

PART I

Sustainable Development Goals Trends and Tables



Introduction to the Sustainable Development Goals Trends and Tables

The Millennium Development Goals (MDGs) provided a comprehensive framework for monitoring socioeconomic progress as they set forth specific, time-bound, and quantified targets for addressing extreme poverty in its many dimensions, while also promoting gender equality, education, and environmental sustainability. When the MDGs concluded in 2015, significant gains had been made in most parts of the world, particularly in Asia and the Pacific as documented in *Key Indicators 2015*. While there is much cause for celebration, there remains an unfinished agenda due to uneven progress across the goals and across countries, and the uