry of Health and Welfare

2: Households with food security mean those who answered to the question about the household's eating habits in the last year as 'all of my family could eat as much as we wanted and various kinds of food' and 'we could have had enough food, but not many kinds of food'

Percentage of Nutrition Deficiency Population by Sex and Age: 2016

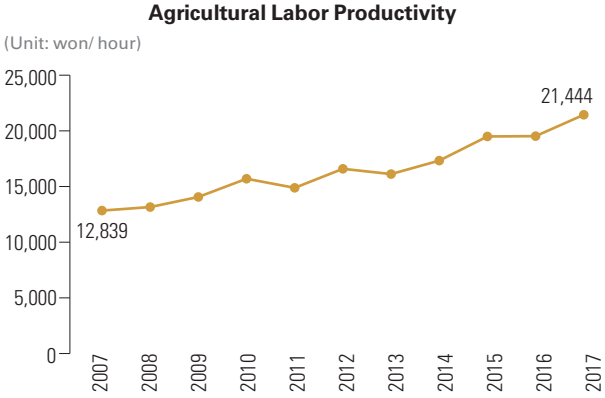


Source: Korea Centers for Disease Control and Prevention, 2016 National Health Statistics

Agricultural Labor Productivity and Farm Household Income

Labor productivity is the ratio of added value to the working hours, which is an indicator of comparing economic productivity between industries or between farms. According to the Farm Household Economy Survey, labor productivity of agriculture increased from 12,839 won per hour in 2007 to 21,444 won in 2017. In terms of farm type, labor productivity was highest in the livestock industry (41,937 won), followed by paddy rice (28,387 won). Labor productivity of agriculture also varied depending on the size of the cultivated land. Labor productivity

Agricultural Labor Productivity

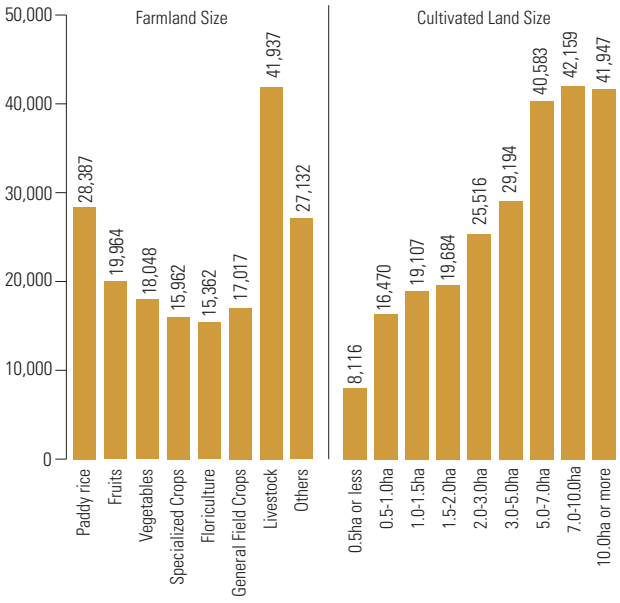


Source: KOSTAT, Farm Household Economy Survey

Note 1: Labor productivity of agriculture = value added of agriculture / labor hour in operating farms

2: Value added of agriculture = Gross farm receipt – (intermediate material – depreciation)

Labor Productivity by Farm Type and Cultivated Land Size: 2017

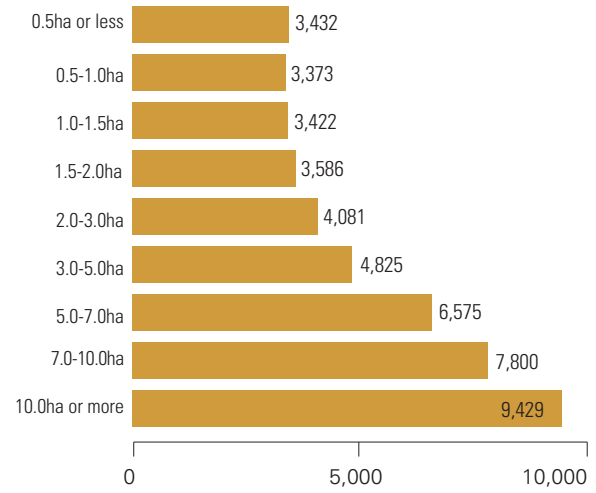


Source: KOSTAT, Farm Household Economy Survey

of farm households over 10ha was 41,947 won per hour, about five times higher than 8,116 won of farm households under 0.5ha, indicating that the larger the cultivated land, the higher the labor productivity. On the other hand, when comparing the annual income of farmers depending on the size of the cultivated land, farm households with an area of less than 5.0ha-7.0ha were 65.75 million won, 1.9 times higher than that of farm household income with less than 0.5ha.

Annual Farm Household Income by Cultivated Land Size: 2017

(Unit: 10,000 won)



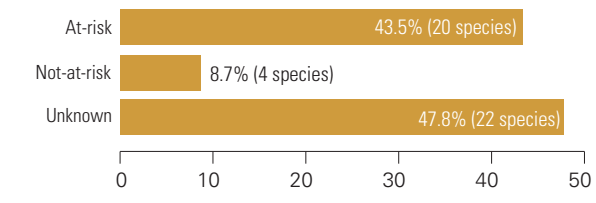
Source: KOSTAT, Farm Household Economy Survey

Note : Farm household income = farm income + non-farm income + transfer income + irregular income

Diversity of Genetic Resources

FAO divides the risk of extinction into three stages of extinction, endangered, and risk according to the number of livestock numbers and breeding structures, and collects data from each country through the Domestic Animal Diversity Information System (DAD-IS). In the ROK, the National Institute of Animal Science provides data in accordance with the Agro-fishery Bioresources Act. As of 2018, 106 livestock breeds were listed, of which 46 are classified as local breeds that meet the SDGs standards. Currently, 20 (43.5%) of the registered local breeds are classified as at risk level.

Proportion of Local Breeds Classified as Being At-risk, Not-at-risk or Unknown Level of Risk of Extinction: 2018



Source: FAO, Global Databank for Animal Generic Resources

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

Obviously many people live much healthier than in the past. However, many still suffer from preventable diseases and die at an early age. Overcoming disease and ill health will require concerted and sustained efforts (UN, 2018). In recognition that the right to health is a universal human right, the SDG is working to reduce non-infectious diseases and health risk factors and to build a universal health care system by expanding MDGs that addressed individual issues such as reduced child mortality, improved maternal health, and reduced infectious disease as goals.

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**
	3.2.1 Under-5 mortality rate
	3.2.2 Neonatal mortality rate
3.3	**By 2030, end the epidemics of 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	**By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being**
	3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease
	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 Harmful use of alcohol, defined according to the national context as 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**
	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
	3.9.3 Mortality rate attributed to unintentional poisoning
3.a	**Strengthen the implementation of the WHO 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	**Provide access to affordable essential medicines and vaccines to developing countries**
	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
3.c	**Increase health financing and the recruitment, development, training and retention of the health workforce in developing countries**
	3.c.1 Health worker density and distribution
3.d	**Strengthen the capacity of developing countries, for early warning, risk reduction and management of health risks**
	3.d.1 International Health Regulations (IHR) capacity and health emergency preparedness

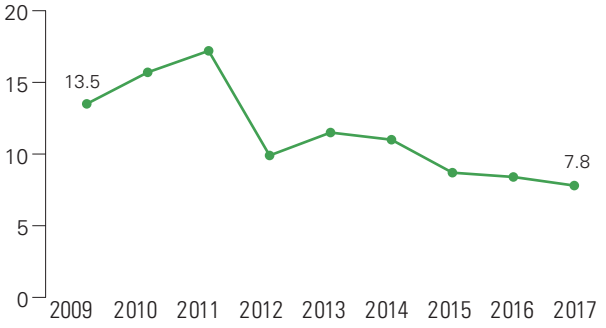
ROK's data updated in global DB Indicator used for analysis Proxy indicator

Maternal and Child Mortality

As of 2017, the maternal mortality ratio in the ROK is 7.8 per 100,000 live births. Compared with 13.5 in 2009, this is a decrease of nearly half. According to the data estimated for international comparison, only the U.S. has a higher maternal mortality ratio than the ROK in 2015. And the mortality ratio of the U.S. increased compared to 2000 unlike other countries. The mortality rate for children under the age of 5 is 3.3 per 1,000 live births in 2017, down from 2000. Japan had the lowest mortality rate of 2.6, followed by Italy (3.4), Germany (3.7), France (4.2), the U.K. (4.3), Canada (5.1) and the U.S. (6.6). Disaggregation by sex, the mortality rate of boys was consistently higher than that of girls in all countries.

Maternal Mortality Ratio

(Unit: Deaths per 100,000 live births)

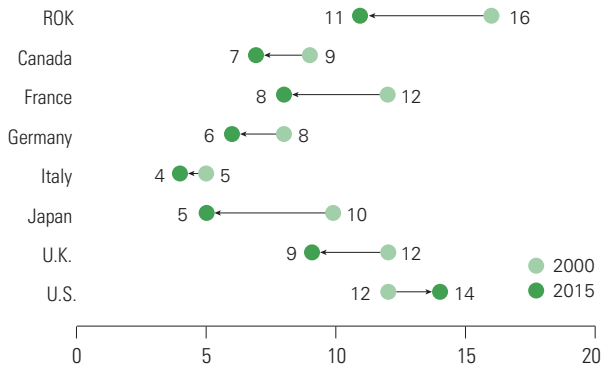


Source: KOSTAT, Death Cause Statistics

Note: Maternal mortality ratio is death caused by direct or indirect obstetrical causes during pregnancy or within 42 days after delivery, and is calculated by dividing the number of maternal deaths by the number of live births

International Comparison of Maternal Mortality Ratio

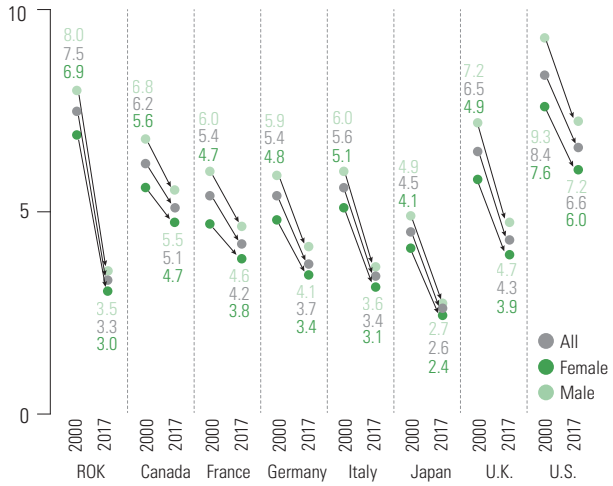
(Unit: Deaths per 100,000 live births)



Source: WHO, UNICEF, UNFPA, World Bank Group and the UNPD, Trends in maternal mortality: 1990 to 2015

International Comparison of Under-five Mortality Rate

(Unit: per 1,000 live births)



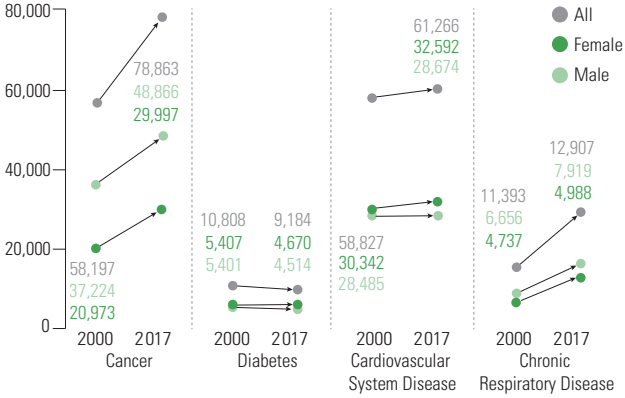
Source: United Nations Inter-agency Group for Child Mortality Estimation

Death from Non-Communicable Diseases

According to the trends in the number of deaths from cancer, diabetes, the cardiovascular system and chronic respiratory disease, the number of deaths from diseases, except for diabetes, has increased compared to 2000. By sex, the number of female deaths was higher in cardiovascular system disorders, while the number of male deaths was higher in cancer and chronic respiratory disease. The probability of death from all four types of disease estimated by the World Health Organization (WHO) has decreased from 16.5% in 2000 to 7.8% in 2016. During the same period (2016), the probability was 8.4%, 9.5% and 9.8% in Japan, Italy and Canada, respectively. On the other hand, the mortality rate of male was higher than that of female in all countries to be compared.

Number of Deaths Attributed to Cancer, Diabetes, Cardiovascular Disease, Chronic Respiratory Disease

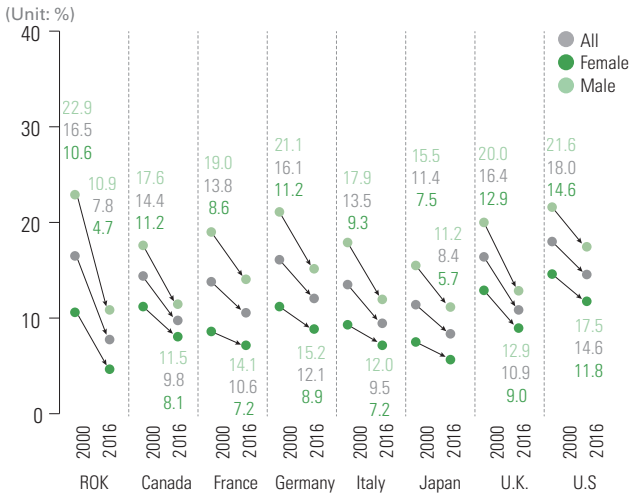
(Unit: person)



Source: KOSTAT, Death Cause Statistics

Note: In the case of chronic respiratory disease, the numbers corresponding to disease / death cause classification code J30-J98 are compiled from microdata according to the definition of SDG indicator (3.4.1)

Mortality Rate Attributed to Cancer, Diabetes, Cardiovascular Disease, Chronic Respiratory Disease (probability)



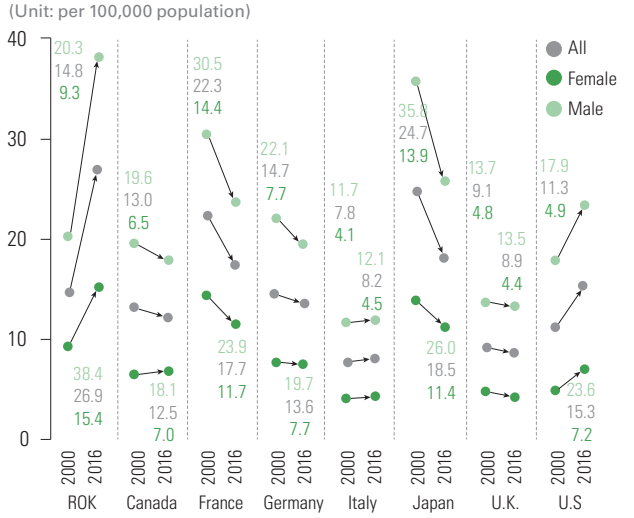
Source: WHO, Global Health Estimates 2016; Deaths by cause, age, sex, by country and by region 2000-2016

Note: Probability of death from cancer, diabetes, cardiovascular disease, or chronic respiratory disease between the ages of 30 and 70, which is calculated using life table methods

Mental Health and hazardous Environment

Suicide and traffic accidents account for the highest proportion of deaths by external factors other than diseases in the ROK (KOSTAT, 2018a). According to the WHO's adjusted results for comparison of each country's data, the ROK's suicide mortality rate increased from 14.8 per 100,000 population in 2000 to 26.9 in 2016, which is more than three times higher than that of Italy (8.2 people in 2016), which has the lowest suicide mortality rate among the countries to be compared. On the other hand, the suicide mortality rate of male is higher than that of female in all countries.

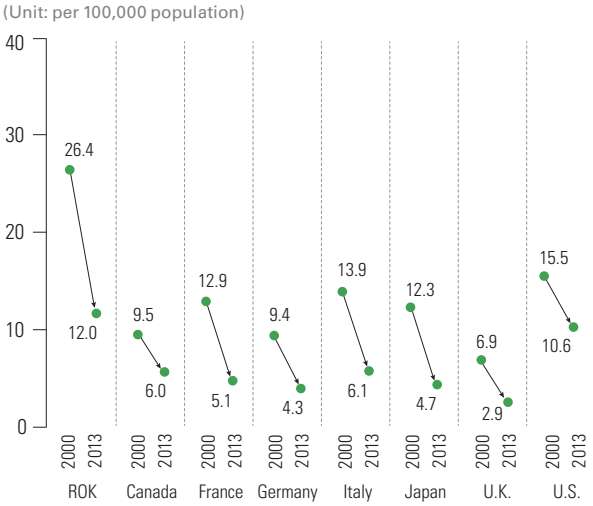
International Comparison of Death Rate due to Road Traffic Injuries



Source: WHO, Global Health Estimates 2016: Deaths by cause, age, sex, by country and by region 2000-2016

The death rate due to road traffic injuries in the ROK has declined in general, but is relatively higher than that of the countries to be compared. As of 2013, 12 per 100,000 population are four times that of the U.K., which has the lowest death rate (2.9population) during the same period.

International Comparison of Death Rate due to Road Traffic Injuries



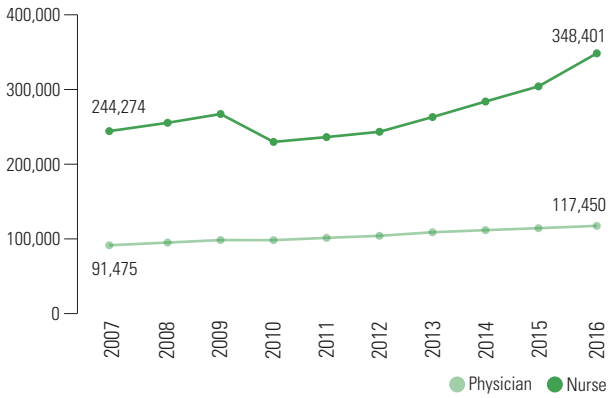
Source: WHO, Global Status Report on Road Safety 2015

Health Workforce

According to the status of health workforce in the ROK in 2016, the number of physicians, including oriental physicians, was 117,450, and the number of nurses was 348,401, an increase of 28.4% and 42.6%, respectively, compared to 2007. However, when compared to the number of physicians per 1,000 population in other countries, the density of medical personnel is still low. In 2016, there were 2.3 per 1,000 population in the ROK, compared with 4.2 in Germany, 4.0 in Italy and 3.2 in France. The number of nurses was 6.9 per 1,000 population in the ROK, about half that of Germany (13.8).

Number of Health Worker

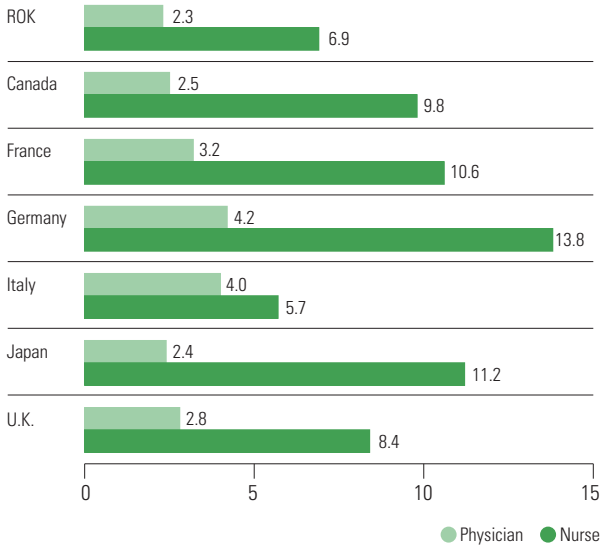
(Unit: persons)



Source: WHO, Global Health Workforce Statistics Database

International Comparison of Health Worker Density

(Unit: per 1,000 population)



Source: WHO, Global Health Workforce Statistics Database

Note: Data on Japan, Canada·France·Germany and Korea·U.K.·Italy was collected in 2014, 2015 and 2016, respectively

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

Education is the driving force of development. The achievement of education itself is a goal, and it is also a key means for implementing the other goals of the SDGs (Korean National Commission for UNESCO, 2018). Therefore, unlike the MDGs, which focus on achieving primary education, the target of the SDGs is to ensure inclusive and fair high quality education throughout the entire process from early childhood education to higher education. It also promotes lifelong learning opportunities in various areas, including school education, vocational education and sustainable development education.

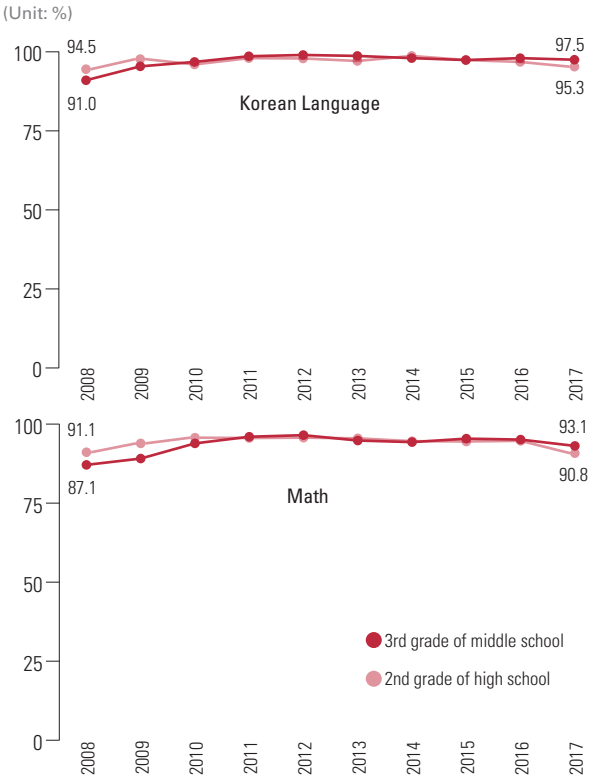
4.1	**By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes**
	4.1.1 Proportion of children and young people (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex ▲ **Percentage of students above basic level in (i) reading and (ii) math (a) at the second or third year of elementary school, (b) at the end of elementary school, and (c) at the end of middle schoo**l
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 under 5 years of age 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 ▲ **Formal and non-formal education participation rate**
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 ▲ **Percentage of population with sufficient literacy necessary for everyday life**
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, including gender equality and human rights, are mainstreamed at all levels 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 with access to (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)
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 in: (a) pre-primary; (b) primary; (c) lower secondary; and (d) upper secondary education who have received at least the minimum organized teacher training (e.g. pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country

ROK's data updated in global DB Indicator used for analysis ▲ Proxy indicator

From Early Childhood Education to Secondary Education

The advancement rate of middle school and high school in the ROK is almost 100%, and the enrollment rate of kindergartens and daycare centers for 3-5 year-olds has continued to exceed 90.0% since 2014, indicating that universal education has been performed (Jo Ji-min, 2018). However, quality is just as important as the quantitative expansion of educational opportunities in the education system. According to the results of the evaluation of academic achievement among the students, the percentage of students above the minimum level in 2017 was 97.5% (Korean language) and 93.1% (math), 95.3% and 90.8% in third grade of middle school, the second grade of high school, respectively. Based on major countries and their levels using Programme for International Student Assessment, the ROK has the highest rate of attainment of minimum proficiency in both reading and math following Canada and Japan.

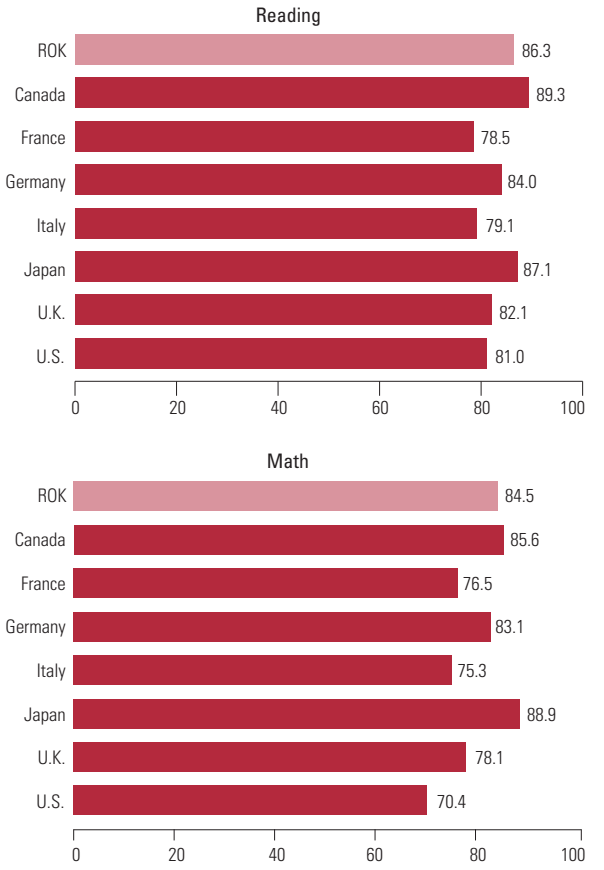
Percentage of Students above Minimum Level



Source: Ministry of Education, National Level Academic Achievement Assessment Results

Note: The National Level Academic Achievement Assessment is carried out for third graders of middle school, the second graders of high school nationwide in Korean, English, and Math in accordance with Elementary and Secondary Education Act and announced by the Ministry of Education as three levels of above average education, basic education, and lack of basic education

International Comparison of Minimum Proficiency in Reading and Math: 2015



Source: OECD, PISA

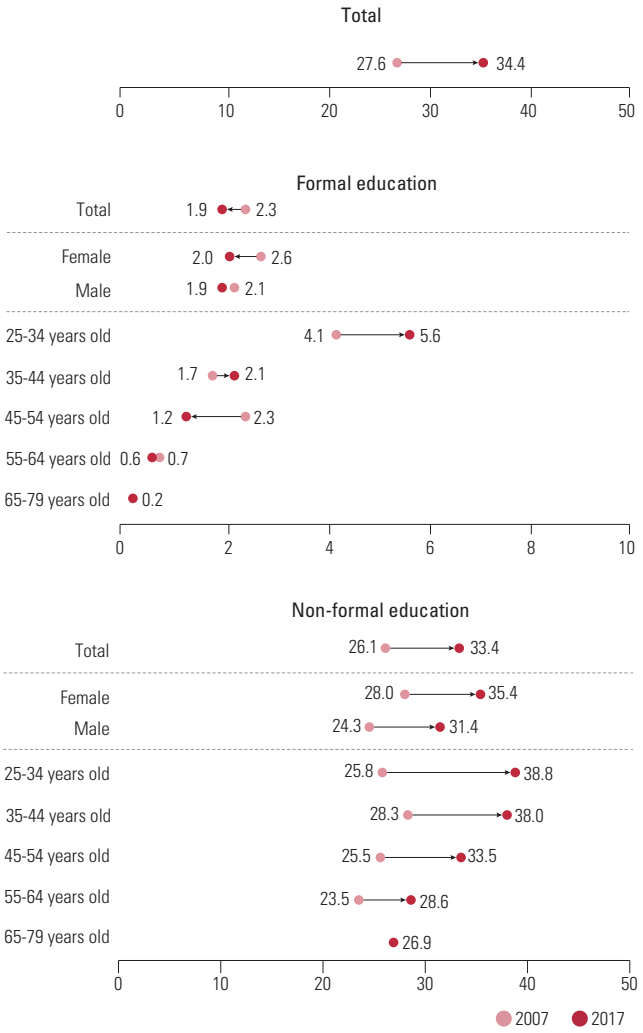
Note: Targeting the students in their first half of secondary education, and data on Italy and Japan in math was collected in 2012

Adult Education

The participation rate of lifelong learning among Korean adults increased from 27.6% in 2007 to 34.4% in 2017. In terms of formal education and non-formal education, formal education decreased from 2.3% to 1.9% during the same period, while non-formal education increased from 26.1% to 33.4%. In particular, the latter increased in all groups subdivided by sex and age. According to the Programme for the International Assessment of Adult Competencies (PIAAC), the ROK's participation rate in formal and non-formal education and training is 49.7%, which is lower than that of the U.K. (59.1%) and Canada (57.7%). In terms of sex, countries other than the U.K. showed similar male and female participation rates or higher male participation rate.

Adult Lifelong Learning Participation Rate

(Unit: %)



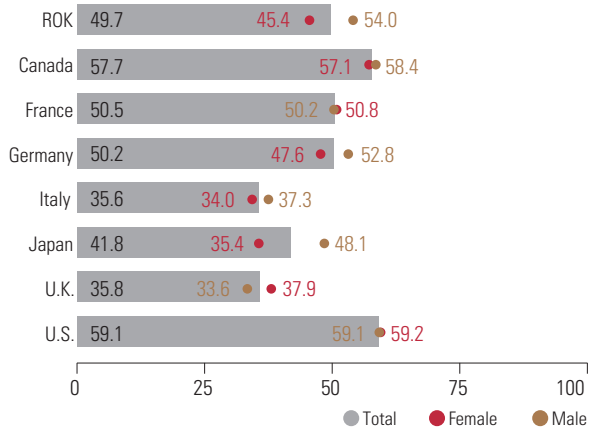
Source: Korean Educational Development Institute, Korean Adult Lifelong Learning Survey

Note 1: Until 2016, the survey has been conducted for 25-64 year-olds, but from 2017, the target was changed to 25-79 year-olds.

2: Formal education refers to education for obtaining a diploma or degree through formal curriculum such as elementary, middle and high school or university (graduate school), and non-formal education is structured learning activities other than formal education. It refers to education through programs or curricula operated by lifelong education institutions.

International Comparison of Participation Rates in Formal and Non-formal Education and Training

(Unit: %)



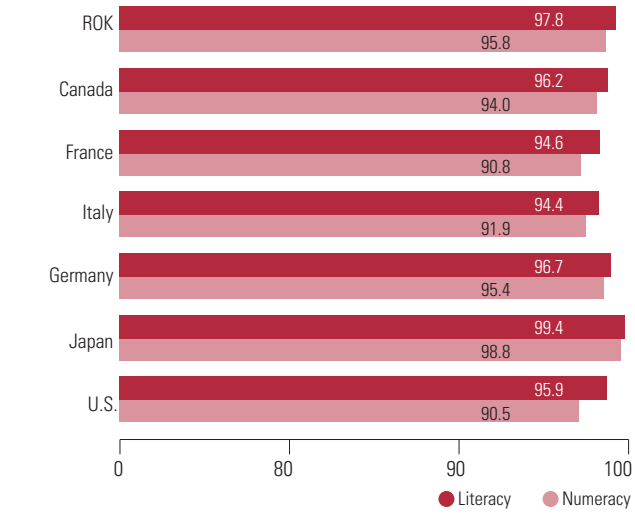
Source: OECD, 2012, PIAAC (ROK, Canada, Japan, USA); Eurostat, 2011, Adult Education Survey (France, Italy, Germany, U.K.)

Literacy

Literacy in the SDGs is defined as the ability to recognize, understand, interpret, create, and communicate using printed and other written materials created in a variety of contexts (Cho Sun-ok, 2018). According to the results of the PIAAC, the percentage of population achieving at least a fixed level of proficiency in functional skills of the ROK in 2012 was 97.8% for literacy and 95.8% for numeracy, the second highest after Japan (99.4% and 98.8%, respectively). However, the results of further disaggregation using domestic data show differences between groups. According to the Adult Literacy Survey, the percentage of people with sufficient literacy was higher in 2017 than in 2014. However, the percentage was lower in female than in male and the percentage of literacy was decreased rapidly with age after the 50s.

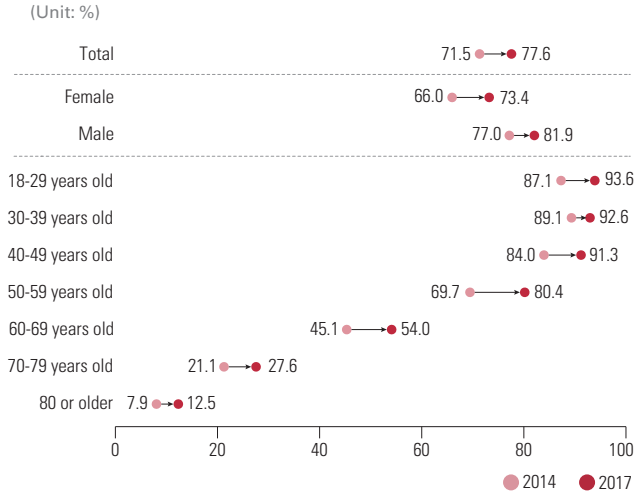
International Comparison of Percentage of Population Achieving at Least a Fixed Level of Proficiency in Functional Skills: 2012

(Unit: %)



Source: OECD, PIAAC

Percentage of Population with Sufficient Literacy for Everyday Life



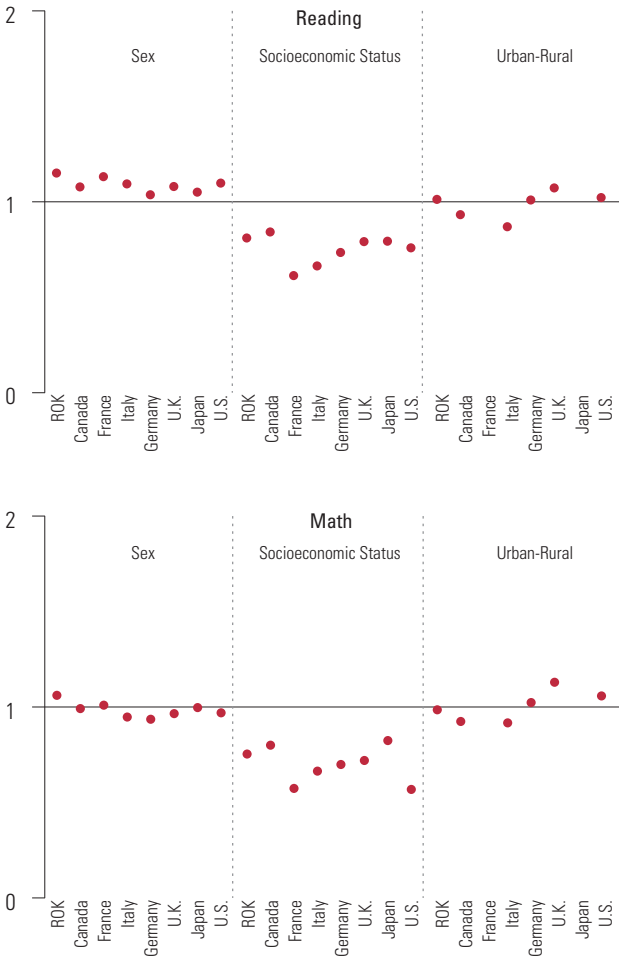
Source: National Institute for Lifelong Education, Adult Literacy Survey

Note: The adult literacy survey categorizes literacy levels from complete literacy (level 1) to sufficient literacy (level 4). Illiteracy refers to level 3, which lacks the basic literacy skills necessary for daily life. Here, the percentage of level 4 is presented

Equity

The UN Educational, Scientific and Cultural Organization (UNESCO) has developed a parity index to identify equity in education. The index means that the gap grows as the value moves away from 1. According to sex, socioeconomic status, and urban-rural parity indexes for the minimum level of proficiency in reading and math, the urban-rural parity indexes in all the comparison countries are close to 1, but parity indexes according to socioeconomic status are further away from 1 to 0. This means that the level of educational attainment is also low in the low socioeconomic status in both reading and math. Among them, the U.K. had the lowest socioeconomic parity index in math, 0.59. In the ROK, the gap by socioeconomic status is greater than the male-female and urban-rural gap.

International Comparison of Parity Indexes for Achievement in Reading and Math: 2015



Source: OECD, PISA

Note 1: Targeting the students in their first half of secondary education, and data on Italy in math was collected in 2012. There is no comparison data between city and country in France and Japan

2: The reference group for each index is male, the rich and city

Achieve gender equality and empower all women and girls

Gender is known as one of the most deep-rooted hierarchies in human society. People divide themselves into men and women everywhere, and men have a better share almost everywhere (Harari, 2018). That's why the SDGs are working to set and improve gender inequality as the independent goal. We aim to achieve sustainable development by strengthening our capacity to achieve gender equality, meet women's rights, and expand political, social and economic rights. To this end, specific targets include the establishment of a legal basis for gender equality, eradication of harmful practice against women, valuation of unpaid domestic work and participation in decision-making in the political and economic domains, securing sexual self-determination, and enhancement of economic and social rights.

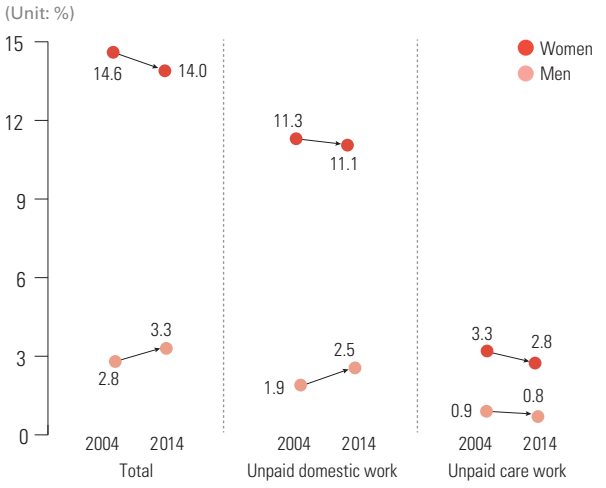
5.1	**End all forms of discrimination against all women and girls everywhere**
	5.1.1 Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex
5.2	**Eliminate all forms of violence against all women and girls in the public and private 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/cutting, by age
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

ROK's data updated in global DB Indicator used for analysis Proxy indicator

Valuation of Unpaid Domestic and Care Work

The time spent on unpaid domestic and care work was clearly different between men and women. As of 2014, women spent 14.0% of 24 hours a day in domestic work and caring for family, while men spent only 3.3% of 24 hours. The percentage decreased by 0.6%p for women and 0.5%p for men compared to 2004, 10 years ago, but the difference still remains. In particular, it was only affected the increase in the domestic work time of men, but the care time was found to have decreased slightly. Compared with major countries by limiting the target to a population of 15 years and older, women consistently spent more time in unpaid domestic work than men in all countries. The difference between men and women was the largest in Japan and Italy (12.0%p), followed by the ROK (11.0%p) and Canada with 5.0%p, which is the smallest.

Proportion of Time Spent on Unpaid Domestic and Care Work (over 10 years old)

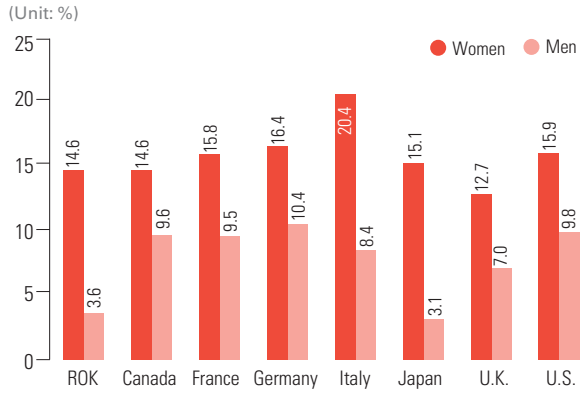


Source: KOSTAT, Time Use Survey

Note 1: Unpaid domestic work is a concept that combines home management work with family and household member care work

2: KOSTAT's Time Use Survey behavioral classification system excluded travel time from home management and care work, but recalculated it according to the definition of the SDGs indicator (5.4.1)

International Comparison of Proportion of Time Spent on Unpaid Domestic and Care Work (over 15 years old)



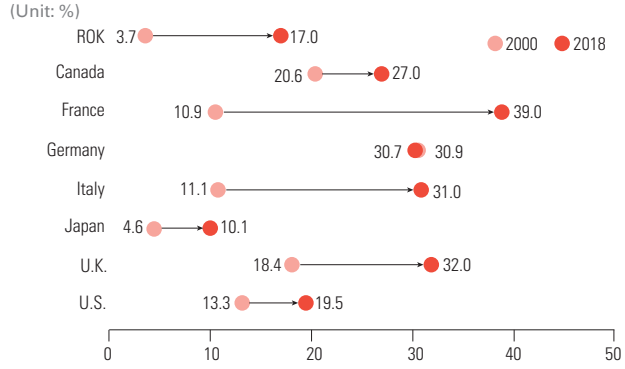
Source: UNSD, Time Use Survey

Note : The data on U.S.·Canada·Japan, U.K., ROK·Italy, Germany and France was collected in 2016, 2015, 2014, 2013 and 2010, respectively

Participation in Political and Economic Area

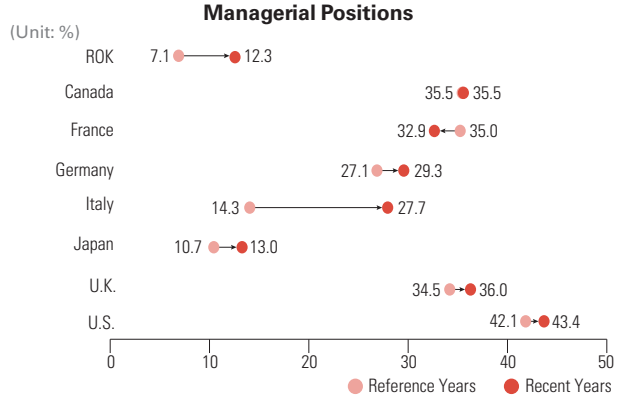
The percentage of women seats in the Korean National Assembly has increased by about five times from 3.7% in 2000 to 17.0% as of 2018, but it is still low compared to other countries. In France, the U.K. Italy and Germany, women account for more than 30% of the total seats. The percentage of women among managers increased gradually compared to 2004 (7.1%), which was 12.3% in 2017, but this is also low compared to other countries. Only Japan was at a similar level to the ROK, followed by Italy which showed 27.7%, more than twice that of the ROK. In the U.S., on the other hand, nearly half of all managers, 43.4%, are women managers.

International Comparison of Percentage of Seats Held by Women in National Parliament



Source: Inter-Parliamentary Union Database on Women in National Parliament

International Comparison of Proportion of women in Managerial Positions



Source: ILO, Labour Force Survey

Note 1: Canada 2000 v.s. 2014, France, Germany, Italy, United Kingdom 2000 v.s. 2016, Japan 2009 v.s. 2016, U.S. 2003 v.s. 2013, ROK 2004 v.s. 2017

2: ROK's data was updated with adjusted by time series

Ensure availability and sustainable management of water and sanitation for all

SDG6 aims to ensure clean and safe water and sanitation for all. According to a report by the WHO and the UN International Children's Emergency Fund (UNICEF) (2017), as of 2015, 71% of the World's population has access to safely managed drinking water, and 39% of the population uses safe, well-managed sanitation facilities, indicating that many people live without clean water and adequate sanitation facilities. Access to safe drinking water and sanitation facilities is a fundamental human right and an essential goal that must be achieved to eradicate poverty and hunger and ensure health and education for all. Thus, the targets include not only ensuring the access to safe drinking water and sanitation facilities, but also improving water quality and water resource-use efficiency, and protecting and restoring marine ecosystems.

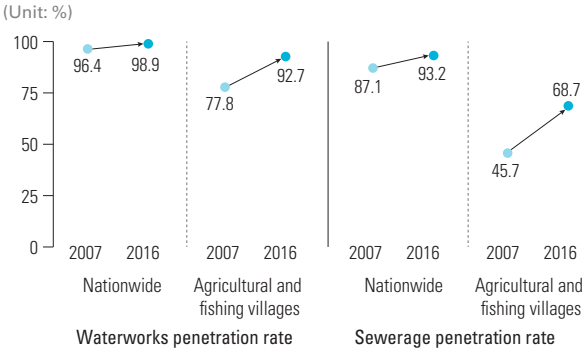
6.1	**By 2030, achieve universal and equitable access to safe and affordable drinking water for all**
	6.1.1 Proportion of population using safely managed drinking water services ▲ **Waterworks penetration rate**
6.2	**By 2030, achieve access to adequate and equitable sanitation and hygiene for all and 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 ▲ **Sewerage penetration rate**
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 wasteswater and substantially increasing recycling and safe reuse globally**
	6.3.1 Proportion of wasteswater 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 implementation (0–100)
	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, wasteswater 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

ROK's data updated in global DB Indicator used for analysis ▲ Proxy indicator

Universal Access to Drinking Water and Sanitation Facilities

According to the result of WHO and UNICEF's monitoring of drinking water supply and sanitation (2017), 98.0% of people use drinking water safely and 98.5% of people use safe sanitation facilities in the ROK, which are relatively high levels.[12] It is closely related to the ROK's waterworks and sewage penetration rate. Throughout the country, the waterworks and sewage penetration rate has steadily increased to 98.9% and 93.2%, respectively as of 2016. However, there is a significant gap among local unit. The waterworks rate in rural areas increased from 10 years ago, but there was room for improvement, 92.7% in 2016. During the same period, the sewerage penetration rate was significantly low, 68.7%.

Waterworks and Sewerage Penetration Rate

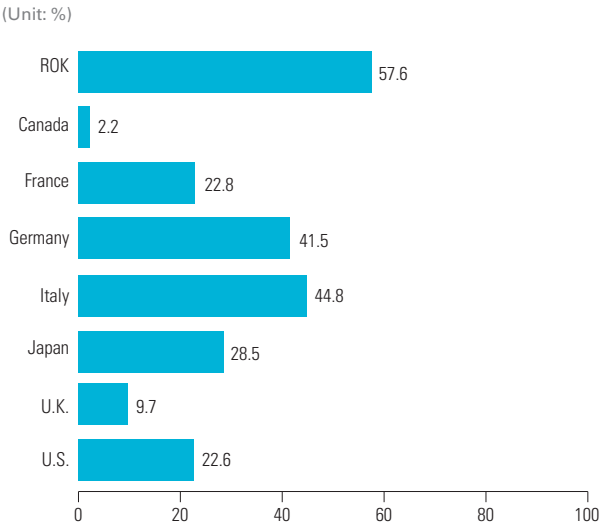


Source: Ministry of Environment, Statistics of waterworks, Statistics of sewerage

Water-Use Efficiency

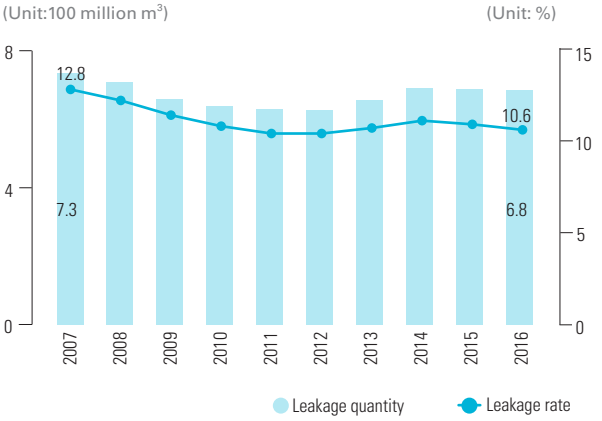
Water stress is a percentage of the amount used of the total amount of water resources that can be used for one year. The value exceeding 10% is regarded as water stress state, and 10-20%, 20-40% and more than 40% are regarded as low stress, moderate stress, and serious stress, respectively (Korea Water Resources Corporation, 2017). Increased efficiency can reduce water stress by reducing water usage and increasing available water resources. The ROK's Level of Water Stress, which was measured by FAO, is 57.6% as of 2014, which is serious stress level and higher than in all countries to be compared. In particular, the water stress levels in Canada and the U.K. were 2.2% and 9.7%, respectively, which means there is no stress. Reducing water leakage is one way to increase the efficiency of water use. As of 2016, the amount of water leakage was 680million m^3, which is 10.6% of the total water supply. Compared to 2007, 2.2%p was reduced.

International Comparison of Water Stress Levels: 2014



Source: FAO

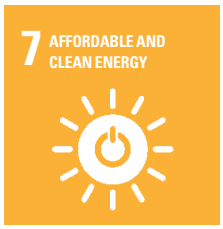
Waterworks Leakage Rate



Source: Ministry of Environment, Statistics of Waterworks
Note: Leakage ratio = (leakage quantity/ total water supply) X100

12 'Use of safe drinking water' herein refers to an improved drinking water source that is accessible, available when needed, and free of fecal contamination, and 'use of a safely managed sanitation facility' means the use of a basic sanitation facility where wastes is safely disposed of or discharged out of place without sharing the sanitary facilities of other households (IAEG-SDGs, 2018b).

Ensure access to affordable, reliable, sustainable and modern energy for all



SDG7 aims to ensure that everyone has access to reliable, clean energy at an affordable price. The energy sector has emerged as an important issue of the international community in the last two decades, and its importance has been addressed and has become an independent goal in the SDGs. Specifically, the goals are to ensure universal access to modern energy, increase the use of renewable energy, and improve energy efficiency.

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 ▲ **New and renewable energy production and supply**
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
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 Investments in energy efficiency as a proportion of GDP and the amount of foreign direct investment in financial transfer for infrastructure and technology to sustainable development services

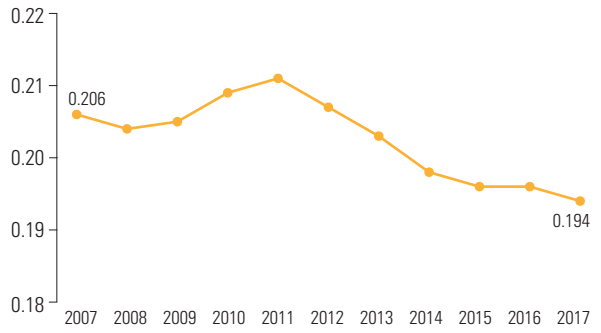
ROK's data updated in global DB Indicator used for analysis ▲ Proxy indicator

Energy Efficiency

The energy intensity, which represents the national energy efficiency level, is 0.194 toe / million won in 2017, steadily decreasing except 2009-2011, indicating that the efficiency is improving. The deterioration in efficiency in 2009-2011 is analyzed to be attributed to the increase in energy and power consumption for raw materials due to the expansion of facilities and production activities in the energy glutton industry (Korea Energy Economics Institute, 2018). Estimates from the International Energy Agency (IEA) indicate that the ROK is still less energy efficient than major countries.

Energy Intensity

(Unit: toe/million won)



Source: Ministry of Trade, Industry and Energy / Korea Energy Economics Institute, 2018 Yearbook of Energy Statistics

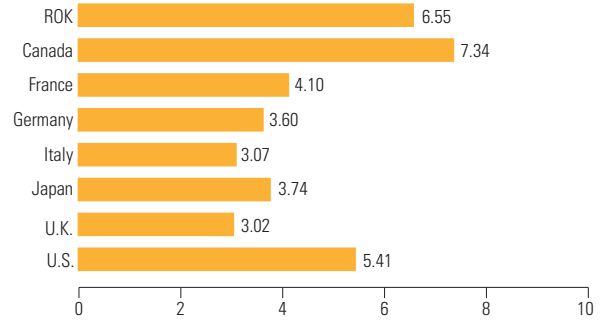
Note 1: It is the value of primary energy divided by GDP, expressed in units of energy source in the ROK. Primary energy refers to the energy supplied to the ROK by production, import and export, and inventory increase/ decrease. Here, it is calculated as the sum of energy input to be converted to other energy and final energy consumed for industry, transportation, household, and business

2: GDP is based on chain prices

3: Toe (ton of oil equivalent) refers to a unit that standardizes different types of energy sources such as oil, gas, and electricity based on 10^7kcal, which is a calorie of 1 ton (t) of crude oil

International Comparison of Energy Intensity: 2015

(Unit: MJ/USD)



Source: IEA, World Energy Balances 2017

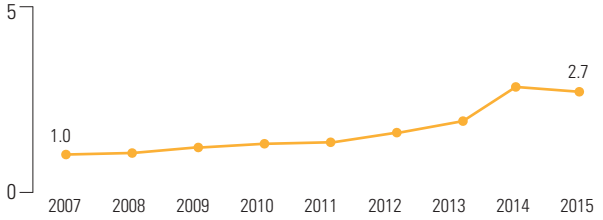
Note : GDP is based on 2011 PPP

Use of Renewable Energy

As an indicator to monitor the expansion of renewable energy use, the percentage of renewable energy of the final energy consumption was found to be 2.7% in the ROK in 2015. It is a steadily increasing, but still far lower than Canada's 22.0%, Italy's 16.5% and Germany's 14.2%.

Percentage of Renewable Energy Share in the Total Final Energy Consumption

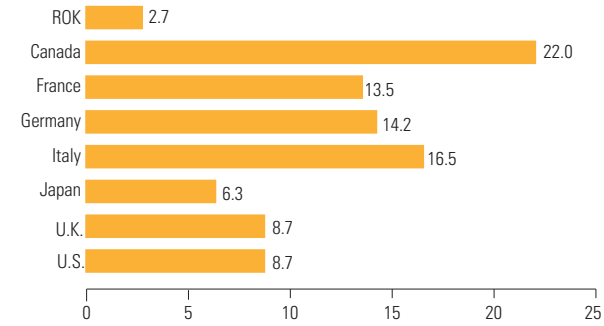
(Unit: %)



Source: IEA, World Energy Balances 2017

International Comparison of Renewable Energy Share in the Total Final Energy Consumption: 2015

(Unit: %)



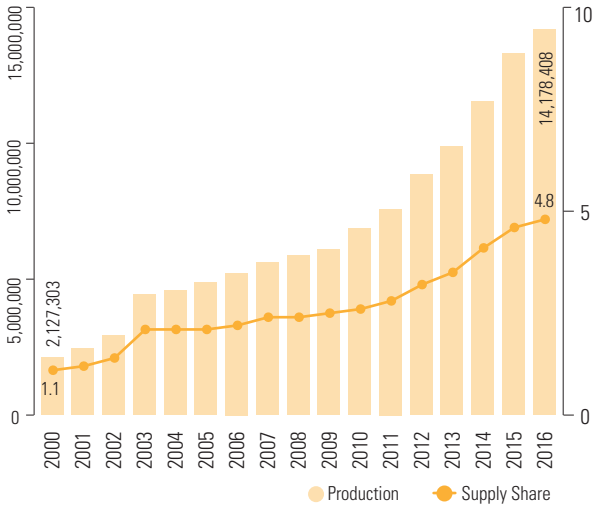
Source: IEA, World Energy Balances 2017

However, the ROK's renewable energy supply is on the rise due to government investment and private sector's participation in responding to Framework Convention on Climate Change. The difference is that the ROK uses a slightly different concept, which combines renewable energy with new energy such as fuel cells, coal liquefaction and gasification, vacuum residue gasification and hydrogen energy on a policy basis. The supply of new and renewable energy was 2,127,303 toe in 2000 and increased by about 6.7 times to 14,178,408 toe in 2016. As a result, the share of new and renewable energy in primary energy was 1.1% in 2000 to 4.8% in 2016. As of 2016, the share of energy

sources consisting of new and renewable energy was in the order of waste (61.7%), bio (19.5%) and solar photovoltaic(7.7%).

Production and Supply Share of New and Renewable Energy

(Unit: toe) (Unit: %)



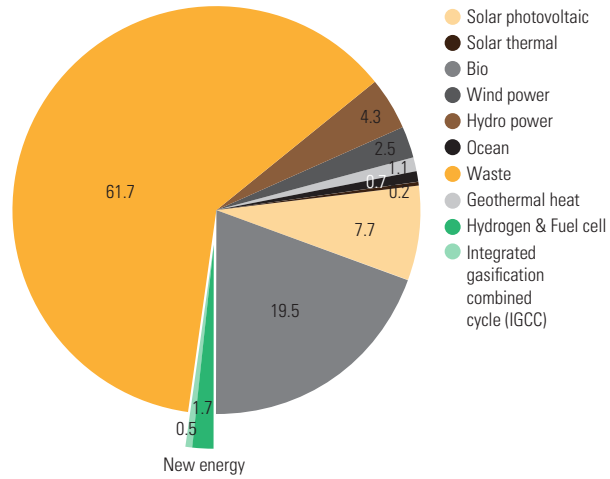
Source: Korea Energy Agency, Survey on deployment New & Renewable energy

Note 1: Renewable energy is energy used by converting renewable energy such as sunlight, water, geothermal heat, precipitation, and biological organisms and includes solar energy (solar photovoltaic and solar thermal), bio, wind power, hydro power, ocean, waste, geothermal heat, etc. New energy is energy that converts existing fossil fuels or uses electricity or heat through chemical reactions such as hydrogen and oxygen and includes hydrogen energy, fuel cells, integrated gasification combined cycle (IGCC), etc.

2: The share of supply is the share of new and renewable energy of primary energy

New and Renewable Energy Composition: 2016

(Unit: %)



Source: Korea Energy Agency, Survey on Deployment of New & Renewable Energy

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

SDG8 is based on three axes: economic growth, full and productive employment and decent work. It should lead sustainable economic growth through technology improvement and innovation, but in the process, it should be able to embrace vulnerable groups in society such as children, women and migrant workers. This will ultimately provide everyone with decent work that will satisfy their quality of life. To achieve SDG8, the targets are to promote economic growth by diversifying industries and improving resource efficiency through innovation-oriented policies, ensure productive employment by achieving equal pay for equal work, ending child labour, and protecting labour rights for migrant workers and create decent work by reducing youth unemployment rate and encouraging sustainable tourist industry.

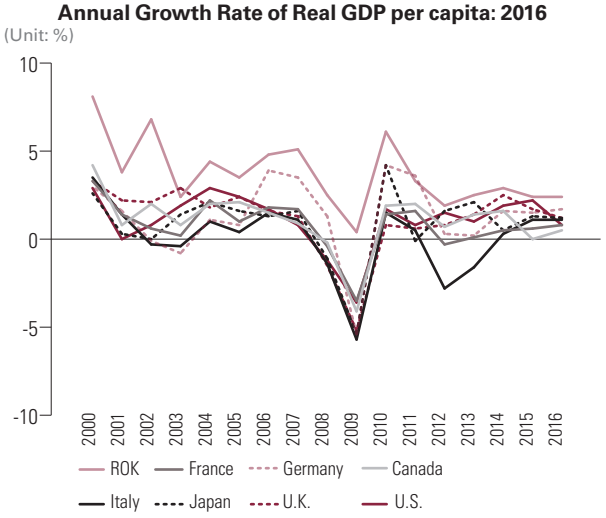
8.1	**Sustain per capita economic growth in accordance with national circumstances**
	8.1.1 Annual growth rate of real GDP per capita
8.2	**Achieve higher levels of economic productivity through diversification, technological upgrading and innovation**
	8.2.1 Annual growth rate of real GDP per employed 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 non-agriculture employment, by sex
8.4	**Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation**
	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 female and male employees, by occupation, age 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 and 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
8.8	**Protect labour rights and promote safe and secure working environments for all workers**
	8.8.1 Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status
	8.8.2 Level of national compliance with labour rights based on ILO textual sources and national legislation
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
	8.9.2 Proportion of jobs in sustainable tourism industries out of total tourism jobs
8.10	**Strengthen the capacity of domestic financial institutions to encourage and expand access to 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

ROK's data updated in global DB Indicator used for analysis Proxy indicator

Economic Growth

It is a common phenomenon that the growth rate is slow as the economic development stage goes higher (Yoon Yoon-kyu, 2017). Of the seven major countries, Canada, France and the U.S. showed annual GDP per capita growth rate of less than 1% in 2016, and the remaining countries also showed the growth rate of 1%. During the same period, the ROK's annual GDP growth rate per capita was 2.4%. After rapid growth, the ROK's growth rate slowed down during the 1997 economic crisis, and recorded another low point of the growth rate (0.4%) due to the global financial crisis in 2009. Since then, the ROK has recovered, showing a recent growth rate of around 2%.

Annual Growth Rate of Real GDP per capita: 2016



Source: United Nations, Department of Economic and Social Affairs, Statistics Division (AMA)

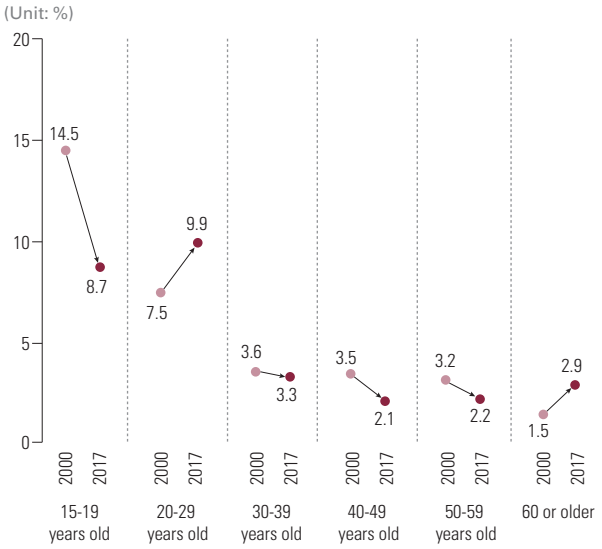
Decent Work

The unemployment rate in the ROK has been maintained in the 3% range overall, but has been increasing since 2013. By sex, the unemployment rate of male is consistently higher than that of female. In 2014, the gap was narrowed due to the increase in the unemployment rate of female, but recently the unemployment rate of male has increased slightly compared to that of female. By age, the unemployment rate of 20-29 year-olds has increased significantly since 2000 compared to that of other age groups. The unemployment rate of the seven major countries was the lowest in Japan (3.1%), with 4% in Germany, the U.K. and the U.S., and more than 10% in Italy and France. On the other hand, the unemployment rate of male was higher than that of female in all countries except Italy.

Unemployment Rate

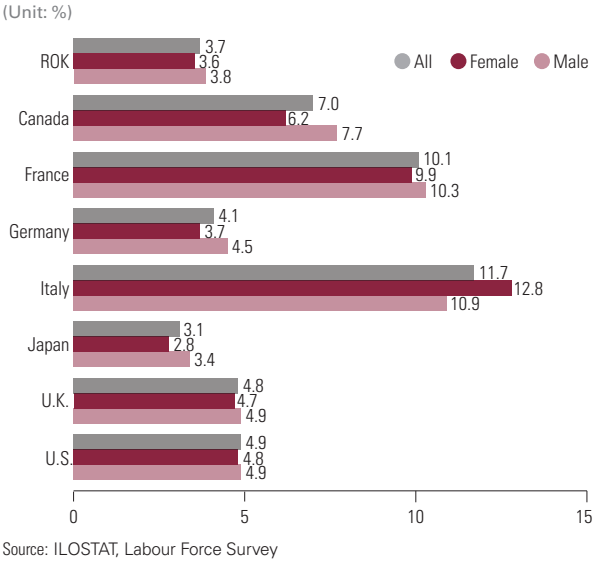
Source: KOSTAT, Economically Active Population Survey

Unemployment Rate by Age Group



Source: KOSTAT, Economically Active Population Survey

International Comparison of Unemployment Rate: 2016



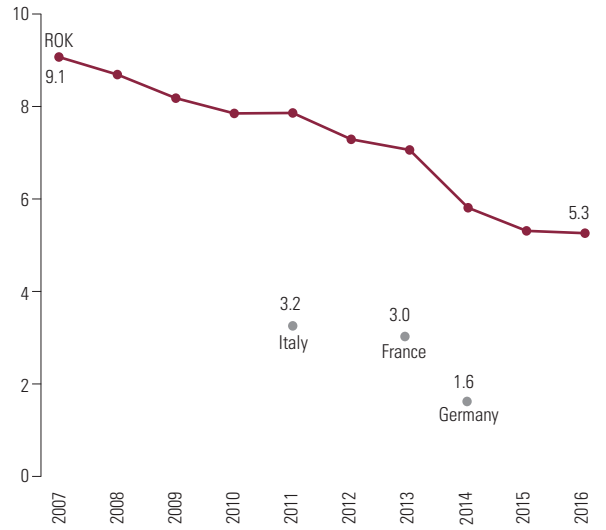
Source: ILOSTAT, Labour Force Survey

Safe Working Condition

The fatalities from fatal occupational injuries in the ROK have continued to decline, down to 5.3 per 100,000 employees in 2016. However, compared to major countries, it is still higher than France (3.0 in 2013), Italy (3.2 in 2011) and Germany (1.6 in 2014).

International Comparison of Fatal Occupational Injuries among Employees

(Unit: per 100,000 employees)



Source: ILOSTAT, Occupational Accidents and Injuries Records

Note : Data on Italy, France and Germany was collected in 2011, 2013 and 2014, respectively

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Infrastructure, industrialization and innovation are key driving force of economic growth, and if combined with inclusiveness, resilience and sustainability, sustainable development can be achieved. To achieve inclusive and sustainable industrialization, economic growth should create employment and income, international trade should be activated and resources should be used efficiently (UN, 2017; 2018). Globally, the percentage of manufacturing added value increased by 1.1%p in 2017 compared to 2005 and carbon intensity decreased by 19%p in 2015 compared to 2000, but this trend is not observed in all regions. It is a point where technological innovation is required for inclusive development embracing developing countries.

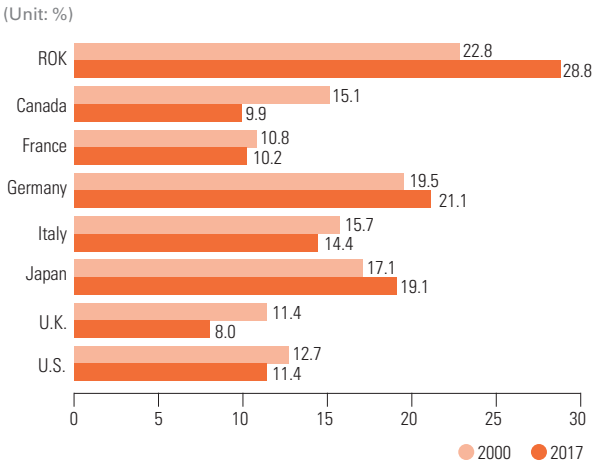
9.1	**Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all**
	9.1.1 Proportion of the rural population who live within 2 km 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
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 CO2 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

ROK's data updated in global DB Indicator used for analysis Proxy indicator

Sustainable Industrialization

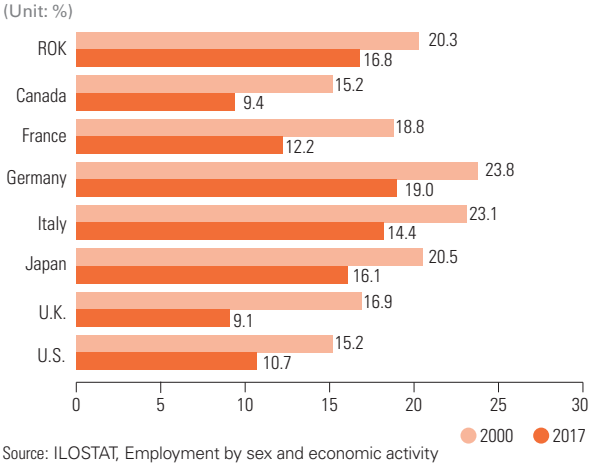
The ROK's manufacturing value added rate to GDP was 28.8% in 2017, up 6.0%p from 2000 (22.8%). Of countries to be compared, Germany (21.1%) was the only country which had a manufacturing value added rate above 20% in 2017, followed by Japan (19.1%), Italy (14.4%). However, the value added rate of all countries except Germany and Japan are decreasing compared to 2000, and the ROK's increase is remarkable. Unlike the increase in manufacturing value added rate, employment rate in the manufacturing sector decreased in 2017 compared to 2000. This phenomenon is consistent in all the countries to be compared, with the smallest decline of 3.5%p in the ROK.

International Comparison of Manufacturing Value Added as a Proportion of GDP



Source: UNIDO, Manufacturing Value Added Database

International Comparison of Manufacturing Employment Rate as a Proportion of Total Employment

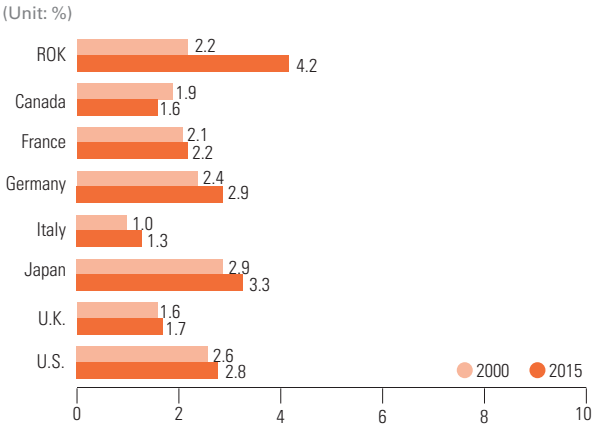


Source: ILOSTAT, Employment by sex and economic activity

R&D Capability

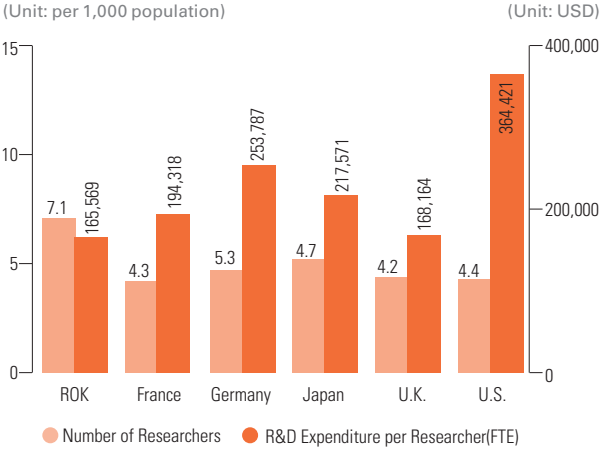
Investment in research and development(R&D) in the ROK is relatively high in the world. The percentage of research and development costs compared to GDP has doubled from 2.2% in 2000 to 4.2% in 2015, and this increase is high compared to the seven major countries.[13] The number of researchers (Full Time Equivalent, FTE) calculated by reflecting the percentage committed to R&D was also 7.1 per 1,000 population in 2015, which are more compared to other countries. However, R&D expenditure per FTE was $165,569, the lowest among the countries to be compared.

International Comparison of R&D Expenditure as a Proportion of GDP



Source: OECD, Research and Development Statistics database
Note : Data on Canada was collected in 2014.

International Comparison of Number of Researchers (in FTE) and R&D Expenditure: 2015



Source: Ministry of Science and ICT, 2016 Survey of Research and Development in Korea

13 As of 2015, R&D expenditure ratio in the ROK is the second largest in the world following Israel (4.3%) (Ministry of Science and ICT 2017).

Reduce inequality within and among countries

The SDG10 aims to mitigate inequalities based on sex, age, disability, race, class, religion and opportunity, as well as income inequality at the national and international levels. Targets include mitigation of income inequality which is the most basic in inequality debate, elimination of discriminatory laws, policies and practices, strengthening social protection policies, monitoring global financial market and strengthening regulatory enforcement, strengthening the voice of developing countries' right to speak, realization of responsible migration and population movement through systematic immigration policies, implementation of the principle of preferential treatment for developing countries, expansion of official development assistance for developing countries. On the other hand, implementing this goal requires disaggregated data that shows the inequality of each population group.

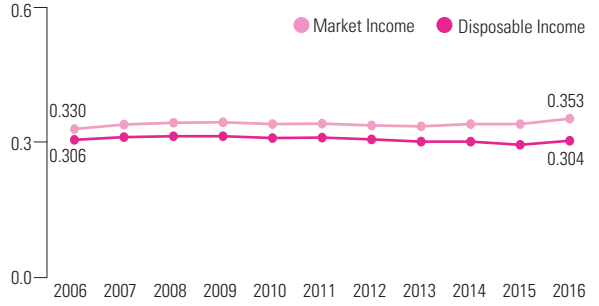
10.1	**By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average**
	10.1.1 Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population and the total population ▲ **Gini coefficient**
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	**Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality**
	10.4.1 Labour share of GDP, comprising wages and social protection transfers
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 Number of countries with migration policies that facilitate orderly, safe, regular and responsible migration and mobility of people
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

ROK's data updated in global DB Indicator used for analysis ▲ Proxy indicator

Income Inequality

The representative indicator of income distribution is the Gini coefficient. The Gini coefficient, which is created based on equivalized income according to OECD recommendations using KOSTAT's Household Income and Expenditure Survey, have been repeatedly increasing and decreasing since 2006, with 0.204 in 2015 and 0.304 in 2016. The Gini coefficient based on disposable income reflects the effect of the government's redistribution policy by taking into account public transfer income and public transfer expenditure in market income. It is founded that the effect of government policy increased from 0.024 in 2006 to 0.049 in 2016. In 2016, the Gini coefficient based on disposable income was 0.391 in the U.S. and 0.351 in the U.K.

Gini Coefficient



Source: KOSTAT, Combined Data of Household Income and Expenditure Survey

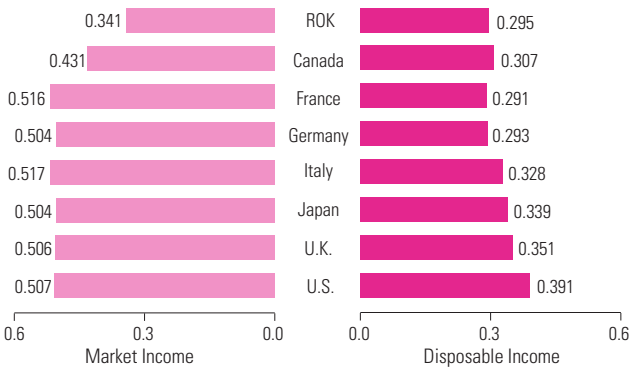
Note 1: The Gini coefficient has a ratio between 0 and 1, the closer to 1, the higher the inequality

2: Prepared based on equivalized income divided by the square root of the number of households, so that the welfare level can be compared between households with different number of households

3: Market income = Wage and salary income + Business income + Property income + Private transfer expenditure
Disposable income = Market income + Public transfer income - Public transfer expenditure
Government policy effect = Market income - disposable income

4: From 2016, Official data source was changed to Survey of Household Finances and Living Conditions

International Comparison of Gini Coefficient: 2016



Source: OECD, Income Distribution and Poverty Database

Note : Data on ROK, Germany and Japan was collected in 2015

Make cities and human settlements inclusive, safe, resilient and sustainable

According to the World Urbanization Prospect, the percentage of urban population, which is currently 55%, will reach 68% by 2050 (UNDESA, 2018). This is because cities offer many opportunities in various areas related to quality of life, such as occupation, education, health and hygiene. However, rapid urbanization causes various socio-economic problems, such as an increase in poverty and expansion of slums. Sharing this awareness of the issue, the international community puts forward the establishment of inclusive, safe, resilient and sustainable cities as an independent goal within the SDGs. In detail, it suggests the improvement of the living environment and transportation, integrated urban planning and management, reduced damage from disasters, protection of cultural heritage, and creation of a healthy environment through air quality and wastes management.

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 ▲ **Percentage of households that fall below the minimum housing standards**
11.2	**By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all**
	11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities ▲ **Public transportation share**
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 expenditure (public and private) per capita spent on the preservation, protection and conservation of all cultural and natural heritage, by type of heritage (cultural, natural, mixed and World Heritage Centre designation), level of government (national, regional and local/municipal), type of expenditure (operating expenditure/investment) and type of private funding (donations in kind, private non-profit sector and sponsorship)
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**
	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 in relation to global GDP, damage to critical infrastructure and 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 wastes management**
	11.6.1 Proportion of urban solid wastes regularly collected and with adequate final discharge out of total urban solid wastes 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 Proportion of population living in cities that implement urban and regional development plans integrating population projections and resource needs, by size of city
11.b	**By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement**
	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
	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**
	11.c.1 Proportion of financial support to the least developed countries that is allocated to the construction and retrofitting of sustainable, resilient and resource-efficient buildings utilizing local materials

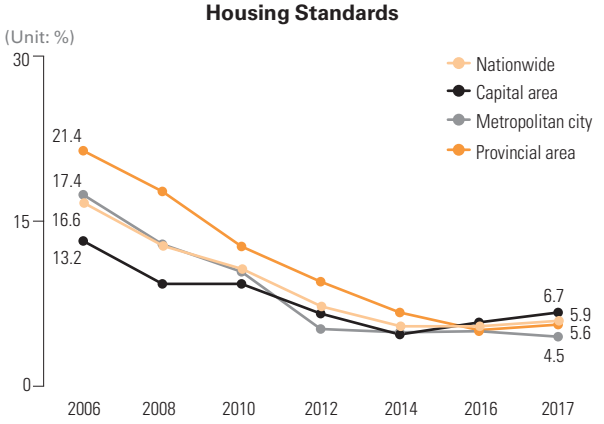
ROK's data updated in global DB Indicator used for analysis ▲ Proxy indicator

Residential Environment

Slum is a representative indicator that shows extreme poverty. It is defined as a living space lacking water, sanitation facilities, adequate living space, home durability and ownership (IAEG-SDGs, 2018c). Although there is no official data in the ROK that perfectly meets this standard, Korea Housing Survey have annually released statistics on households that fall below the minimum housing standards under the Framework Act on Residence. Over the last decade, the percentage of households that have not met the minimum housing standards has declined by 10.7%p from 16.6% in 2006 to 5.9% in 2017. In terms of capital area, metropolitan cities, and provincial areas, the percentage of households that fall below the minimum housing standards is decreasing in all regions. However, the distribution by region has changed within the households below the minimum housing standards. In 2006, the percentage of households that fall below the minimum housing standards was high in the order of provincial areas, capital areas, and metropolitan cities. In 2017, however, it was changed to the order of capital areas, provincial areas and metropolitan cities.

This is due to the increase of single-person households in the capital area and the supply of small-sized housing (Korea Research Institute for Human Settlements, 2017).

Percentage of Households that Fall Below the Minimum Housing Standards



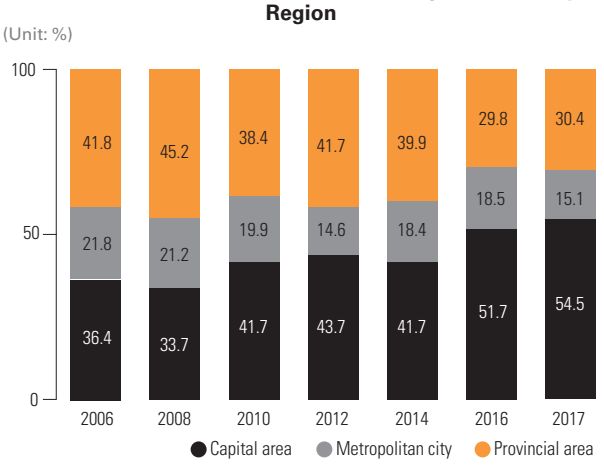
Source: Ministry of Land, Infrastructure, and Transport, Korea Housing Survey

Note 1: Households that fall below the minimum housing standards means those that do not meet the standards of bedrooms, area, and facilities among the minimum housing standards under the Framework Act on Residence

2: Incheon and Gyeonggi-do were excluded from metropolitan cities and provincial areas, respectively as the capital areas include Seoul, Incheon, and Gyeonggi-do

3: The items for ordinary household has been surveyed every two years since 2006, but every year since 2017

Households under the Minimum Housing Standards by Region

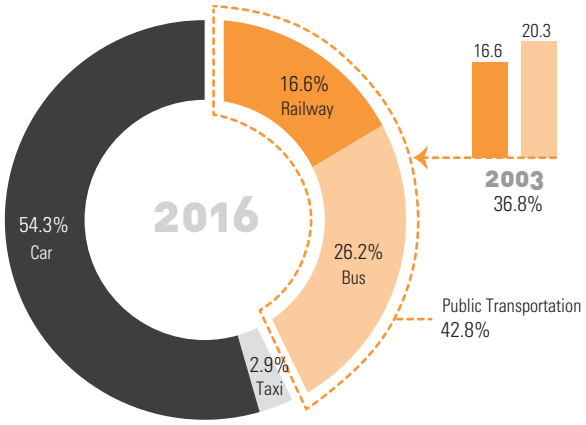


Source: Ministry of Land, Infrastructure, and Transport, Korea Housing Survey

Public Transport Accessibility

Public transport is important not only for the low-income class and the transport vulnerable group, but also for the environment by mitigating the negative effects of traffic congestion and pollutant emissions. Accessibility to public transport is thus used as an indicator to monitor inclusive and sustainable urban development. In the ROK, the share of public transport continued to increase from 36.8% in 2003 to 42.8% in 2016 according to the expansion of public transport networks such as railways and buses. Among them,

Share of Transport by Modes of Transport



Source: Ministry of Land, Infrastructure, and Transport, Performance of Transport

Note 1: Share of public transport = (Public transport passenger traffic performance / total passenger traffic performance of means of land transport) X100

2: The modes of transport includes cars, taxis, railways (including subways), among which means of public transport are buses and railways

3: Transport performance is the product of the distance traveled by the number of people using the transport (unit: person-km)

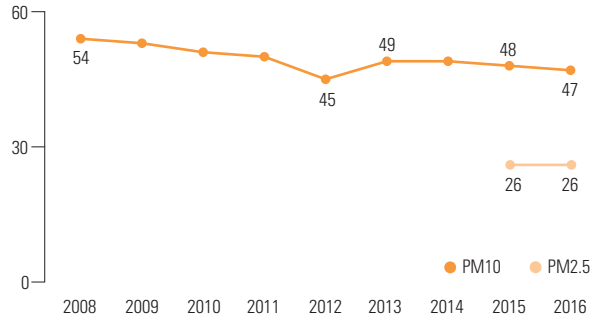
railways and buses accounted for 16.6% and 26.2%, respectively, and the bus utilization rate mainly increased.

Air Quality Management

Attention on particulate matter has recently been rising. This is due to the negative effects of particulate matter on health. Particulate matter is divided into PM10 and PM2.5 depending on the diameter. PM10 is dust smaller than 10/1000㎜, and PM2.5 is dust smaller than 2.5㎜ / 1000. The recent change in concentrations of PM10 showed 45㎍/m³ in 2012 and increased to 49㎍/m³ in 2013 and decreased to 47㎍/m³, which was 1㎍/m³ lower than in 2016. The concentration of PM2.5, which began to be measured in 2015, was 26 ㎍/m³ in 2016 without change. In terms of major cities in the world, Seoul's annual average of particulate matter concentration is about twice that of London, Tokyo and Paris. This is similar not only in Seoul but in all six metropolitan cities.

Change in Annual Particulate Matter Concentrations Nationwide

(Unit: ㎍/m³)

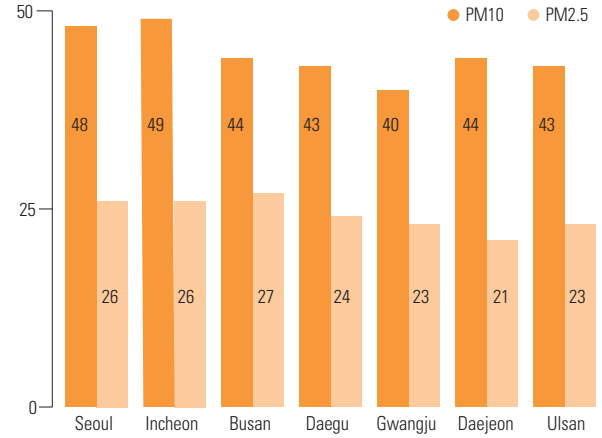


Source: National Institute of Environmental Research, Annual Report of Air Quality in Korea 2016

Note 1: P M 2.5 has been measured since 2015

Average Particulate Matter Concentrations in Seoul and Other Metropolitan Cities: 2016

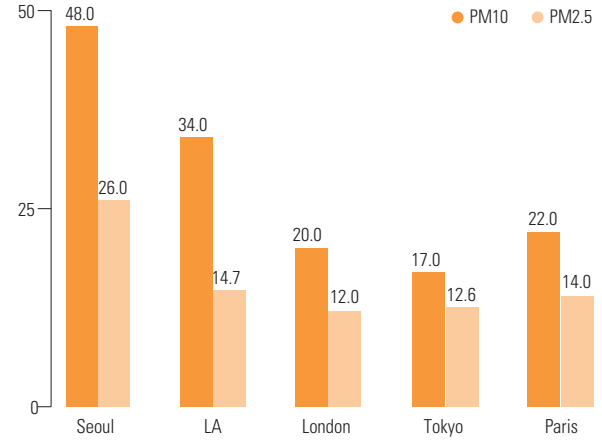
(Unit: ㎍/m³)



Source: National Institute of Environmental Research, Annual Report of Air Quality in Korea 2016

Particulate Matter Concentrations in Major Cities around the World: 2016

(Unit: ㎍/m³)



Source: National Institute of Environmental Research, Annual Report of Air Quality in Korea 2016

Note : The PM2.5 concentration in LA is the value from the official US-EPA website, which is not correspond with value of Annual Report of Air Quality in Korea 2016

Ensure sustainable consumption and production patterns

Sustainable consumption and production refer to activities that transform existing non-sustainable production and consumption patterns into sustainable patterns by increasing resource efficiency and reducing pollutant emissions throughout the production, distribution, and consumption of products and services. This is an issue that emerged due to the growing concern about the environmental degradation, unsustainability of consumption and production due to excessive use of natural resources and desolation of land even if human living standards improved as industrialization enabled mass production and mass consumption. It goes beyond environmental pollution to cover natural capital, productivity, economic activity and capacity building issues (KOICA, 2015). Thus, SDG12 focuses on sustaining the earth's resources and capacities through sustainable production, with targets such as efficient use of natural resources, reduction of food wastes, reduction of chemicals and hazardous wastes, recycling of resources, and rationalization of fossil fuel use.

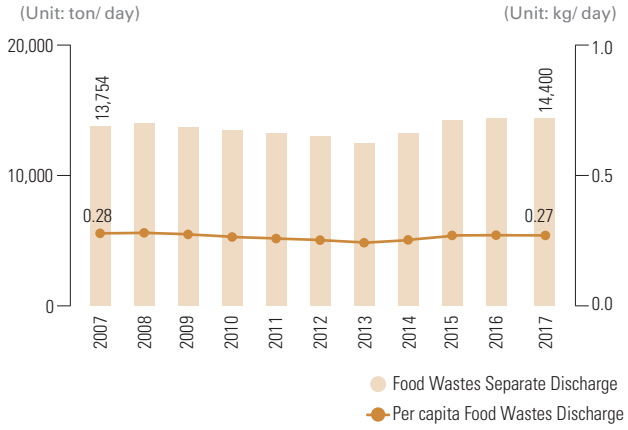
12.1	**Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries**
	12.1.1 Number of countries with sustainable consumption and production (SCP) national action plans or SCP mainstreamed as a priority or a target into national policies
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 wastes 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 wastes index ▲ **Food wastes generation**
12.4	**By 2020, achieve the environmentally sound management of chemicals and all wastes**
	12.4.1 Number of parties to international multilateral environmental agreements on hazardous wastes, and other chemicals that meet their commitments and obligations in transmitting information as required by each relevant agreement
	12.4.2 Hazardous wastes generated per capita and proportion of hazardous wastes treated, by type of treatment ▲ **Designated wastes generation and treatment status**
12.5	**By 2030, substantially reduce wastes generation through prevention, reduction, recycling and reuse**
	12.5.1 National recycling rate, tons of material recycled ▲ **Wastes recycling rate**
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 (including climate change education) are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment
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 Amount of support to developing countries on research and development for sustainable consumption and production and environmentally sound technologies
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 Number of sustainable tourism strategies or policies and implemented action plans with agreed monitoring and evaluation tools
12.c	**Rationalize inefficient fossil-fuel subsidies that encourage wastesful consumption by removing market distortions**
	12.c.1 Amount of fossil-fuel subsidies per unit of GDP (production and consumption) and as a proportion of total national expenditure on fossil fuels

ROK's data updated in global DB ☐ Indicator used for analysis ▲ Proxy indicator

Food Wastes

Reducing food loss at the food production and supply stages is a key to sustainable consumption and production. Reducing the amount of food waste is a typical activity, but as of 2017, the average amount of food waste generated in the ROK was 14,400 tons, up 4.7% from 13,754 tons in 2007. If the amount of food waste is converted to per capita, it is 0.27kg per day in 2017.

Food Wastes Generation

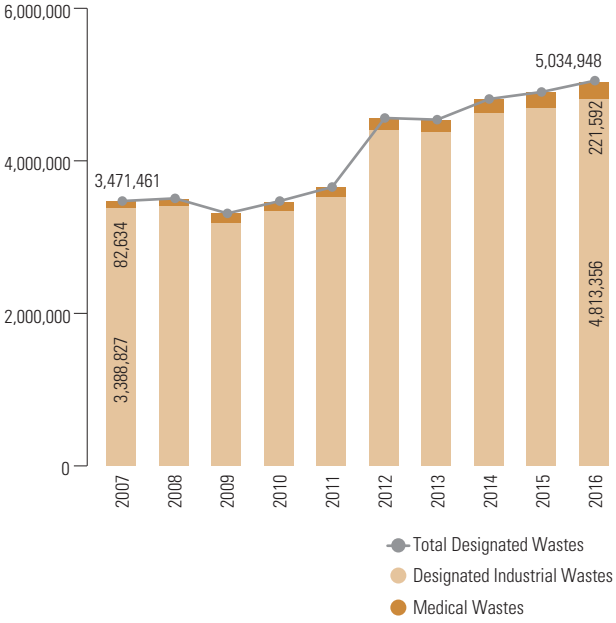


Source: Ministry of Environment, Status of Waste Generation and Treatment
Note : Separate discharge of food wastes means wastes that is contained in food waste bags or containers for the purpose of recycling remaining food wastes

Hazardous Wastes

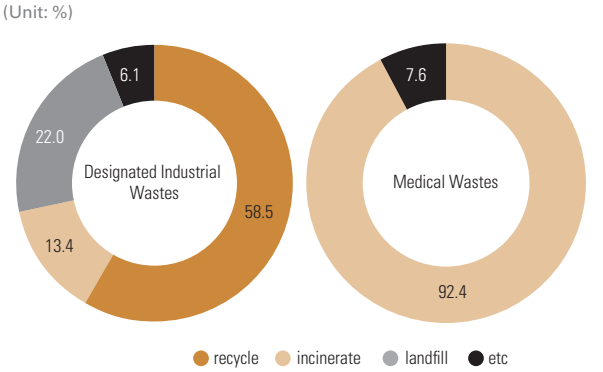
In accordance with the Wastes Control Act, governments designates substances that may pollute the surrounding environment such as waste oil, waste acid, or harm human body such as medical wastes among industrial wastes as designated wastes to identify the generation amount and treatment status each year. The amount of designated wastes has been increasing every year, and 5,034,948 tons was generated in 2016, up 45% from 2007 (3,471,461 tons). There are 4,813,356 tons of designated wastes(95.6%), and 221,592 tons of medical wastes(4.4%). In 2016, the designated wastes treatment status showed that 58.5% of the designated industrial wastes was recycled and the rest was landfilled (22.0%) or incinerated (13.4%). On the other hand, medical waste is mostly incinerated (92.4%), and the rest is sterilized, grinded or treated by waste water treatment facilities.

Designated Wastes Generation



Source: Ministry of Environment, Status of Hazardous Waste Generation and Treatment

Status of Designated Wastes Treatment: 2016



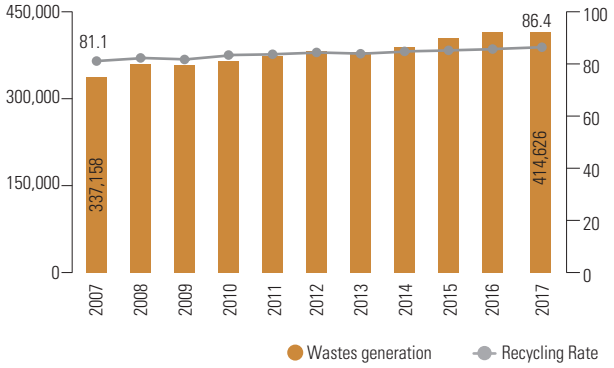
Source: Ministry of Environment, Status of Waste Generation and Treatment
Note : Others = (other treatment amount + final storage amount)-The value of carryover amount of last year, which is processed by sterile grinding (self) and wastewater treatment facilities, etc.

Wastes Recycling

Wastes is mostly treated landfilled, incinerated or recycled. Excluding the designated wastes, the total amount of waste generated per day in 2017 was 414,626 tons and 358,271 tons (86.4%) was recycled. The waste recycling rate is on the rise. On the other hand, in the case of daily-life wastes 61.6% were recycled per day in 2017.

Wastes Generation and Recycling Rate

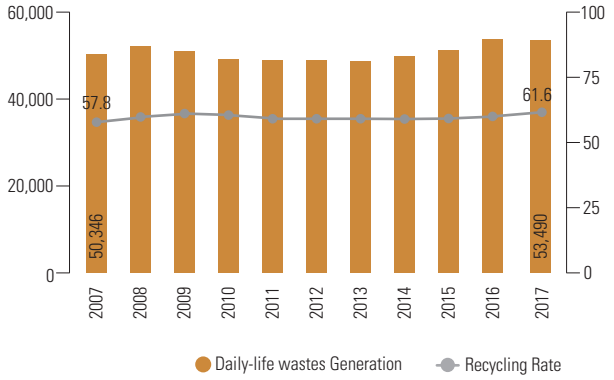
(Unit: ton/ day) (Unit: %)



Source: Ministry of Environment, Status of Waste Generation and Treatment

Household Wastes Generation and Recycling Rate

(Unit: ton/ day) (Unit: %)



Source: Ministry of Environment, Status of Waste Generation and Treatment

Note : Daily-life wastes are figures including household wastes, industrial daily-life wastes, and construction daily-life wastes

Take urgent action to combat climate change and its impacts

Climate change is a critical threat to human survival and sustainable development. The Intergovernmental Panel on Climate Change (IPCC) argues that global average temperatures have risen by 0.74℃ compared to 1906, and that a 2℃ increase in global mean temperature will have a devastating impact on the global ecosystem. The international community has agreed to action to reduce climate change and its impacts by adopting the Paris Agreement in December 2015 as a follow-up to the Kyoto Protocol, which is due to expire in 2020. Paying attention to the increase of greenhouse gases and climate change caused by human activities, SDG13 recognizes the impact as an important task to be urgently addressed. Targets include resilience and adaptive capacity to climate change and natural disasters, integration of climate change response measures in national plans and strategies, education and capacity building.

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 that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other) ▲ **GHG Emissions**

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

13.3.1 Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula

13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions

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 Mobilized amount of United States dollars per year between 2020 and 2025 accountable towards the $100 billion commitment

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 that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change-related planning and management, including focusing on women, youth and local and marginalized communities

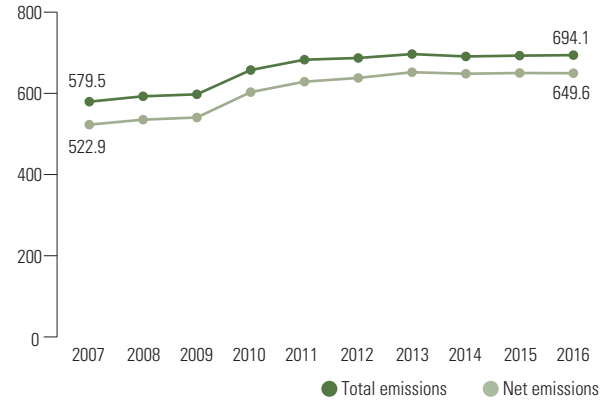
ROK's data updated in global DB ☐ Indicator used for analysis ▲ Proxy indicator

GHG Emissions

A greenhouse gas is the main culprit of global warming, and the Kyoto Protocol has specified six greenhouse gases as the targets. These include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrogen fluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). In 2016, the ROK's total GHG emissions amounted to 694.1 million tons of CO_2eq, up 114.6 million tons CO_2eq. from 2007 (579.5 million tons CO_2eq.). The net emissions, including 44.5 million tons CO_2eq., absorption in Land Use, Land-Use Change and Forestry (LULUCF), are 649.6 million tons CO_2eq. The largest share of emissions is energy (87.1%), followed by industrial processes (7.4%), agriculture (3.1%) and waste (2.4%). On the other hand, the total emissions compared to real GDP decreased to 459.7 tons CO_2eq./1 billion won in 2016, but the total per capita emissions increased to 13.5 tons CO_2eq. from 10 years ago. Compared with major countries' emissions compared to GDP based on US dollars, the ROK's emissions are 0.396kgCO_2eq./USD, similar to those of the U.S. (0.4) but higher than those of Japan (0.281) or Germany (0.261).

Trends in Total GHG Emissions and Net Emissions

(Unit: million tonnes of CO_2eq.)



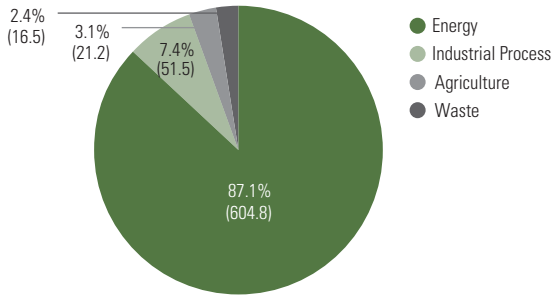
Source: Center for Greenhouse Gas Inventory & Research, 2018 National Greenhouse Gas Inventory

Note 1: Net Emissions = Total Emissions + LULUCF (Land Use, Land-Use Change and Forestry)

2: CO_2eq. (Carbon dioxide equivalent) is a unit that converts major direct greenhouse gas emissions into carbon dioxide according to the global warming index, which expresses the contribution of each greenhouse gas to global warming numerically

GHG Emissions by Sector: 2016

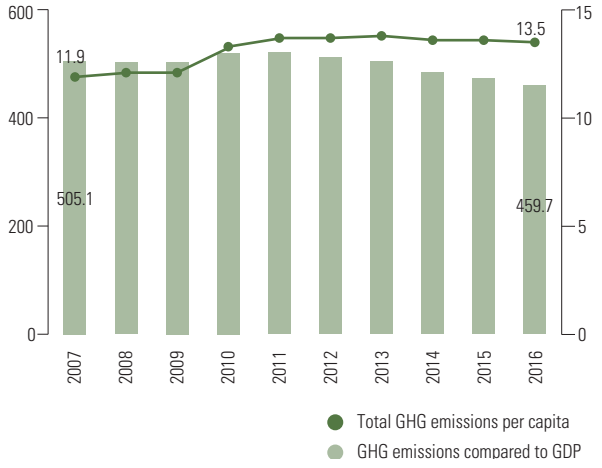
(Unit: %, million tonnes of CO_2eq.)



Source: Greenhouse Gas Inventory and Research Center, 2018 National Greenhouse Gas Inventory

Total GHG Emissions per Capita compared to Real GDP

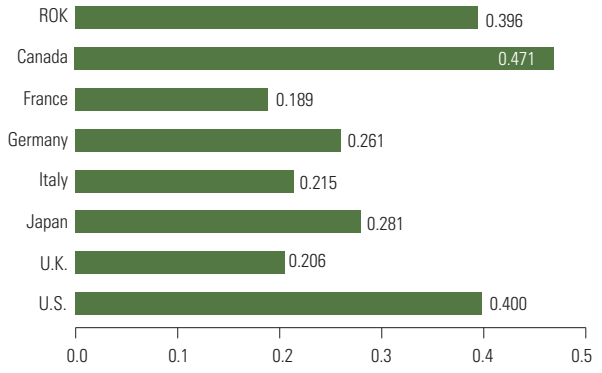
(Unit: tonnes of CO_2eq./1 billion won) (Unit: tonnes of CO_2eq./ population)



Source: Greenhouse Gas Inventory and Research Center, 2018 National Greenhouse Gas Inventory

International Comparison of GHG Emissions compared to GDP: 2015

(Unit: kgCO_2eq./USD)



Source: OECD

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

The ocean, which occupies three quarters of the earth's surface, plays a key role in ecosystems. In this regard, marine acidification is emerging as an important issue. Ocean acidification is a phenomenon in which the hydrogen ion concentration index (pH) of the ocean is lowered as carbon dioxide in the atmosphere is absorbed into the ocean. Compared to the Industrial Revolution, the acidity has increased by approximately 26%. This may affect the marine ecosystem and fisheries as a whole and even lead to food crises. Reflecting this importance of the ocean, SDG14 challenges two seemingly conflicting goals of ocean protection and sustainable use of resources for the sustainable development of the earth. More specifically, it proposes to reduce marine pollution, increase biodiversity and increase the use of resources through sustainable fishing.

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 Index of coastal eutrophication and floating plastic debris density ▲ **Coastal litter status, distribution of water quality index (WQI) across the coast**
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 Proportion of national exclusive economic zones managed using ecosystem-based approaches
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
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 negotiation**
	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

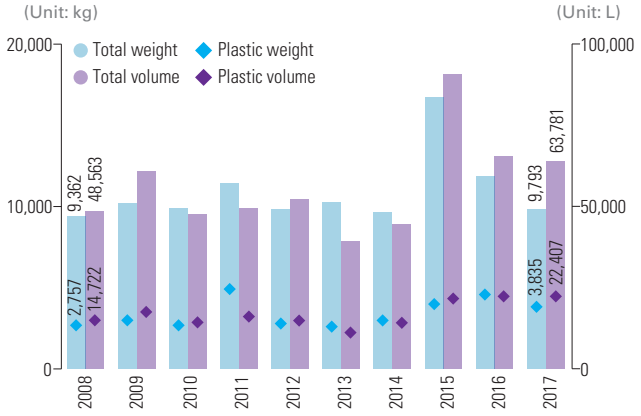
ROK's data updated in global DB ☐ Indicator used for analysis ▲ Proxy indicator

13 Korea JoongAng Daily October 23, 2017 "26% increase in global seawater acidification after industrial revolution"

Marine Pollution

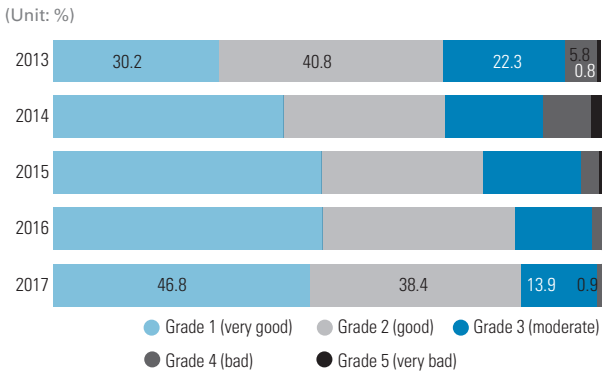
Marine pollutants are very diverse, not only household wastes, but also sewage, wastewater and garbage from industrial activities such as agriculture and fisheries. Coastal eutrophication[15] indexes and floating plastic density, which are presented as global indicators, can be a measure of pollution from land activities. The Ministry of Oceans and Fisheries and the Korea Marine Environment Management Corporation have selected 40 sites along the East, West and South Sea coasts to conduct regular surveys every two months and monitor the state of coastal waste. As of 2017, the coastal litter weighed 9,793kg and had a volume of 63,781L. And plastics accounted for 3,835kg, 39.2% of total weight and 22,407L, 35.1% of total volume.

Coastal Litter Status



Source: Korea Marine Environment Management Corporation, Marine ecosystem information(www.malic.or.kr)

WQI Distribution across National Coasts



Source: Ministry of Oceans and Fisheries, Annual Report on Marine Environment Monitoring in Korea

Note 1: Seawater quality grades are divided into five grades based on a combination of five water quality indicators (dissolved oxygen concentration, phytoplankton concentration, transparency, nitrogen, and phosphorus) to assess the quality of seawater

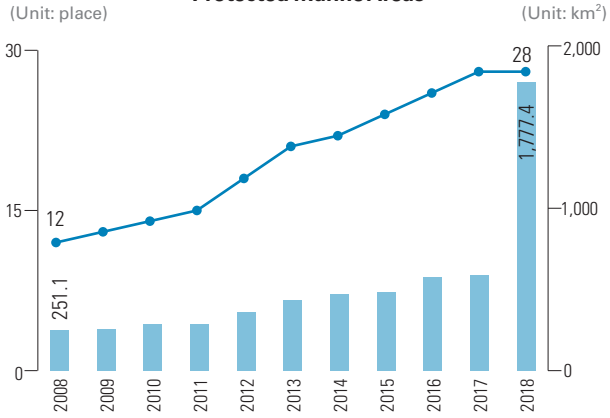
2: The numbers of survey peaks are 377 in 2013, 417 in 2014, 417 in 2015, 417 in 2016 and 425 in 2017

According to the Water Quality Index (WQI), which reflects the characteristics of the ROK's marine environment, the percentage of Grades 1 and 2, which mean that the water quality is very good and good, is about 85% of the 425 peaks across the national coasts. According to the measurement result for the recent five years (2013-2017), the percentage of water quality grades 1 and 2 was over 70%, the grade 4 was between 1-9% and the grade 5 was less than 2%. In particular, after 2016, Grade 5 water quality no longer appeared, and Grade 4 also continued to decline since 2014.

Biodiversity

Protected marine areas are areas designated by the state or local governments for specific public water surface because of a special need to conserve the marine ecosystem and the marine landscape. In accordance with Article 25 of the Conservation and Management of Marine Ecosystems Act and Article 8 of the Wetlands Conservation Act, those are divided into areas for protecting marine ecosystems, areas for protecting marine organisms, areas for protecting marine landscape and coastal wetlands protection area. There are currently 28 protected marine areas in the ROK, with a total area of 1777.4 km^2. Protected marine areas have continued to expand, an increase of about 7.1 times from 251.1km^2 in 2008.

Cumulative Designated Places and Cumulative Area of Protected Marine Areas



Source: Statistical Yearbook of Oceans & Fisheries

15 Eutrophication refers to a phenomenon in which algae grows rapidly due to the increase of nutritive salts such as nitrogen and phosphorus due to the inflow of livestock manure and domestic sewage into rivers, seas and lakes

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

SDG15 aims to maintain biodiversity and conserve terrestrial ecosystems. Since humans depend on various services provided by ecosystems, maintaining biodiversity and ecosystem is very important for human survival and sustainable development. Under the Convention on Biological Diversity (CBD), the international community has put a lot of efforts into maintaining the ecosystem by establishing strategies and detailed goals for biodiversity. Failure to achieve the goal of preventing biodiversity reduction in MDGs has resulted in more detailed and comprehensive targets in SDGs. The contents are to conserve and restore biodiversity and habitats, block inflow of foreign species, and to mobilize the country's plans and resources for each ecosystem type, such as forests, wetlands, mountains, drylands, and lake ecosystems.

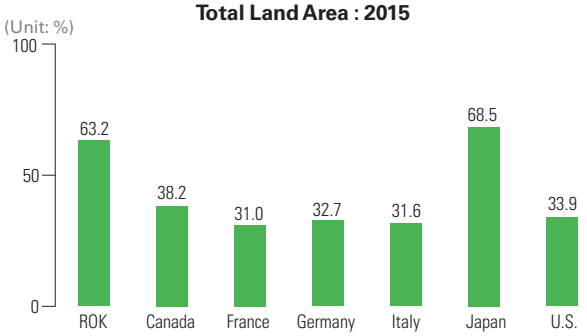
15.1	**By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements**
	15.1.1 Forest area as a proportion of total land area
	15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type
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 Mountain Green Cover Index
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 ▲ **The ROK's Red List**
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 Progress towards national targets established in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011–2020
15.a	**Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems**
	15.a.1 Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems
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 Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems
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

ROK's data updated in global DB ☐ Indicator used for analysis ▲ Proxy indicator

Conservation of Land Ecosystems and Guarantee of Sustainable Use

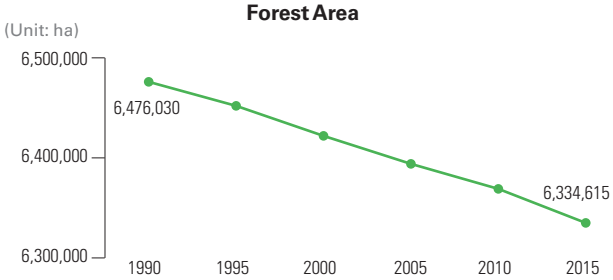
Forests serve as the provision of wood and non-wood products, habitats for biodiversity and conservation of soil and water resources. As of 2015, the ROK's forest area was 6,334,615 ha, which is 63.2% of the total land area, about twice that of the U.S (33.9%) and Canada (38.2%).[16] However, forests are steadily decreasing due to changes in land use for other purposes such as road construction, housing construction, and industrial complexes. The Korea Forest Service estimates that forests decreased by 0.54% compared to 6,368,843 ha in 2010 and will be about 6,230,000 ha by 2030 in case that the forest management is maintained at the same level as now.

International Comparison of Forest Area as a Proportion of Total Land Area : 2015



Source: FAOSTAT

Forest Area



Source: Korea Forest Service, Basic Forest Statistics

Endangered Species Protection

The International Union for Conservation of Nature and Natural Resources (IUCN) manages wildlife's extinction risk levels by category through the Red list. According to the ROK's Red List, which supplemented the categories and standards according to the situation in the ROK, there are threatened 533 species that combined the categories of Critically Endangered (58 species), Endangered (169 species) and Vulnerable (306 species). It was found that there are 268 species of wildlife in the near threatened state, which may be evaluated as a threatened species in the near future.

The ROK's Red List Assessment: 2018

Category	Mammals	Birds	Amphibians, reptiles	Fish	Insects	Mollusks	Land plants	Arachnid	Total
Extinct (EX)	1								1
Extinct in the Wild (EW)									
Regionally Extinct (RE)	5	3		1	1			2	12
Critically Endangered (CR)	1	1		4	12	4	28	8	58
Endangered (EN)	4	18	5	13	22	19	86	2	169
Vulnerable (VU)	9	36	5	9	74	57	110	6	306
Near Threatened (NT)	1	8	2	14	34	82	56	71	268
Least Concern (LC)	11	28	23	20	511	583	97	487	1,760
Data Deficient (DD)	4		4	5	380	923	40	128	1,484
Not Evaluated (NE)	4		3	10	3,491	264	126	11	3,909
Not Applicable (NA)	1	1	1		28	31			62
Total	41	95	43	76	4,553	1,963	543	715	8,029

Source: National Institute of Biological Resources homepage (www.nibr.go.kr)

Note 1: Extinct (EX): There is no reasonable doubt that the last object is dead
2: Extinct in the Wild (EW): The taxon has been extinct in its natural habitat or has only lived or grown in a botanical garden
3: Regionally Extinct (RE): There is no reason to doubt that the last object with potential reproductive potential in the area has died or has disappeared from the wild state, or a taxon, formerly a visitor taxon but whose last object died or disappeared in the wild state within the region
4: Critically Endangered (CR): A condition considered to face an extremely high extinction crisis in the wild
5: Endangered (EN): A condition considered to face a very high extinction crisis in the wild
6: Vulnerable (VU): A condition considered to face a high extinction crisis in the wild
7: Near Threatened (NT): Currently not a Critically Endangered, Endangered, or Vulnerable and a condition that can be assessed or approached to extinction in the near future
8: Least Concern (LC): A taxa that is widespread and has a large population without currently being in a Critically Endangered, Endangered, Vulnerable, and Near Threatened state
9: Data Deficient (DD): A taxon that lacks information to make certain state assessments
10: Not Evaluated (NE): A category applied to a taxon that has not yet been evaluated according to the Red List criteria. Data Deficient and Not Evaluated categories do not reflect the threat of taxon
11: Not Applicable (NA): A taxon considered to be inadequate for evaluation at the regional level

16 Forest area ranks fourth among OECD countries following Finland (73.1%), Japan (68.5%) and Sweden (68.4%) (www.mdex.go.kr).

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

A peaceful and just society, an effective, responsible and inclusive system is the cornerstone of the sustainable development process. SDG16 sets targets for reducing violence, in particular ending violence against children and promoting the rule of law, reducing corruption, developing transparent, effective and reliable institutions, ensuring participatory decision making, and human rights and freedoms.

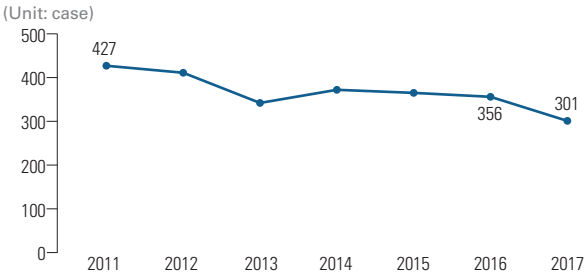
16.1	**Significantly reduce all forms of violence and related death rates everywhere**
	16.1.1 Number of victims of intentional homicide per 100,000 population, by sex and age ▲ **Sexand age distribution of murder victims**
	16.1.2 Conflict-related deaths per 100,000 population, by sex, age and cause
	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 ▲ **Percentage of population who feels fear of crime**
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
16.4	**By 2030, significantly reduce illicit financial and arms flows and combat all forms of organized crime**
	16.4.1 Total value of inward and outward illicit financial flows (in current United States dollars)
	16.4.2 Proportion of seized, found or surrendered arms whose illicit origin
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 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 to prevent violence and combat terrorism and crime**
	16.a.1 Existence of independent national human rights institutions in compliance with the Paris Principles
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

ROK's data updated in global DB ☐ Indicator used for analysis ▲ Proxy indicator

Reduced Violence

The number of murder case has declined from 427 in 2011 to 301 in 2017. According to the characteristics of the victims, the percentage of female victim was consistently higher than that of male and the percentage of victim tends to be higher as the age increases. In particular, the proportion of those under the age of six increased from 3.8% in 2011 to 8.3% in 2017.

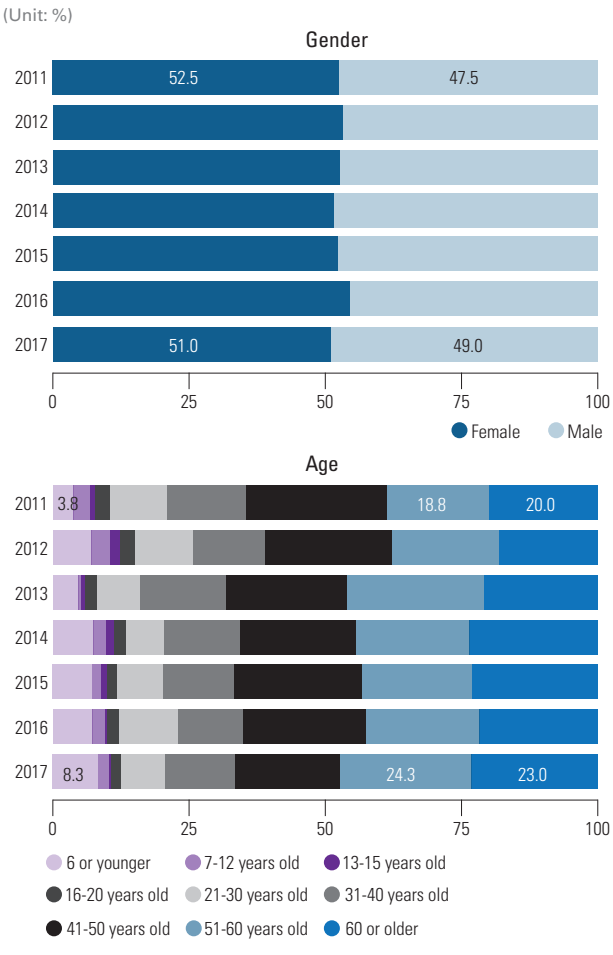
Number of Murder Case



Source: National Police Agency, 2017 Police Statistics Annual Report

Note : Murder crimes are divided into murder and attempted murder, but murder cases that resulted in actual death were presented according to the definition of the SDG indicator (16.1.1)

Victims of Murder by Sex and Age

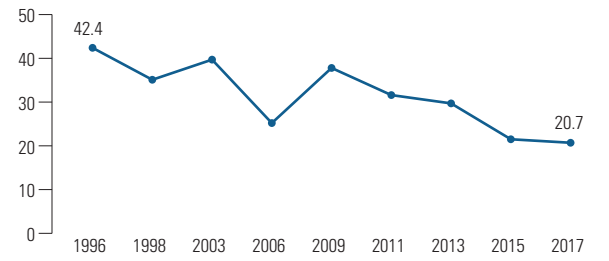


Source: National Police Agency, 2017 Police Statistics Annual Report

Note : The percentages of sex and age are calculated without unknown

Fear of crime has also declined since the survey was conducted. It was the highest at 42.4% in 1996, and it has been steadily decreasing since 2009 after repeating increase and decrease, and has fallen to 20.7% in 2017 (Choi Soo-hyung·Cho Young-oh, 2017).

Percentage of Population Who Have Fear of Crime



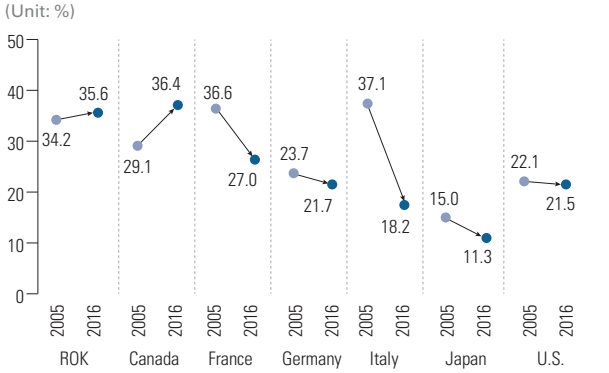
Source: Korean Institute of Criminology, 2017 National Public Safety Survey

Note : Fear of crime is the sum of responding to the question of being afraid when walking alone in a neighborhood alley at night as 'a little scared' and 'very scared'

Status of Unsentenced Detainees

An unsentenced detainee is a person who is held in a correctional facility at the stage of an investigation or trial in a criminal case. According to the Universal Declaration of Human Rights, he/she should be presumed and treated innocent because he/she is not convicted yet (Choi Youngshil et al, 2014). In terms of the percentage of unsentenced detainees in the ROK, there has been no significant change in the past 10 years from 34.2% in 2005 to 35.6% in 2016. This is similar to that of Canada. The percentage of unsentenced detainees declined in all countries except the ROK and Canada, with the largest decline in Italy.

International Comparison of Unsentenced Detainees as a Proportion of Overall Prison Population



Source: United Nations Survey on Crime Trends and Operations of Criminal Justice Systems

Note : 2005 is the mean of 2003-2005 and 2016 is the mean of 2014-2016

Strengthen the means of implementation and revitalize the global partnership for sustainable development

SDG17 emphasizes the need for inclusive participation and active partnerships of government, civil society, private sector and other relevant actors to achieve a successful 2030 Agenda. It also aims to expand support for developing countries, especially least-developed countries, small islands and inland developing countries, to achieve equal growth throughout the world through the full implementation of the Addis Ababa Action Agenda.

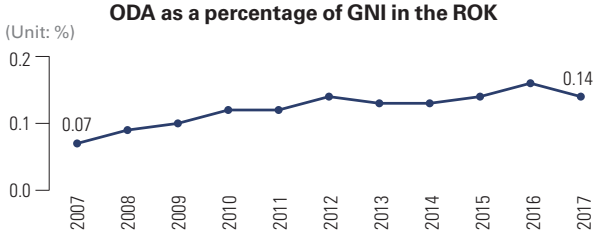
17.1	**Strengthen domestic resource mobilization for developing countries to improve domestic capacity for tax and other revenue collection**
	17.1.1 Total government revenue as a proportion of GDP, by source
	17.1.2 Proportion of domestic budget funded by domestic taxes
17.2	**Developed countries to 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**
	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 Foreign direct investment (FDI), official development assistance and South-South cooperation as a proportion of total domestic budget
	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**
	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 least developed countries
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**
	17.6.1 Number of science and/or technology cooperation agreements and programmes between countries, by type of cooperation
	17.6.2 Fixed Internet broadband subscriptions per 100 inhabitants, by speed
17.7	**Promote the development of environmentally sound technologies to developing countries on favourable terms**
	17.7.1 Total amount of approved 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**
	17.8.1 Proportion of individuals using the Internet
17.9	**Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the SDGs, 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
17.10	**Promote equitable multilateral trading system 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**
	17.12.1 Average tariffs faced by developing countries, least developed countries and small island developing States
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**
	17.15.1 Extent of use of country-owned results frameworks and planning tools by providers of development cooperation
17.16	**Enhance the Global Partnership for Sustainable Development, complemented by multi-stakeholder partnerships**
	17.16.1 Number of countries reporting progress in multi-stakeholder development effectiveness monitoring frameworks that support the achievement of the SDGs
17.17	**Encourage and promote effective public, public-private and civil society partnerships**
	17.17.1 Amount of United States dollars committed to (a) public-private partnerships and (b) civil society partnerships
17.18	**By 2020, enhance capacity-building support to developing countries to increase significantly the availability of high-quality, timely and reliable data**
	17.18.1 Proportion of sustainable development indicators produced at the national level with full disaggregation when relevant to the target
	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	**Build on existing initiatives to develop measurements of progress on sustainable development that complement GDP 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

ROK's data updated in global DB Indicator used for analysis Proxy indicator

Official Development Assistance

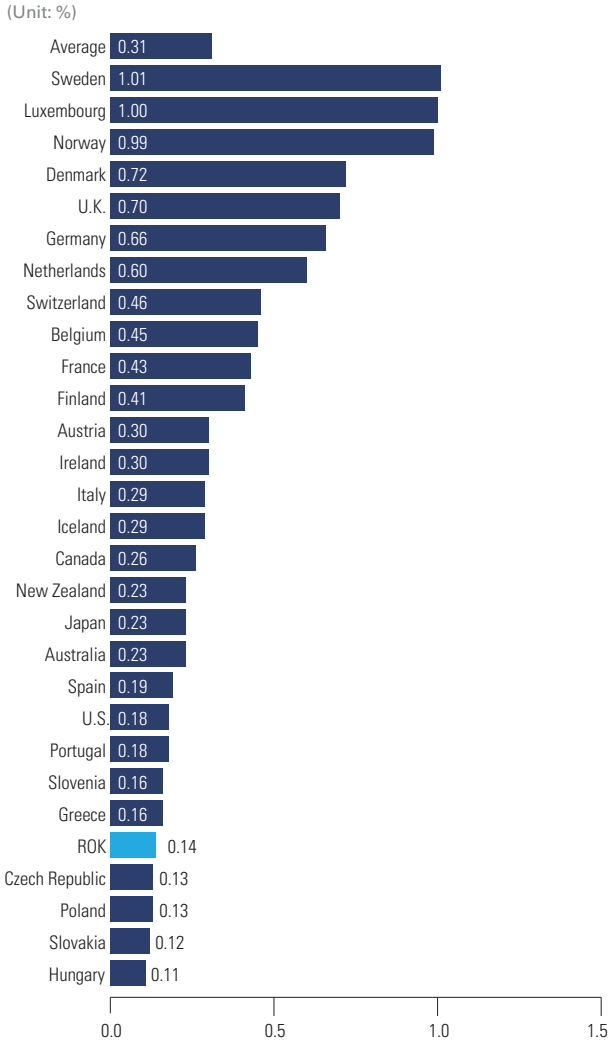
The percentage of official development assistance (ODA) to the ROK's Gross National Income (GNI) is 0.14% in 2017. Since 2000, when a recipient country became a donor country, ODA percentage has been on the rise, but is still below the target of 0.2% at the time joining OECD Development Assistance Committee (DAC). In 2017, the average percentage of all DAC member countries was 0.31%, with Sweden (1.01%) and Luxembourg (1.00%) having the highest ODA rates. The ROK is the 25th of 29 countries.

ODA as a percentage of GNI in the ROK



Source: OECD, DAC Statistics database

ODA as a percentage of OECD-DAC donors' GNI : 2017



Source: OECD, DAC Statistics database

Chapter 5

Strategies to Reduce the SDGs Data Gap

1. SDG Indicators as Future Direction

Often data are unavailable when creating policy. Can we anticipate policy needs in advance and produce data? This is why statistical production guidelines are needed from a future-oriented perspective. In this respect, the SDGs are likely to give statisticians ideas.

The most frequently asked question in the localization of the SDGs is, "SDGs contain a number of targets and indicators that are not relevant with the Korean context. Should these cases be also implemented in the ROK?" Since the SDGs are universal to all countries around the world, there are certainly areas that the ROK has already achieved or are out of the Korean context.

However, what is the criteria for the assessment? Let's think of the proportion of girls and women aged 15-49 years who have undergone female genital mutilation/cutting, an indicator that evaluates the implementation of the target of 'eliminating all harmful practices such as 'child marriage, early marriage and forced marriage, and Female Genital Mutilation/Cutting (FGM/C). In the current trend of increasing migration, this target and indicator cannot be seen as irrelevant to the domestic context. Therefore, without recognizing a global relationship, the achievement and evaluation of the target cannot be carried out. We agreed that the 232 indicators are the minimum we should monitor those for sustainable development.

In order to derive future-oriented data strategies, the current situation must be reviewed first. Metadata, which can be said to be a concept definition of 232 global indicators, is the basis for situational review. In this chapter, we diagnosed domestic data availability based on the concept and methods at the global level. In the process, we established our own classification system that is distinct from the UN's tier system. The criteria of data availability, one axis of the UN tier system, is whether more than 50% of the countries or populations in the region provide data on a regular basis. Even when domestic data is available, the indicator may be classified as Tier 2, and even when domestic data is not available, it may be classified as Tier 1. Thus, in order to establish SDGs data strategy, it is effective to operate the domestic tier system with UN tier system.

The Statistics Research Institute at KOSTAT classified 232 indicators into three tiers of A, B, and C, based on the availability of data and the provision of data to the IOs, that is, whether Korean data was included in the global DB. If domestic statistics are produced and provided to IOs, they are classified as A. The cases where there are proxy statistics in the ROK and where it is necessary to develop new statistics for the indicator definition were classified as B and C, respectively. A was subdivided again into A1 if the statistics fully meet the definition of the indicator according to the extent to which they meet international standards and A2 if only part of the indicator definitions is met. On the other hand, if A, B, and C are quantitative indicators, qualitative indicators related to the presence or absence of laws, institutions and policies at the individual level or policy monitoring at the global level were classified separately as D.

SDG Indicators Classification System Tailored in the ROK

Standard of classification	Result
A. Provide data to IOs because there are relevant statistics	71
A 1. If fully meeting the indicator definition	59
A 2. If partially meeting the indicator definition	12
B. Proxy indicators in the ROK	25
C. Need to develop statistics and indicators	82
D. Qualitative indicators	54

This classification system shows that many of the indicators need to be improved and developed at present. During the data verification process, it was found that even A1 has plenty of room for improvement. In the process of verifying the source and figures of Korean data contained in the global DB, some issues are raised. Although data meeting the definition of indicators were provided, there were cases where the figures used in

IOs differed from those in the ROK, and the quality of the data provided was not controlled in some cases. If this occurs repeatedly in several cases, not just one, we will have to approach it as a structural problem. Therefore, this chapter summarized the major issues derived from the data verification process, and then classified the issues into methodology development, data collection, and quality control procedure to derive the SDGs data responsive strategies. We also reviewed the specific means required for the certain procedures.

Steps for Deriving SDGs Data Strategy

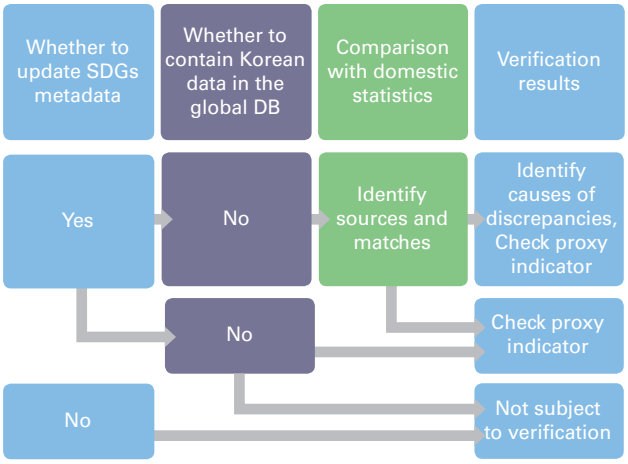
2. Data Verification Procedure and Key Findings

Verification procedure

For data verification, 232 SDG indicators were reclassified according to subjects since SDGs are interconnected between goals and it is an efficient way to review similar subjects simultaneously.[17] Data verification was conducted with various stakeholders including relevant ministries, academia and research institutes, civic groups, and IOs in the ROK. When the stakeholders overlap or when it is judged to be efficient to consult together, the working group was integrated. For example, the gender equality indicator group meeting and the criminal indicator group meeting were conducted at the same time, because there are common indicators related to sexual violence. The nutrition indicator and the health indicator working group were also operated together. The working group was operated from February to June 2018.

The logistic is shown in the following figure. Based on the SDGs indicator metadata, the group reviewed the concept, definition, and calculation method of indicators, identified the Korean data sources and figures in the global DB, and checked their consistency with the relevant domestic statistics. If there is a difference in comparison with domestic statistics, we tracked the causes. We also examined whether there are better domestic statistics that fit the concept of indicators in addition to Korean data in the global DB. In this process, we excluded the Tier 3 indicator, which methodology is still developed, and the indicators that metadata has not been prepared from the verification targets.

SDGs Data Verification Procedure



Key findings

It is the utmost role of the NSO to produce reliable data and to provide this data to IOs. However, the following points found during the data verification process raise concerns about the reliability of the Korean data of the global DB.

First, some Korean data in the global DB are not approved official statistics by KOSTAT. IOs obtain their data through various channels. They acquire data by downloading from the NSO's website as well as by making requests to the statistics agency directly. Surprisingly, it was found that in some cases they also receive data from third parties (individuals or institutions), not from statistical agencies, or cite statistics in research papers. In the process, most are

17 Economy, Employment, Tourism, Education, Transportation, International Relations, Homeland, Climate Change, Agriculture, Atmosphere, Trade, Cultural Property, Water and Hygiene, Health, Welfare, Crime, Social Integration, Forests, Biodiversity, Gender Equality, Energy, Resources, Disaster, Justice, Policy, Statistics, Waste, Ocean, IT, ODA, R&D (in alphabetical order). The list of participating institutions and participants in the indicator council is provided in the Appendix

approved statistics, and some are not. The examples include unapproved statistics created by a statistics agency, statistics created by the private sector and re-citation of Korean data used by other IOs. Why is this a problem?

KOSTAT only ensures the data reliability for approved statistics by systematically managing quality[18]. However, there is no official quality assurance plan for data from other sources, so the quality may depend on the capacity of the institution producing the data.

Second, the data of the global DB were compared with the domestic data, which is source of global data. As a result, the figures matched in some cases, but did not match in other cases. It happened that same data were used under indicators using different definitions of global and national data. So, if we do not examine the data carefully, false comparisons can be made due to different standards. Even though individual countries have developed domestic classification systems according to the international classification system, the classification codes do not match perfectly. For example, in international classification systems such as occupations, industries, crimes, etc., it is sometimes difficult to calculate according to the SDG metadata because of differences in classification. The percentage of female managers (indicator 5.5.2) is defined as the percentage of women employed in middle and senior management and it is calculated according to the International Standard Classification of Occupations (ISCO).[19] However, this classification system is not exactly consistent with the Korean Standard Classification of Occupations (KSCO). Therefore, it is necessary to be aware of the differences when comparing data.

Third, many cases of data mismatch were found. In the case of the suicide mortality rate (Indicator 3.4.2), both KOSTAT and the WHO follow the same definition, which is number of deaths per 100,000 population, but the calculated figures are different. The main reason

Population size in the ROK: which population data should we use?

Based on the type of statistics used, the population of Korea is divided into the census population, the estimated population and the resident registration population. Each population differs in the scope, the baseline, and the cycle, so it is necessary to use a population suitable for the purpose of use (KOSTAT, 2015).

The Census Population is for all Koreans and foreigners residing in Korea as of 0:00, November 1st. Until 2010, the enumerator visited the site and conducted interviewing, but since 2015, the resident registration population data has been supplemented based on the concept of the resident population to create an annual population. In the case of Koreans, overseas residents and delayed death notices are excluded from and delayed birth registrations are added to the resident registration population. Foreigners are calculated by supplementing with immigration data based on alien registration data, reports of foreign national residence, and short-term illegal alien data. The census population is used as a basis for policymaking and evaluation because it has a lot of information on the structure and characteristics as well as the size of the population.

Like the census population, the estimated population is for the population residing in the ROK. However, it is estimated on July 1 every year to reflect population variability factors (birth, death, and international population movement). It is divided into population estimates for the past population and population projections that are created in consideration of future population changes. It is a correction for the missing population in the census and is used to indicate the scale and structure of Korea's population. The resident registration population is for those who are reported in the resident registration place as of the end of each month. That is, it includes registered nationals and foreign nationals, but excludes an individual deleted from the public registration, otherwise known as de-registration population.

The resident registration population is counted monthly, and the mid-year population representing the year is used to calculate a rate that represents the number of occurrences per population, such as birth rate and death rate. The mid-year population is the population as of July 1st, which is the middle of the year and is calculated by calculating an arithmetic mean of the resident registration population as of December 31 of the previous year and the resident registration population as of December 31 of the year.

18 The Statistics Act requires that statistics agencies obtain approval from KOSTAT before they try to produce new statistics. KOSTAT determines whether to produce statistics by examining similar duplication, lack of reliability, and profit purposes. This is called approved statistics, which are subject to regular and irregular quality control. KOSTAT conducts periodic diagnosis every five years for the approved statistics. The agency should also carry out annual self-diagnosis, and occasionally quality diagnosis is conducted if the quality diagnosis obligation is not fulfilled or if quality deterioration is suspected. The six criteria considered in quality control are relevance, accuracy, timeliness, comparability, consistency and accessibility

19 The formula according to the global indicator definition is as follows: [(Female Population ISCO08 Classification 1-ISCO08 Classification 14) / (All Population ISCO08 Classification 1-ISCO08 Classification 14)] × 100 or [(Female Population ISCO88 Classification 1-ISCO88 Classification 13) / (All Population ISCO88 Classification 1-ISCO88 Classification 13)] × 100

for the inconsistency is that IOs apply adjustment, estimation and modeling methods for international comparability. In the adjustment process, data collected on international standards, rather than on domestic raw data, are often used for denominator statistics. IOs prioritize comparisons between different countries according to the same standard.

The estimated Korean population of the UN Population Division (UNPD) is a prime example, which is different from the population calculated in the ROK (see box). UNPD provides data on age and gender population, fertility, mortality and migration from 1950 to 2100 through the World Population Prospects for 223 countries. 12 of the 17 SDGs targets use UNPD population. Among the indicators of the goals, the number of indicators using the UNPD population exceeds 50% in Goal 3 (19, 79%), Goal 4 (9, 100%), and Goal 5 (7, 58%) (IAEG-SDGs, 2018d). In the case of GDP as a comparison of the economic unit as well as population, GDP based on Purchasing Power Parities (PPP) is used in the process of adjusting by IOs. In the case of land and marine areas, differences were found between the areas measured in each country and those of global standards. Especially in the case of the Exclusive Economic Zone (EEZ), it is also linked to political issues.

In addition to these causes, the numerical difference was caused by the difference in the data update cycle. An example of this could be the proportion of women in managerial positions. Its source is from the Economically Active Population Survey data and it is regularly provided to the International Labour Organization (ILO). After data provision from KOSTAT to ILO, the past time series data (2000-2017) were adjusted as the five-year cycle of Population and Housing Census changed into Register-Based Census and the results were released. However, adjustment of result was not immediately reflected on ILO's data base.

Fourth, although data is not currently presented to the global DB, there was domestic data that met the concept of SDGs in some cases. For example, the percentage of people who feel safe when walking alone in an area where they live (indicator 16.1.4) is not yet available in the DB, but it can be provided as the fear of crime statistics currently measured by the National Criminal Victimization Survey. Only, there is a need for improvement because fear of crime statistics does not fully meet the SDGs indicators' criteria.

The issues found so far through data verification are summarized as follows: Whether the data source is official or not, Whether the concept of indicator is the same or different between national and global, the reason for data discrepancies, and possible domestic proxy indicators. In the next chapter, we will examine how these issues can be addressed in the process of data collection and management.

3. Type of Data Gap

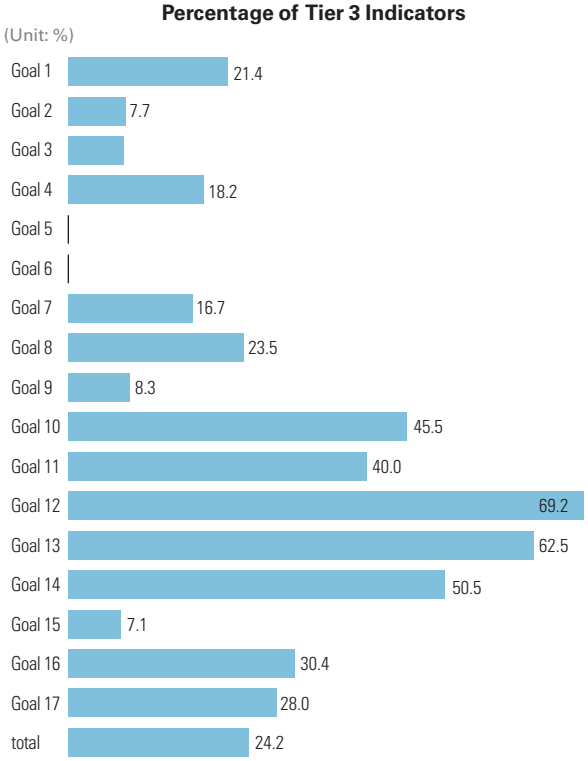
1) Indicator requiring methodology development

• Indicators under methodology development at a global level

The inclusion of Tier 3 indicators that the methodology has not yet been developed is a feature that distinguishes the SDG indicators framework from others. It reflects the ambition of the SDGs. There are 62 indicators under Tier 3 as of October 2018. Goal 5 and 6 have no Tier 3 indicators, while Goal 12, 13, and 14 have more than 50% of the indicators in Tier 3. These goals are categorized as environmental areas, indicating that overall development of environmental indicators is lagging. Monitoring sustainable development of the environmental sector is inevitable. Statistical capacity and investment are needed in this field

In the list of Tier 3 indicators, the following characteristics can be found: First, the concept definition of 'sustainability' is not clear yet. Although the term sustainability is used in many fields, the measurement is still ambiguous. Some examples of this are: Indicator 2.4.1 *(proportion of agricultural area under productive and sustainable agriculture)*, indicator 3.5.1 *(coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders)*, indicator 4.7.1 *(extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human*

Percentage of Tier 3 Indicators



rights, are mainstreamed at all levels in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment), indicator 8.9.2 *(proportion of jobs in sustainable tourism industries out of total tourism jobs)*, indicator 12.a.1 *(amount of support for developing countries on research and development for sustainable consumption and production and environmentally sound technologies)* and indicator 14.7.1 *(Sustainable fisheries as a proportion of GDP in small island developing states, in the least developed countries and in all countries)*.

Second, regarding ODA related indicators,[20] Other Official Flows (OOFs) beyond traditional sources and the concept of ODA for the environment and sustainability (indicator 12.a.1, indicator 17.7.1) are emerging issues. Therefore, there is a need for a consensus on how to improve the code of the current Creditor Reporting System (CRS) field.

Third, there are many indicators that measure subjective status: indicator 4.2.1 *(proportion of children under five years of age who are developmentally on track in health, learning and psychosocial wellbeing, by sex)*, indicator 16.6.2 *(proportion of population satisfied with their last experience of public services)*, indicator 16.7.2 *(proportion of population who believe decision-making is inclusive and responsive, by sex, age, disability and population group)*, and indicator 16.b.1 *(proportion of population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of discrimination prohibited under international human rights law)*.

The IOs are a developing methodology, but it is not just the role of IOs. NSO can participate in the entire process, from concept definition through pilot testing. It reflects the national context in methodology. The indicator is not the standalone product. KOSTAT has participated in the methodology development of indicator 16.6.2 *(proportion of population satisfied with their last experience of public services)* and indicator 16.7.2 *(proportion of population who believe decision-making is inclusive and responsive, by sex, age, disability and population group)*, which are the indicators under UN Development Programme (UNDP).

• Indicators that require methodological consensus

Although the methodologies have been confirmed at the global level, there are some cases where adjustments to concepts with domestic contexts are inevitable. First, there are indicators requiring country-specific definitions in the indicators themselves. For example, Indicator 1.2.1 *(proportion of population living below the national poverty line, by sex and age)* and indicator 1.2.2 *(proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions require the criterion of poverty line, i.e. the definition of multidimensional poverty at the individual country level)*.

Recently, developed countries have used the median income instead of average income as a poverty line. The ROK also applies a relative poverty line to its

20 The national ODA head and coordinating body is the International Development Cooperation Committee. The Framework Act on International Development Cooperation stipulates the submission of ODA statistics to an institution designated by the committee, and the Korea Export-Import Bank Foreign Economic Cooperation Fund plays the role. In accordance with the related laws, ODA statistics are reported from domestic aid agencies, and the reports are reviewed, modified, collected and finally reported to the OECD.

List of Indicators (tier 3) under Methodology Development at the Global Level

1.a.1	Proportion of domestically generated resources allocated by the government directly to poverty reduction programmes
1.a.3	Sum of total grants and non-debtcreating inflows directly allocated to poverty reduction programmes as a proportion of GDP
1.b.1	Proportion of government recurrent and capital spending to sectors that disproportionately benefit women, the poor and vulnerable groups
2.4.1	Proportion of agricultural area under productive and sustainable agriculture 3.5.1 Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders
3.5.1	Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders
3.b.3	Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis
4.2.1	Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial wellbeing, by sex
4.7.1	Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment
7.b.1	Investments in energy efficiency as a proportion of GDP and the amount of foreign direct investment in financial transfer for infrastructure and technology to sustainable development services
8.4.1	Material footprint, material footprint per capita, and material footprint per GDP
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
8.9.2	Proportion of jobs in sustainable tourism industries out of total tourism jobs
9.1.1	Proportion of the rural population who live within 2 km of an all-season road
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
10.5.1	Financial Soundness Indicators
10.7.1	Recruitment cost borne by employee as a proportion of monthly income earned in country of destination
11.3.2	Proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically
11.4.1	Total expenditure (public and private) per capita spent on the preservation, protection and conservation of all cultural and natural heritage, by type of heritage (cultural, natural, mixed and World Heritage Centre designation), level of government (national, regional and local/municipal), type of expenditure (operating expenditure/investment) and type of private funding (donations in kind, private non-profit sector and sponsorship)
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.1	Proportion of population living in cities that implement urban and regional development plans integrating population projections and resource needs, by size of city
11.c.1	Proportion of financial support to the least developed countries that is allocated to the construction and retrofitting of sustainable, resilient and resource-efficient buildings utilizing local materials
12.3.1	(a) Food loss index and (b) food wastes index
12.4.2	Hazardous wastes generated per capita and proportion of hazardous wastes treated, by type of treatment
12.5.1	National recycling rate, tons of material recycled
12.8.1	Extent to which (i) global citizenship education and (ii) education for sustainable development (including climate change education) are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment
12.a.1	Amount of support to developing countries on research and development for sustainable consumption and production and environmentally sound technologies
14.1.1	Index of coastal eutrophication and floating plastic debris density
14.2.1	Proportion of national exclusive economic zones managed using ecosystembased approaches
14.3.1	Average marine acidity (pH) measured at agreed suite of representative sampling stations
14.7.1	Sustainable fisheries as a proportion of GDP in small island developing States, least developed countries and all countries
16.1.2	Conflict-related deaths per 100,000 population, by sex, age and cause
16.4.1	Total value of inward and outward illicit financial flows (in current United States dollars)
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
16.6.2	Proportion of population satisfied with their last experience of public services
16.7.1	Proportions of positions in national and local public 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.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
17.7.1	Total amount of approved funding for developing countries to promote the development, transfer, dissemination and diffusion of environmentally sound technologies
17.13.1	Macroeconomic Dashboard
17.17.1	Amount of United States dollars committed to (a) public-private partnerships and (b) civil society partnerships
17.18.1	Proportion of sustainable development indicators produced at the national level with full disaggregation when relevant to the target, in accordance with the Fundamental Principles of Official Statistics

Note: Among the indicators in Tier 3, qualitative indicators that measure the presence of institutions, policies and strategies are excluded. On the other hand, the methodology development of the Tier 3 indicators has been completed as of December 31, 2018 and indicators for which Tier upgrade are approved by IAEG-SDGs (2.4.1 / 3.b.3 / 8.8.2 / 9.1.1 / 10.5. 1 / 10.7.1 / 11.3.2 / 11.7.1 / 14.3.1 / 17.13.1) are included

customized payment system, which has been in effect since July 2015 (Social Security Committee, 2018). Multi-dimensional poverty indicators are still underway at the research level in the ROK. It is still difficult to combine and consider various areas to set a poverty indicator and even more so to come to a consensus about the selection of the main areas on which to base research. (Kim Mun-gil et al., 2017).

Second, methodology consensus between IOs and the domestic is needed if the country data are adjusted and estimated by IOs. Among the Korean data in the global DB, 25 indicators are estimates of country data and four indicators were modeled.

In the case of indicator 3.8.2 *(percentage of population with health experience overburden relative to total household spending and income)*, IOs have used the Household and Income and Expenditure Survey to estimate the data. However, in the ROK, data from surveys such as the Korea Welfare Panel Survey and the Korea Health Panel Survey are reviewed simultaneously (Shin Hyung-woong et al., 2010). In addition, in the case of indicator 8.3.1 *(informal employment rate in the non-agricultural sector)*, although the definition of informal employment is clear, the agreement is needed because a variety of methods exist in calculating informal employment rates for certain types of production units, such as self-employed persons. Indicator 14.2.1 *(percentage of Exclusive Economic Zones (EEZ) managed by ecosystem-based approach)* needs to be discussed again between countries after the development of methodologies by IOs because the area of EEZ claimed by each country differs according to the interests of each country. In fact, there are cases where no data has been provided because domestic agreement has not been reached on methodologies proposed by IOs. Although this was the case before the SDG indicators framework was built. It is worth noting that the indicator is also within the current framework. An example of this is indicator 8.6.1 *(proportion of youth (aged 15–24 years) not in education, employment or training)*, known as Not in Education, Employment or Training (NEET). The OECD requested for the agency to provide the data, but KOSTAT did not agree with the

Methodology development process of the indicator of percentage of population who think decision making is inclusive and responsive

Organization responsible for indicators
UNDP

Main schedule
After completion of methodology development by October 2018, results will be submitted to the 9th IAEG-SDGs meeting in March 2019

Indicator Methodology Development Process
Develop under the direction of the Praia city group, which is building international methodology guidelines for the production of governance statistics, in collaboration with the NSO and international research experts

① Preliminary frame building through expert meetings (April 2017): Review of existing survey questions with a long tradition internationally (e.g. Afrobarometer and World Value Survey)

② Test surveys conducted in 33 countries (NSO) to measure the inclusiveness and responsiveness of the decision-making process: Investigate fairness, government inclusivity and responsiveness, and public participation in elections

③ 1st Expert Group Meeting (May 2017): Three key aspects to be considered in the indicators are emphasized. First, it should mean decision making at the formal institutional level, not at the informal level. Second, it should be evaluated in terms of policy viability. Third, it should be empirically correlated with 16.7 targets

④ Elaboration of the conceptual framework by examining survey questions used in 10 countries (NSO) and 11 African countries

⑤ 2nd Expert Group Meeting (October 2017): Discussion of similarities with theoretically well-established political efficacy indicators in the field of political science since the 1950s. Through this, it is comprised of questions about the individual's participation ability (inclusiveness) and the policy maker's response (responsiveness) in the decision-making process

⑥ Revision of European Social Survey (ESS), UNDP's survey items (January-June 2018): In this process, participants agreed that political efficacy should be measured with internal efficacy (subjective confidence) and external efficacy (systemic response) and selected related items

⑦ Collaboration with expert groups to measure social desirability errors: Suggestions for items directly measuring political efficacy and experiment method of indirectly measuring it

⑧ Pilot testing of 11 countries' NSO (July - October 2018) and World Value Survey: Participation of Korea

⑨ Final modification of methodology (September - October 2018)

Participating organizations
Questionnaire of NSO (including KOSTAT), regional level Afrobarometer, Asian / Arab / Latino barometer and review of ESS. Review of OECD How 's life? and PIAAC, EU-SILC, other international governance experts

OECD's definition of NEET and they did not provide data. Although the OECD defines NEET as those who are not currently in school or employed, the situation is likely to be interpreted differently in the Korean context. If currently studying at an educational institution, such as institutes, not school, they should be regarded as preparing for economic activities and should not be included in the NEET population. Therefore, if the consultation on the concept of NEET is conducted with the ILO, which is the custodian agency of the indicator, the data can be provided immediately. However, further consultation is necessary because the ILO's definition of youth population (15-24 years) differs from that of the ROK (15-29 years).

Third, there are cases where IOs conduct surveys in cooperation with private survey agencies in each country and use it as national data, which may require agreement on the use of the results. For example, in order to measure the indicator 2.1.2 *(prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale)*, the FAO, custodian agency for the indicator, is conducting a survey using the World Gallup Poll, and the ROK is also the targeted country. However, the ROK already has been collecting food insecurity data in the Korea National Health and Nutrition Examination Survey (KNHNES) by the Korea Centers for Disease Control and Prevention (KCDC). Therefore, KCDC requested the use of the National Health and Nutrition Survey data in SDGs to the FAO. At that time, the measurement items and the survey cycles were different, but they agreed to use data from the KNHNES. It remains an issue whether KCDC will improve the statistics in accordance with SDGs.

There are also opposite cases. The Joint United Nations Program on HIV/ AIDS (UNAIDS) estimates HIV prevalence (indicator 3.3.1) through a sample survey. In addition, data of the indicator 16.5.2 *(proportion of businesses that had at least one interaction with a public official and paid a bribe to the public official or were asked for a bribe by that public official during the previous 12 months)* is also collected by an agency. There should be discussion on whether the ROK will

Indicators Estimated and Modeled by IOs

	Name of Indicator	Data Nature
1.1.1	Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural)	G
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	E
2.1.1	Prevalence of undernourishment	E
3.1.1	Maternal mortality ratio	E
3.2.1	Under-5 mortality rate	E
3.2.2	Neonatal mortality rate	E
3.3.2	Tuberculosis incidence per 100,000 population	E
3.3.3	Malaria incidence per 1,000 population	E
3.3.4	Hepatitis B incidence per 100,000 population	E
3.5.2	Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol	G
3.8.1	Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population)	E
3.8.2	Proportion of population with large household expenditures on health as a share of total household expenditure or income	E
3.9.1	Mortality rate attributed to household and ambient air pollution	E
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)	E
3.a.1	Age-standardized prevalence of current tobacco use among persons aged 15 years and older	E
3.b.1	Proportion of the target population covered by all vaccines included in their national programme	E
6.1.1	Proportion of population using safely managed drinking water services	E
7.1.1	Proportion of population with access to electricity	E
7.1.2	Proportion of population with primary reliance on clean fuels and technology	E
7.2.1	Renewable energy share in the total final energy consumption	E
7.3.1	Energy intensity measured in terms of primary energy and GDP	E
8.2.1	Annual growth rate of real GDP per employed person	M
8.4.2	Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP	E
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	G
9.2.1	Manufacturing value added as a proportion of GDP and per capita	M
9.4.1	CO2 emission per unit of value added	E
9.b.1	Proportion of medium and high-tech industry value added in total value added	M
10.4.1	Labour share of GDP, comprising wages and social protection transfers	E
10.6.1	Proportion of members and voting rights of developing countries in international organizations	G
11.6.2	Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10)in cities (population weighted)	E
15.4.2	Mountain Green Cover Index	E
15.5.1	Red List Index	E

participate in the survey, and if not, consultation is needed on how to provide relevant data.

Fourth, due to the changes in social environments, the indicator needs to be included in the national indicator's framework. These are typical examples; Indicator 3.7.2 *(adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1,000 women in that age group)*, indicator 5.3.2 *(proportion of girls and women aged 15–49 years who have undergone female genital mutilation/cutting(FGM/C))*, indicator 8.7.1 *(proportion and number of children aged 5–17 years engaged in child labour)*. The statistics were not produced because there was little FGM/C practice in the ROK. As international migration has increased, there are people who have experienced FGM/C. In addition, children's economic activity in the entertainment sector has increased recently in the ROK. In the case of indicator 3.3.5 (number of people requiring interventions against neglected tropical diseases (NTD), items under the disease that require treatment for NTD defined by the WHO are often not necessarily measured in the ROK. Therefore, the KCDC suggests an alternative as the number of infected people from abroad.[21]

2) Indicator groups that need to improve existing statistics

In order to produce data that meets the concept and methods of the SDG indicators, it is necessary to improve the existing statistics.

First, among the provided data, the definition is only partially satisfied in the current statistics system in the ROK. In the case of indicator 8.8.1 *(frequency rates of fatal and non-fatal injuries)*, only fatal injuries data are provided in spite of the fact that the SDGs require both fatal and non-fatal occupational injuries. Data from Labour's Statistics of Industrial Accident, which measures only fatal injuries, is provided by the Ministry of Employment. Indicator 2.5.1 *(number of plant and animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities)*, statistics on plant genetic resources are lacking. Disaster-related indicators also need to be further improved. For the Indicator 1.5.1 *(number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population)*, statistics on populations directly affected are insufficient. Regarding indicator 1.5.2 *(direct economic loss attributed to disasters in relation to global gross GDP)* and indicator 11.5.2 *(direct economic loss in relation to global GDP, damage to critical infrastructure and number of disruptions to basic services, attributed*

The Indicator Partially Covered by Existing Statistics

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
1.5.1	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)
2.5.1	Number of plant and animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities
3.3.5	Number of people requiring interventions against neglected tropical diseases
3.7.2	Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1,000 women in that age group
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
4.3.1	Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex
4.4.1	Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill
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
5.5.1	Proportion of seats held by women in (a) national parliaments and (b) local governments
8.5.1	Average hourly earnings of female and male employees, by occupation, age and persons with disabilities
8.5.2	Unemployment rate, by sex, age and persons with disabilities
8.8.1	Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status
11.5.2	Direct economic loss in relation to global GDP, damage to critical infrastructure and number of disruptions to basic services, attributed to disasters
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)

21 It was raised at the meeting of Gender Equality and Crime Indicators working group (March 28, 2018) and the Nutrition and Health Indicators working group (May 14, 2018)

to disasters), statistics on economic losses such as agriculture and cultural heritage are lacking and it is especially not difficult to convert financially. For these indicators, the existing statistics need to be improved to fully meet the definition.

Second, data disaggregation is also a driving force for the improvement of the current statistical system. In particular, data disaggregation by migration status and disability is challenging.[22] : Indicator 8.5.1 (average hourly earnings of female and male employees, by occupation, age and persons with disabilities), indicator 8.5.2 (unemployment rate, by sex, age and persons with disabilities), indicator 8.8.1 (frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status), and indicator 10.2.1 (proportion of people living below 50 per cent of median income, by sex, age and persons with disabilities).

For disaggregation by disability and migration status, agreement on definition and category on the relevant items must be preceded. Expert Group on Migration Statistics is under discussion of migration concept, while the Washington Group has developed disability survey items for use in census and sample surveys (see the box). However, the disabled and migrant groups are one of the hardest to survey groups. In-depth studies on sampling, data collection, and estimation are needed to capture these groups in the survey (Park Youngshil et al., 2016).

Third, among the indicators, there are statistics that can be provided immediately through some revisions. For the indicator 5.3.1 (proportion of women aged 20–24 years who were married or in a union before age 15 and before age 18), it could be explained by the Population and Housing Census when asked about the age of first marriage including living-together. For example, indicator 3.7.1 (proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods (indicator 3.7.1) and indicator 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). These two indicators could be produced by supplementing the items in the National Fertility and Family Health and Welfare Survey.

Indicators related to criminal victimization and fear of crime can also be provided by the Korean Institute of Criminology's National Criminal Victimization Survey which is highly comparable internationally. However, some items may not be collected with international standards.

Disability Measurement and Monitoring using the Washington Group Disability Questions

Data disaggregation by disability requires a clear definition of disability. Disability is a relative concept that may vary depending on who a society defines as a person with a disability. In other words, the concept of disability depends on the socioeconomic level and cultural expectation of the individual society and may also be changed by the environment. For this reason, the definition of disability differs from country to country, making international comparison of disability statistics very difficult.

UNSC established the Washington Group on Disability Statistics in 2001, an international expert group, to facilitate cross-border comparison of disability measurement and disability-related data. Based on the classification system called the International Classification of Functioning, Disability and Health (ICF) developed by the WHO, the Washington Group has developed the Washington Group Short Set on Functioning, which consists of six questions for use in a census and a sample survey, and recommends that this item be used for disaggregation of disability status in the SDGs.

The Washington Group selects six areas with restricted activities due to health problems and asks the extent of the difficulties. The selected six areas include: ① Do you have difficulty seeing, even if wearing glasses?, ② Do you have difficulty hearing, even if using a hearing aid?, ③ Do you have difficulty walking or climbing steps?, ④ Do you have difficulty remembering or concentrating?, ⑤ Do you have difficulty (with self-care such as) washing all over or dressing?, ⑥ Using your language, do you have difficulty communicating, for example understanding or being understood by others? The response categories include; 'No, no difficulty', 'Yes, some difficulty', 'Yes, a lot of difficulty', 'Cannot do it at all'. Finally, disability is determined by responding a lot of difficulty in at least one of the six areas. The ROK will include the Washington Group items in the 2020 Census and is currently testing them.

22 With regard to data segmentation, IAEG-SDGs define dimensions and categories as follows: Dimensions refer to the characteristics of the data segmented, such as gender and age, and categories are different attributes under certain segmentation dimensions, with the category of men and women for gender (IAEG-SDGs, 2017).

Source of Proxy Indicator in the ROK(both approved and unapproved statistics)

Name of Indicator		Source of Proxy indicator in the ROK	
1.2.1	Proportion of population living below the national poverty line, by sex and age	KOSTAT	Household Trend Survey
1.a.2	Proportion of total government spending on essential services (education, health and social protection)	Ministry of Economy and Finance	National Budgeting Overview
2.1.2	Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)	KCDC	Korean National Health and Nutrition Examination Survey
2.3.1	Volume of production per labour unit by classes of farming/pastoral/ forestry enterprise size	KOSTAT	Farm household economy survey
2.3.2	Average income of small-scale food producers, by sex and indigenous status	KOSTAT Korea Forest Service	Farm household economy survey Forest Household Economic Survey
3.3.1	Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations	KCDC	HIV REPORTER STATUS
3.7.1	Proportion of women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods	Korea Institute for Health and Social Affairs	National Birth and Family Health and Welfare Survey
4.b.1	Volume of official development assistance flows for scholarships by sector and type of study	Export-Import Bank of Korea	OECD DAC REPORT
4.c.1	Proportion of teachers in: (a) preprimary; (b) primary; (c) lower secondary; and (d) upper secondary education who have received at least the minimum organized teacher training (e.g. pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country	Korean Educational Development Institute	Korean Education Longitudinal Survey
5.3.1	Proportion of women aged 20–24 years who were married or in a union before age 15 and before age 18	KOSTAT	Census
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	Korea Institute for Health and Social Affairs	National Birth and Family Health and Welfare Survey
6.3.1	Proportion of wasteswater safely treated	Ministry of Environment	Industrial Wasteswater Generation and Treatment Status
10.2.1	Proportion of people living below 50 per cent of median income, by sex, age and persons with disabilities	KOSTAT	Household Trend Survey
11.1.1	Proportion of urban population living in slums, informal settlements or inadequate housing	Ministry of Land, Infrastructure, and Transport	Housing Survey
11.3.1	Ratio of land consumption rate to population growth rate	Korea Land & Housing Corporation	City planning status
11.6.1	Proportion of urban solid wastes regularly collected and with adequate final discharge out of total urban solid wastes generated, by cities	Ministry of Environment	National Wastes Generation and Treatment Status
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	Korean Institute of Criminology	National Living Safety Survey
12.4.2	Hazardous wastes generated per capita and proportion of hazardous wastes treated, by type of treatment	Ministry of Environment	Status of designated wastes generation and treatment
12.5.1	National recycling rate, tons of material recycled	Ministry of Environment	National Wastes Generation and Treatment Status
14.3.1	Average marine acidity (pH) measured at agreed suite of representative sampling stations	Ministry of Maritime Affairs and Fisheries	Seawater Quality Report
15.4.1	Coverage by protected areas of important sites for mountain biodiversity	Korea National Park Service	Korea Protected Area Integrated Database
15.7.1	Proportion of traded wildlife that was poached or illicitly trafficked	National Institute of Biological Resources	Red list status in Korea
16.1.4	Proportion of population that feel safe walking alone around the area they live	Korean Institute of Criminology	National Safety Survey
16.2.2	Number of victims of human trafficking per 100,000 population, by sex, age and form of exploitation	National Police Agency	Police Statistics Yearbook
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	National Police Agency	Police Statistics Yearbook

For example, indicator 16.1.4 *(proportion of population that feel safe walking alone around the area they live)* is recommended to be measured on a four-point scale (very safe-very unsafe), but in the Korean Survey, it on a five-point scale. In addition, indicator 16.1.3 *(proportion of population subjected to (a) physical violence, (b) psychological violence and (c) sexual violence in the previous 12 months)* is produced in the same survey, but for the case of sexual violence, the standard error is so large that it does not guarantee the reliability of the statistics. (Choi Soo-hyung·Cho Young-oh 2017). Indicator 16.2.2 (number of victims of human trafficking per 100,000 population) and indicator 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) can be also calculated partially through the statistics from the National Police Agency and Supreme Prosecutors' Office. There are also statistics to look at carefully. For the indicator 16.1.1 *(Number of victims of intentional homicide per 100,000 population)*, the ROK currently collects the information on only representative victim per murder case, which underestimates the actual number of victims. This part needs to be improved in the future.

There are a few indicators that can be produced during administrative processing: Indicator 6.3.1 *(proportion of wastewater safely treated)*, indicator 11.6.1 *(proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated,* indicator 12.4.2 *(hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment),* and indicator 12.5.1 *(national recycling rate, tons of material recycled)*. For waste-related indicators, Nationwide Waste Generation and Treatment Status statistics by the Ministry of Environment can be used to produce indicators on total waste volume, hazardous waste volume, recycling volume and rate. For hazardous waste, there are statistics on the Status of Designated Waste Generation and Disposal, and the waste is collected in accordance with relevant laws from administrative data.[23]

Interagency coordination is another issue. Crime related indicators are produced by the National Police Agency, the Supreme Prosecutors' Office, KOSTAT, and the Korean Institute of Criminology. It should be decided in advance on which agency will provide data to IOs. Indicator 16.1.1 *(number of victims of intentional homicide per 100,000 population)* is currently provided with National Police Agency's statistics, but it should be noted that there are differences from the numbers compiled by the Supreme Prosecutors' Office. The number of those killed is also provided in KOSTAT's Death Cause Statistics. Inter-agency coordination should be established even if the data is not produced yet. For indicator 12.2.2 *(domestic material consumption)*, the Ministry of Environment and the Ministry of Commerce, Industry and Energy are involved, and for indicator 3.9.1 *(mortality rate attributed to household and ambient air pollution)*, the Ministry of Environment, Ministry of Health and Welfare, and KOSTAT are related. Therefore, it should be clarified to establish a system for providing the data.

3) Indicators necessary for data quality management

Data quality should be maintained through on-going management. In this respect, the quality management system of KOSTAT is essential for the coordination of the data ecosystem but it targets the government-approved statistics only. In fact, statistics provided to IOs and used by IOs include statistics other than government-approved statistics. The statistics in the global DB are categorized according to the kind of sources. There are not only approved statistics but also include many statistics that are prepared by unapproved statistics

23 However, these statistics are generator based, so the rate is almost 100%. Therefore, it was raised by the Indicator Working group (May 2, 2018) that it is effective to set trends as indicators and monitor them rather than treatment rate.

agencies like private institutions, research data, and statistics having unclear data sources.[24]

In terms of data quality in the SDGs, the key is to manage the quality remaining statistics except for official statistics. Even if data has been collected by a public authority, sometimes it is not a government-approved statistic. Many indicators under Goal 4(indicator 4.1.1, 4.3.1, 4.4.1, 4.6.1) are representative. Trends in International Mathematics and Science Study (TIMSS) organized by IEA and PISA, PIAAC organized by the OECD. Korea Institute for Curriculum and Evaluation and Korea Research Institute for Vocational Education and Training collect and provide data for PISA and TIMSS and PIAAC, respectively.

Indicator 2.1.2 *(prevalence of moderate or severe food insecurity in the population)* and indicator 15.5.1 (the Red List index) utilized and collected through the private agency. In addition, data source of two indicators, indicator 2.2.1 *(prevalence of stunting among children under five years of age)* and indicator 2.2.2 *(prevalence of malnutrition among children under five years of age)* were cited from the research paper. Also, the data source of some indicators, including indicator 3.d.1 (International Health Regulations (IHR) capacity and health emergency preparedness) is unclear.

4. Means to Reduce the Data Gap

In order to improve the domestic statistics for the SDGs monitoring, the following was identified as necessary: development of methodologies such as concept definition and methods, improvement of statistics that are the source of indicators, strict quality control. What are the means of implementation necessary to develop methodologies, improve statistics and control quality?

First, the indicators that need to develop methodologies such as concept, definition and methods can be divided into the case the methodology which is still under development at the global level, the case where agreement between IOs and countries is needed for methodologies such as estimation and modeling at the global level and the case where it is necessary to judge relevance with domestic context. Methodological development can be implemented to bring into line global and national standards. What is emphasized here is KOSTAT's coordinating roles. In the future, it is expected that KOSTAT will play an important role in coordinating between international organizations and domestic agencies.

Meanwhile, it is necessary to understand how global standards are constructed. The participation of the NSO and relevant ministries is required. Apart from the unilateral business practices of requesting and responding to data from IOs to countries. Whole processes including provision of data are monitored and evaluated. The NSO and related ministries should actively request the disclosure of methodologies used by IOs to determine whether the data is appropriate to assess the domestic policy environment. On the other hand, indicators that need to be defined at the national level require research and investment in methodologies. In particular, it is necessary to evaluate whether the indicators are accepted officially through communication with the policy department.

Second, indicators requiring statistics improvement are as follows: If existing statistics only partially meet the definition of the SDGs and if further disaggregation such as migration status and disability has not been achieved. The development of statistics covers, not only the improvement of existing statistics, but also the use of various data sources. Administrative data, big data, geographic information data, as well as survey data should be reviewed. Meanwhile, the scope of application can be extended to private data. It can be also proposed to include survey items such as migration status and disability, which are not dealt with

24 Domestic statistics are largely divided into statistics by statistical agencies and those by non-designated statistics agencies. The former is subdivided again into approved statistics and unapproved statistics. Statistics by non-designated statistics agencies may include statistics by private agency etc.

as core items in traditional survey. It requires statistical decision-making and investment for success.

Finally, indicators require quality assurance. Once data is provided to IOs, the data are continuously reused by other IOs and individual researchers. Therefore, quality assurance of the statistics should be thoroughly carried out and the statistics should be provided according to transparent procedures. It requires improvement of the current quality assurance system limited to the government-approved statistics. We should develop inclusive quality assurance system beyond official statistics.

The procedures of providing data to IOs also need to be enhanced. Currently, statistical agencies provide data directly to the IOs and report to the NSO afterwards.[25] KOSTAT regularly monitors the ROK's data published by IOs. At present, however, it is only managed in terms of volume such as how much data is provided rather than methodology used. The SDGs data provision guideline states that the NSO should review the figures and the validity of methodology of the statistics produced by ministries other than the NSO as a coordinator (IAEG-SDGs, 2018e). Of course, under the decentralized statistical system, it may be difficult for the NSO to guarantee expertise for statistics for all subjects. To strengthen coordination role of KOSTAT, subject matter expertise is needed.

A platform will help to coordinate among ministries and multiple stakeholders. This is done to provide and manage data and monitor SDGs transparently and systematically. Interactive conversation through the platform contributes to assure data quality and it leads to statistics development for the SDGs. It is an opportunity for national statistics growth.

25 The statistics provided to international organizations are increasing, with 99 in 2015, 113 in 2016, and 121 in 2017 and expected to increase further based on the opportunity of SDGs (KOSTAT, 2018b).

Chapter 6

Conclusion

The SDGs monitoring should be based on reliable data. However, monitoring is limited to indicators that are available data. It has been three years since the adoption of the SDGs. Cynics joke that it may be 2030 when all indicators are ready to monitor. It is not necessary to rush, but will time wait for us? Where can we get evidence for sustainable development if we cannot carry out monitoring due to the absence of data? This is why the NSO's role in the implementation of the SDGs is emphasized. The NSO is involved in the whole process from defining the concept of indicators, developing methodologies, controlling data quality and even selecting targets. All processes should open and transparent. We must avoid 'silo' by collaborating with relevant ministries. In order to achieve principles of "Leaving No One Behind", we must also listen to the voices of stakeholders, including civil society organizations.

To produce more than 200 indicators, it is inevitable to use data from various sources, and even non-official data are a valuable source to explore data availability. Experiments that combine big data with official statistics are now part of the NSO's work, and citizen-generated data also just started to be discussed. If you look at the poem 'Arabic Numbers in the Sky' by Minbok Han, our daily lives are composed of numbers such as resident registration numbers, accounting numbers, passwords, and telephone numbers, as well as the classification number of diseases and the license plate numbers. Like it or not, we live in a world dominated by numbers and these numbers come together as statistics. However, how much does each citizen understand the working principle of these numbers? Accumulated data with low data literacy will pollute the data ecosystem, which, in turn, can distort the lens that observes the world. In addition to the NSO, statisticians in each ministry, policy makers who use those statistics, and citizens who are the targets of those policies need to invest in improving data literacy. This is ultimately what makes the data ecosystem stronger.

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Abbreviations

CBD Convention on Biological Diversity
CRS Creditor Reporting System
DAC Development Assistance Committee
DAD-IS Domestic Animal Diversity Information System
EEZ Exclusive Economic Zone
ESS European Social Survey
FAO Food and Agriculture Organization
FGM/C Female Genital Mutilation/Cutting
FIES Food Insecurity Experience Scale
GDP Gross Domestic Product
GNI Gross National Income
HIV Human Immunodeficiency Virus
HLPF High Level Political Forum
IAEG-SDGs Inter-agency and Expert Group for Sustainable Development Goal Indicators
ICF International Classification of Functioning, Disability and Health
IEA International Energy Agency
ILO International Labour Organization
IPCC Intergovernment Panel on Climate Change
ISCO International Standard Classification of Occupations
IUCN International Union for Conservation of Nature and Natural Resources
LULUCF Land Use, Land-Use Change and Forestry
MDGs Millennium Development Goals
ODA Official Development Assistance
OECD Organization for Economic Cooperation and Development
OOF Other Official Flows
PIAAC Programme for the International Assessment of Adult Competencies
PISA Programme for International Student Assessment
SDGs Sustainable Development Goals
SDSN Sustainable Development Solutions Network
TIMSS Trends in International Mathematics and Science Study
UN United Nations
UNAIDS The Joint United Nations Programme on HIV/AIDS
UNDESA United Nations Department of Economic and Social Affairs
UNDP United Nations Development Programme
UNECOSOC United Nations Economics and Social Council
UNESCO United Nations Educational, Scientific and Cultural Organization
UNICEF United Nations International Children's Emergency Fund
UNPD United Nations Population Division
UNSC United Nations Statistical Commission
UNSD United Nations Statistics Division
VNR Voluntary National Review
WCED World Commission for Environment and Development
WFP World Food Programme
WHO World Health Organization
WQI Water Quality Index

List of Collaborating Institutions and Participants

(in alphabetical order, position omitted)

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- Anti-Corruption & Civil Rights Commission
- Ministry of Employment and Labour, Ministry of Education, Ministry of Culture, Sports and Tourism, Ministry of Health and Welfare, Ministry of Gender Equality and Family, Ministry of Foreign Affairs and Trade, Ministry of Maritime Affairs and Fisheries
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List of UN SDG Indicators

- The indicator values are listed in the global DB as of September 2018, and updated to the latest values in some cases
- All figures are rounded up
- Tier classifications is based on October 2018

Goal 1 End poverty in all its forms everywhere

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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 population below the international poverty line, by sex, age, employment status and geographical location (urban/rural)	0.2%	2012	1	A2	World Bank, World Development Indicators database
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	B	
	▲ Relative poverty rate (Percentage of population with below 50% of median income)	14.7%	2016			KOSTAT, Combined data between Household Income and Expenditure Survey and Farm Household Economy Survey
	• Female	16.8%				
	• Male	12.3%				
	1.2.2 Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions			2	C	
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			2	A2	
	• Percentage of population receiving at least one social security benefit	65.7%	2016			ILO Social Security Inquiry (SSI)
	▲ Recipient rate of national basic living security	3.1%	2017			Ministry of Health and Welfare, Recipients of National Basic Living Security
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			2	C	
	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			2	C	
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			2	B	
	▲ Number of people affected by natural disasters		2017			Ministry of Public Administration and Security, Disaster Yearbook
	• Number of deaths	7 people				
	• Number of missing persons	0 people				
	• Number of injured	15 people				
	• Number of victims	8731 people				
	1.5.2 Direct economic loss attributed to disasters in relation to global gross domestic product (GDP)			2	B	
	▲ Economic damage due to natural disaster	187,302,271 won	2017			Ministry of Public Administration and Security, Disaster Yearbook
	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	D	
	1.5.4 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies			2	D	
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.a.1 Proportion of domestically generated resources allocated by the government directly to poverty reduction programmes			3	C	
	1.a.2 Proportion of total government spending on essential services (education, health and social protection)			2	C	
	1.a.3 Sum of total grants and non-debt-creating inflows directly allocated to poverty reduction programmes as a proportion of GDP			3	D	

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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 Proportion of government recurrent and capital spending to sectors that disproportionately benefit women, the poor and vulnerable groups			3	C	

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

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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	< 2.5	2015	1	A1	FAO, Statistics Division
	▲ Prevalence of nutrition deficiency	10.2%	2016			Korea Centers for Disease Control and Prevention, Korea National Health and Nutrition Examination Survey
	2.1.2 Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)			2	B	
	▲ Percentage of households with food security	95.8%	2016			Korea Centers for Disease Control and Prevention, Korea National Health and Nutrition Examination Survey
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			1	C	
	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)			1	C	
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	B	
	▲ Agricultural labour productivity (by farmland size) • 0.5 ha or less • 0.5-1.0 ha • 1.0-1.5 ha • 1.5-2.0 ha • 2.0-3.0 ha • 3.0-5.0 ha • 5.0-7.0 ha • 7.0-10.0 ha • 10.0 ha or more	8.1 thousand won / hour 16.5 thousand won / hour 19.1 thousand won / hour 19.7 thousand won / hour 25.5 thousand won / hour 29.2 thousand won / hour 40.6 thousand won / hour 42.2thousand won / hour 41.9thousand won / hour	2017			KOSTAT , Farm Household Economy Survey
	2.3.2 Average income of small-scale food producers, by sex and indigenous status			2	B	
	▲ Annual farm household income (by farmland size) • 0.5ha or less • 0.5-1.0 ha • 1.0-1.5 ha • 1.5-2.0 ha • 2.0-3.0 ha • 3.0-5.0 ha • 5.0-7.0 ha • 7.0-10.0 ha • 10.0 ha or more	34,319 thousand won 33,731 thousand won 34,216 thousand won 35,857 thousand won 40,811 thousand won 48,246 thousand won 65,746 thousand won 78,000 thousand won 94,291 thousand won	2017			KOSTAT , Farm Household Economy Survey
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			3	C	

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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 plant and animal genetic resources for food and agriculture secured in either medium- or long-term conservation facilities	46 species	2018	1	A1	FAO, Domestic Animal Diversity Information System(DAD-IS)
	2.5.2 Proportion of local breeds classified as being at risk, not at risk or at unknown level of risk of extinction • Dangerous • Non- dangerous • Unknown	43.5% (20 species) 8.7% (4 species) 47.8% (22 species)	2018	1	A1	FAO, Domestic Animal Diversity Information System(DAD-IS)
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	2.23	2016	2	A1	FAO Questionnaire; UNSD national account estimates
	2.a.2 Total official flows (official development assistance plus other official flows) to the agriculture sector			1	D	
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 Agricultural export logistics cost subsidies	31.05 billion won	2013	1	A1	WTO database
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			2	C	

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

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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	11 people	2015	1	A1	WHO, UNICEF, UNFPA, World Bank Group and the UNPD,Trends in maternal mortality: 1990 to 2015
	▲Maternal mortality ratio (per 100,000 newborns)	7.8 people	2017			KOSTAT, Death Cause Statistics
	3.1.2 Proportion of births attended by skilled health personnel	100%	2015	1	A1	Korea Institute for Health and Social Affairs, National Fertility and Family Health and Welfare Survey
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 • All • Female • Male	 3.3 people 3.0 people 3.5 people	2017	1	A1	UNIGME
	3.2.2 Neonatal mortality rate	1.5 people	2016	1	A1	UNIGME

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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			2	B	
	▲ Status of HIV-infected Koreans • All • Female • Male	 1,009 people 50 people 959 people	2017			Korea Centers for Disease Control and Prevention, Annual report on the notified HIV/AIDS in Korea
	3.3.2 Tuberculosis incidence per 100,000 population	77 people	2016	1	A1	WHO, GlobalTuberculosis Report
	▲ Tuberculosis incidence (per 100,000 people)	54.4 people	2017			Korea Centers for Disease Control and Prevention, Infectious disease surveillance yearbook
	3.3.3 Malaria incidence per 1,000 population	0.3 person	2016	1	A1	DHS2000
	▲ Malaria incidence (per 100,000 people)	1.0 person	2017			Korea Centers for Disease Control and Prevention, Infectious disease surveillance yearbook
	3.3.4 Hepatitis B incidence per 100,000 population	0.7 person	2015	2	A1	WHO, Based on serosurveys at city, subnational or national level.
	▲ Hepatitis B (Acute) incidence (per 100,000 people)	0.8 person	2017			Korea Centers for Disease Control and Prevention, Infectious disease surveillance yearbook
	3.3.5 Number of people requiring interventions against neglected tropical diseases	323 people	2016	1	A1	WHO, Global Health Observatory
3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease • All • Female • Male	 7.8% 4.7% 10.9%	2016	1	A1	WHO, Global Health Estimates 2016: Deaths by Cause, Age, Sex, by Country and by Region 2000-2016
	▲ cardiovascular disease mortality rate (per 100,000 people)	119.6 people	2017			KOSTAT , Death Cause Statistics
	▲ Cancer mortality rate (per 100,000 people)	153.9 people				
	▲ Diabetes mortality rate (per 100,000 people)	17.9 people				
	▲ Respiratory system mortality rate (per 100,000 people)	63.7 people				
	3.4.2 Suicide mortality rate • All • Female • Male	 26.9 people 15.4 people 38.4 people	2016	1	A1	WHO, Global Health Estimates 2016: Deaths by Cause, Age, Sex, by Country and by Region 2000-2016
	▲ Suicide mortality rate (per 100,000 people) • All • Female • Male	 24.3 people 13.8 people 34.9 people	2017			KOSTAT , Death Cause Statistics
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	C1	
	3.5.2 Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol	10.2 liters	2016	1	A1	WHO, Global Information System on Alcohol and Health
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	12 people	2013	1	A1	Global Status Report on Road Safety,
	▲ Traffic accident mortality rate (per 100,000 people)	8.1 people	2017			National Police Agency, Police StatisticsYearbook
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			1	B	
	▲ Contraception practice rate of married women	79.6%	2015			Korea Institute for Health and Social Affairs, National Fertility and Family Health and Welfare Survey
	3.7.2 Adolescent birth rate (aged 10–14 years; aged 15–19 years) per 1,000 women in that age group			2	A2	
	▲ Birth rate of 15-19 year-olds (Per 1,000 people)	1.3 people	2016			KOSTAT, PopulationTrend Survey

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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 (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population)	> = 80	2015	2	A1	WHO, Tracking universal health coverage: 2017 Global Monitoring Report
	3.8.2 Proportion of population with large household expenditures on health as a share of total household expenditure or income		2008	2	A1	Key Indicator of the 2017 Global Report on Tracking Universal Health Coverage
	▲ More than 10% of expenditure	13.5%				
	▲ More than 25% of expenditure	4.0%				
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	20 people	2016	1	A1	WHO, Global Health Observatory (GHO)
	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)	1.8 people	2016	1	A1	WHO, Global Health Observatory (GHO)
	3.9.3 Mortality rate attributed to unintentional poisoning		2016	1	A1	WHO, Global Health Estimates 2016: Deaths by Cause, Age, Sex, by Country and by Region 2000-2016
	• All	0.5 person				
	• Female	0.3 person				
	• Male	0.7 person				
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		2015	1	A1	WHO Department of the Prevention of Noncommunicable Diseases; Secretariat of the WHO Framework Convention on Tobacco Control
	• All	23.9%				
	• Female	6.2%				
	• Male	42.0%				
	▲ Smoking rate of population aged 19 or older	22.6%	2016			Korea Centers for Disease Control and Prevention, Korea National Health and Nutrition Examination Survey
	• All	6.1%				
	• Female	39.4%				
	• Male					
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		2016	2	A1	WHO/UNICEF coverage estimates 2016 revision, July 2017
	• Diphtheria, Tetanus, Pertussis Vaccine (DTP3)	98%				
	• Pneumococcal vaccine (PCV3)	98%				
	• Measles secondary vaccine (MCV2)	97%				
	3.b.2 Total net official development assistance to medical research and basic health sectors			1	D	
	3.b.3 Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis			3	C	
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		2016	1	A1	WHO, Global Health Workforce Statistics database
	• Nurse	6.9 people				
	• Doctor	2.3 people				
	• Dentist	0.5 people				
	• Pharmacist	0.7 people				
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	97.9%	2017	1	C	WHO, Global Health Observatory (GHO)

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

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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		2015	3(a)/ 2(b,c)	A2	OECD, PISA
	• Reading, All	86.3%				
	• Reading, Female	92.4%				
	• Reading, Male	80.8%				
	• Math, All	84.5%				
	• Math, Female	87.0%				
	• Math, Male	82.3%				
	▲ Percentage of students above basic education level		2017			Ministry of Education, National Level Academic Achievement Assessment Results
	• Korean, 3rd grade of middle school	97.5%				
	• Korean, 2nd grade of high school	95.3%				
	• Math, 3rd grade of middle school	93.1%				
	• Math, 2nd grade of high s	90.8%				
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 under 5 years of age who are developmentally on track in health, learning and psychosocial well-being, by sex			3	C	
	4.2.2 Participation rate in organized learning (one year before the official primary entry age), by sex		2015	1	A1	UNESCO Institute for Statistics
	• All	90.8%				
	• Female	90.6%				
	• Male	91.0%				
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		2012	2	A3	OECD, PIAAC
	• All	49.7%				
	• Female	45.4%				
	• Male	54.0%				
	▲ Formal and non-formal education participation rate		2017			Korean Educational Development Institute, Korean Adult Lifelong Learning Survey
	• All	29.4%				
	• Female	25.7%				
	• Male	27.6%				
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	60.6%	2016	2	A2	ITU World Telecommunication/ ICT Indicators database.
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		2015	1/2/3	A1	OECD, PISA
	• Reading, Gender Equality Index	1.143				
	• Reading, Socioeconomic Equality Index	0.820				
	• Reading, Regional equality index	1.012				
	• Math, Gender Equality Index	1.058				
	• Math, Socioeconomic Equality Index	0.766				
	• Math, Regional equality index	0.986				
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		2012	2	A1	OECD, PIAAC
	• Literacy	97.8%				
	• Numeracy	95.8%				
	▲ Percentage of population with sufficient literacy necessary for everyday life		2017			National Institute for Lifelong Education, Adult Literacy Survey
	• All	77.6%				
	• Female	73.4%				
	• Male	81.9%				

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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, including gender equality and human rights, are mainstreamed at all levels in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment			3	C	
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 with access to (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)	100%	2016	2	A1	UNESCO Institute for Statistics
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			1	D	
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 in: (a) pre-primary; (b) primary; (c) lower secondary; and (d) upper secondary education who have received at least the minimum organized teacher training (e.g. pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country			2	C	

Goal 5 Achieve gender equality and empower all women and girls

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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			2	D	
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			2	C	
	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			2	C	
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			2	B	
	5.3.2 Proportion of girls and women aged 15–49 years who have undergone female genital mutilation/cutting, by age			2	C	
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 • Female • Male	 14.0% 3.3%	2014	2	A2	KOSTAT, Time Use Survey
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 Percentage of women seats in the National Assembly	 17%	2018	1(a)/ 2(b)	A2	Inter-Parliamentary Union (IPU), the database on Women in National Parliament
	5.5.2 Proportion of women in managerial positions	12.3%	2017	1	A1	KOSTAT , Economically Active Population Survey
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			2	C	
	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			2	D	
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			2	C	
	5.a.2 Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control			2	D	
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 • All • Female • Male	 90.0% 87.6% 92.4%	2016	1	A1	ITU World Telecommunication, ICT Indicators database
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			2	D	

Goal 6 Ensure availability and sustainable management of water and sanitation for all

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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	98.0%	2015	2	A1	WHO/UNICEF, Joint Monitoring Programme for Water Supply, Sanitation and Hygiene
	▲ Waterworks penetration rate • Nationwide • Country	 98.9% 92.7%	2016			Ministry of Environment, Statistics of waterworks
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	98.5%	2015	2	A1	WHO/UNICEF, Joint Monitoring Programme for Water Supply, Sanitation and Hygiene
	▲ Sewerage penetration rate • Nationwide • Country	 93.2% 68.7%	2016			Ministry of Environment, Statistics of sewerage
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 wastewater safely treated			2	B	Ministry of Environment, Statistics of sewerage
	▲ Sewerage penetration rate • Nationwide • Country	 93.2% 68.7%	2016			
	6.3.2 Proportion of bodies of water with good ambient water quality	87.3%	2017	2	A1	Environment Live
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			2	C	
	6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources	57.6%	2014	1	A1	FAO
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 implementation (0–100)			1	D	
	6.5.2 Proportion of transboundary basin area with an operational arrangement for water cooperation			2	D	
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			2	C	
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			1	D	
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			1	D	

Goal 7 Ensure access to affordable, reliable, sustainable and modern energy for all

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	7.1.1 Proportion of population with access to electricity	100%	2016	1	A1	Global Tracking Framework
	7.1.2 Proportion of population with primary reliance on clean fuels and technology	> 95%	2016	1	A1	WHO, Global Health Observatory (GHO)
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	2.7%	2015	1	A1	IEA, World Energy Balances
	▲ Portion of new and renewable energy production and supply	14,178,408 toe	2016			Korea Energy Agency, Survey on deployment New & Renewable energy
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	6.55MJ/USD	2015	1	A1	IEA, World Energy Balances
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			2	D	
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 Investments in energy efficiency as a proportion of GDP and the amount of foreign direct investment in financial transfer for infrastructure and technology to sustainable development services			3	D	

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

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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	2.4%	2016	1	A1	UNDESA, Statistics Division (AMA)
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	2.7%	2017	1	A1	ILO estimates
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 non-agriculture employment, by sex			2	C	
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			3	C	
	8.4.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP			1	C	Environment Live Global Material Flows Database

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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 female and male employees, by occupation, age and persons with disabilities		2016	2	A2	ILOSTAT, Survey on Labour Conditions by EmploymentType
	• All • Female • Male	18,786 won 14,220 won 21,412 won				
	8.5.2 Unemployment rate, by sex, age and persons with disabilities		2017	1	A2	KOSTAT , Economically Active Population Survey
	• All • Female • Male	3.7% 3.5% 3.8%				
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			1	B	
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			2	C	
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 Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status		2016	2	A2	ILOSTAT, Occupational Accidents and Injuries Records
	Number of fatal industrial accident deaths per 100,000 workers	5.3 people				
	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			3	D	
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			2	C	
	8.9.2 Proportion of jobs in sustainable tourism industries out of total tourism jobs			3	C	
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			1	A1	IMF, Financial Access Survey (FAS)
	• Number of commercial banks per 100,000 people aged 15 and older • Number of ATMs per 100,000 people aged 15 and older	16.3 276.3	2016 2015			
	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	94.9%	2017	1	A1	Global Financial Inclusion Database, World Bank.
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		2016	1	A1	OECD, Creditor Reporting System (CRS) database
	• Arrangements • Payment	$ 1010.7 million $ 562.9 million				
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			3	D	

Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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			3	C	
	9.1.2 Passenger and freight volumes, by mode of transport		2016	1	A1	
	• Airline - Passenger - Freight	 131,890,017,373(T_km) 11,484,878,507(T_km)				International Civil Aviation Organization (ICAO)
	• Railway - Passenger - Freight	 71,325,055,642(P_km) 10,086,403,518(P_km)				The International Transport Forum at the OECD (ITF-OECD)
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	28.6%	2017	1	A1	UNIDO MVA 2018 Database.
	9.2.2 Manufacturing employment as a proportion of total employment	16.8%	2017	1	A1	ILOSTAT, Employment by sex and economic activity
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	7.3%	2013	2	C	OECD Structural and Demographic Business Statistics (SDBS) database
	9.3.2 Proportion of small-scale industries with a loan or line of credit			2	C	
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 CO2 emission per unit of value added			1	A1	
	CO2 emissions relative to GDP	0.34kg/US dollar	2015			IEA, CO_2 Emissions from Fuel Combustion Statistics 2017
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	4.2%	2015	1	A1	OECD, Research and Development Statistics
	9.5.2 Researchers (in full-time equivalent) per million inhabitants	7,045people	2015	1	A1	OECD, Research and Development Statistics
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			1	C	
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	63.7%	2015	1	C	UNIDO CIP 2016 Database
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	99.9%	2016	1	C	Korea Communications Commission

Goal 10 Reduce inequality within and among countries

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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			C		
	▲ Gini coefficient (Based on disposable income)		2016			KOSTAT, Household Income and Expenditure Survey KOSTAT, Farm household economy survey
	• Market income • Disposable income	0.353 0.304				
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			B		
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			C		
10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality	10.4.1 Labour share of GDP, comprising wages and social protection transfers	58.9%	2017	C		ILOSTAT - AMECO estimates
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			C		
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			D		
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			C		
	10.7.2 Number of countries with migration policies that facilitate orderly, safe, regular and responsible migration and mobility of people			D		
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			D		
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)		2016	D		
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			C		

Goal 11 Make cities and human settlements inclusive, safe, resilient and sustainable

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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			1	B	
	▲ Percentage of households that fall below the minimum housing standards	5.9%	2017			Ministry of Land, Infrastructure, and Transport, Korea Housing Survey
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			2	B	
	▲ Public transport share	42.8%	2016			Ministry of Land, Infrastructure, andTransport, Performance of Transport
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			2	C	
	11.3.2 Proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically			3	D	
11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage	11.4.1 Total expenditure (public and private) per capita spent on the preservation, protection and conservation of all cultural and natural heritage, by type of heritage (cultural, natural, mixed and World Heritage Centre designation), level of government (national, regional and local/municipal), type of expenditure (operating expenditure/investment) and type of private funding (donations in kind, private non-profit sector and sponsorship)			3	C	
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			2	B	
	▲ Number of people affected by natural disasters • Death • Missing • Injured • Victim	 7 people 0 person 15 people 8,731 people	2017			Ministry of Public Administration and Security, Disaster Yearbook
	11.5.2 Direct economic loss in relation to global GDP, damage to critical infrastructure and number of disruptions to basic services, attributed to disasters			1	B	
	▲ Economic damage due to natural disaster	187,302,271 won	2017			Ministry of Public Administration and Security, Disaster Yearbook
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 wastes management	11.6.1 Proportion of urban solid wastes regularly collected and with adequate final discharge out of total urban solid wastes generated, by cities			2	C	
	11.6.2 Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)			1	B	
	▲ Annual average particular matter concentrations • PM10 • PM2.5	 46$\mu g/m^3$ 26$\mu g/m^3$	2016			Ministry of Environment, Annual Report of Air Quality in Korea

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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			3	C	
	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			3	C	
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 Proportion of population living in cities that implement urban and regional development plans integrating population projections and resource needs, by size of city			3	D	
11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource 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.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			1	D	
	11.b.2 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies			2	D	
11.c Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials	11.c.1 Proportion of financial support to the least developed countries that is allocated to the construction and retrofitting of sustainable, resilient and resource-efficient buildings utilizing local materials			3	D	

Goal 12 Ensure sustainable consumption and production patterns

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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 with sustainable consumption and production (SCP) national action plans or SCP mainstreamed as a priority or a target into national policies			2	D	
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			3	C	
	12.2.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP			1	C	
12.3 By 2030, halve per capita global food wastes 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 wastes index			3	B	
	▲ Food wastes generation (1 day)	14,389tons	2016			Ministry of Environment, Status of Waste Generation and Treatment

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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 wastes, and other chemicals that meet their commitments and obligations in transmitting information as required by each relevant agreement			1	D	
	12.4.2 Hazardous wastes generated per capita and proportion of hazardous wastes treated, by type of treatment			3	B	
	▲ Designated wastes generation (1 year)	5,034,948 tons	2016			Ministry of Environment, Status of Hazardous Waste Generation and Treatment
12.5 By 2030, substantially reduce wastes generation through prevention, reduction, recycling and reuse	12.5.1 National recycling rate, tons of material recycled			3	B	
	▲ Wastes recycling rate	85.7%	2016			Ministry of Environment, Status of Waste Generation and Treatment
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			3	C	
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			3	D	
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 (including climate change education) are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment			3	C	
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 Amount of support to developing countries on research and development for sustainable consumption and production and environmentally sound technologies			3	C	
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 Number of sustainable tourism strategies or policies and implemented action plans with agreed monitoring and evaluation tools			3	D	
12.c Rationalize inefficient fossil-fuel subsidies that encourage wastesful 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 per unit of GDP (production and consumption) and as a proportion of total national expenditure on fossil fuels			2	C	

Goal 13 Take urgent action to combat climate change and its impacts

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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		2017		B	Ministry of Public Administration and Security, Disaster Yearbook
	▲ Number of people affected by natural disasters					
	• Death	7people				
	• Missing	0person				
	• Injured	15people				
	• Victim	8,731people				
	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				D	
	13.1.3 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies				D	
13.2 Integrate climate change measures into national policies, strategies and planning	13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)				D	
	▲ GHG Emissions		2016			Greenhouse Gas Inventory and Research Center, 2018 National Greenhouse Gas Inventory
	• Total emissions	694.1million tons CO_2eq.				
	• Net emissions	649.6 million tons CO_2eq.				
	• Energy	604.8 million tons CO_2eq.				
	• Industrial process	51.5 million tons CO_2eq.				
	• Agriculture	21.2 million tons CO_2eq.				
	• Wastes	16.5 million tons CO_2eq.				
	▲ GHG emissions per capita	13.5 tons CO_2eq.				
	▲ GHG emissions relative to real GDP	459.7 tons CO_2eq./1 billon won				
13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	13.3.1 Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula				D	
	13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions				D	
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 Mobilized amount of United States dollars per year between 2020 and 2025 accountable towards the $100 billion commitment				D	
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 that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate change-related planning and management, including focusing on women, youth and local and marginalized communities				D	

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

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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 Index of coastal eutrophication and floating plastic debris density			3	B	
	▲ Coastal litter status • Plastics • Others	 3,835kg 5,958kg	2017			Marine Environment Management Corporation, Marine ecosystem information(Coastal Litter Status_
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 Proportion of national exclusive economic zones managed using ecosystem-based approaches			3	C	
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	8.16	2017	3	A1	Ministry of Oceans and Fisheries, Seawater Quality
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			1	C	
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			1	B	
	▲ Protected marine area	1777.4km^2	2018			Marine Environment Management Corporation, Marine Ecological Information Nara Protected Marine Area Status
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 negotiation	14.6.1 Degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing			2	D	
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			3	C	
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	0.3%	2013	2	A1	Country submission for Ocean Science data and UIS for R&D
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			2	D	
14.c Strengthen the conservation and sustainable use of the ocean and its 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" by implementing international law reflected in the UN Convention on the Law of the Sea, which provides a legal framework for the conservation and sustainable use of the ocean and its resources while recalling section 158 of the "Future We Want" report	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			3	D	

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

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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	63.2%	2015	1	A1	FAO
	15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type • Land • Freshwater	 36.6% 36.8%	2017	1	C	Birdlife International
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			1	D	
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			2	C	
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			1	C	
	15.4.2 Mountain Green Cover Index	96.3	2017	1	A1	FAO
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			1	B	
	▲The ROK's Red List • Fear of extinction	 533 species	2018			National Institute of Biological Resources
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			1	D	
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			2	C	
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			2	D	
15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	15.9.1 Progress towards national targets established in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011–2020			3	D	
15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems	15.a.1 Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems			1/3	D	
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 Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems			1/3	D	
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			2	C	

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

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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	0.72 person	2015	1	A2	United Nations Survey on CrimeTrends and Operations of Criminal Justice System
	▲Violent crime damage rate	415people	2017			KOSTAT, Death Cause Statistics
	16.1.2 Conflict-related deaths per 100,000 population, by sex, age and cause			3	C	
	16.1.3 Proportion of population subjected to (a) physical violence, (b) psychological violence and (c) sexual violence in the previous 12 months			2	B	
	▲Violent crime damage rate	0.4%	2016			Korean Institute of Criminology, Public Safety Survey(Former, National criminal victimization survey)
	16.1.4 Proportion of population that feel safe walking alone around the area they live			3	B	
	▲Percentage of population who feels fear of crime	20.7%	2017			Korean Institute of Criminology, Public Safety Survey(Former, National criminal victimization survey)
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			2	C	
	16.2.2 Number of victims of human trafficking per 100,000 population, by sex, age and form of exploitation			2	C	
	16.2.3 Proportion of young women and men aged 18–29 years who experienced sexual violence by age 18			2	C	
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			2	C	
	16.3.2 Unsentenced detainees as a proportion of overall prison population	35.6%	2016	1	A1	United Nations Survey on CrimeTrends and Operations of Criminal Justice Systems(UN-CTS)
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	16.4.1 Total value of inward and outward illicit financial flows (in current United States dollars)			3	C	
	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			3	C	
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			2	B	
	▲Number of civil servants who took bribes	297 people	2017			National Police Agency, Police StatisticsYearbook
	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			2	C	
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)			1	C	
	16.6.2 Proportion of population satisfied with their last experience of public services			3	C	

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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			3	C	
	16.7.2 Proportion of population who believe decision-making is inclusive and responsive, by sex, age, disability and population group			3	C	
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			1	D	
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			1	C	
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			2	C	
	16.10.2 Number of countries that adopt and implement constitutional, statutory and/or policy guarantees for public access to information			2	D	UNESCO World Trends in Freedom of Expression and Media Development
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	1	2017	1	D	OHCHR and GANHRI.
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			3	C	

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

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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			1	C	
	17.1.2 Proportion of domestic budget funded by domestic taxes			1	C	
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)	0.14%	2017	1	A2	OECD, DAC Statistics database
17.3 Mobilize additional financial resources for developing countries from multiple sources	17.3.1 Foreign direct investment (FDI), official development assistance and South-South cooperation as a proportion of total domestic budget			1	C	
	17.3.2 Volume of remittances (in United States dollars) as a proportion of total GDP	0.45%	2016	1	A1	World Bank, World Development Indicators

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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			1	C	
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 least developed countries			3	D	
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 Number of science and/or technology cooperation agreements and programmes between countries, by type of cooperation			3	C	
	17.6.2 Fixed Internet broadband subscriptions per 100 inhabitants, by speed	40.5 people	2016	1	A1	Ministry of Science and ICT(MSIT)
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 approved funding for developing countries to promote the development, transfer, dissemination and diffusion of environmentally sound technologies			3	C	
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	92.8%	2016	1	A1	Ministry of Science and ICT(MSIT), Korea Communications Commission
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			1	C	
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			1	D	
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			1	D	
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 Average tariffs faced by developing countries, least developed countries and small island developing States			1	D	
17.13 Enhance global macroeconomic stability, including through policy coordination and policy coherence	17.13.1 Macroeconomic Dashboard			3	C	
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			3	D	
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			2	C	

Target	Indicator	Value	Recent year	Global tier	Domestic tier	Source
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	1	2017	2	D	OECD and UNDP
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 of United States dollars committed to (a) public-private partnerships and (b) civil society partnerships			3	C	
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 Proportion of sustainable development indicators produced at the national level with full disaggregation when relevant to the target, in accordance with the Fundamental Principles of Official Statistics			3	D	
	17.18.2 Number of countries that have national statistical legislation that complies with the Fundamental Principles of Official Statistics	1	2017	2	D	PARIS 21
	17.18.3 Number of countries with a national statistical plan that is fully funded and under implementation, by source of funding	1	2017	1	D	PARIS 21
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			1	C	
	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	1	2015	1	D	UNSD

- Goal 1. NO POVERTY
- Goal 2. ZERO HUNGER
- Goal 3. GOOD HEALTH AND WELL-BEING
- Goal 4. QUALITY EDUCATION
- Goal 5. GENDER EQUALITY
- Goal 6. CLEAN WATER AND SANITATION
- Goal 7. AFFORDABLE AND CLEAN ENERGY
- Goal 8. DECENT WORK AND ECONOMIC GROWTH
- Goal 9. INDUSTRY, INNOVATION AND INFRASTRUCTURE
- Goal 10. REDUCED INEQUALITIES
- Goal 11. SUSTAINABLE CITIES AND COMMUNITIES
- Goal 12. RESPONSIBLE CONSUMPTION AND PRODUCTION
- Goal 13. CLIMATE ACTION
- Goal 14. LIFE BELOW WATER
- Goal 15. LIFE ON LAND
- Goal 16. PEACE, JUSTICE AND STRONG INSTITUTIONS
- Goal 17. PARTNERSHIPS FOR THE GOALS

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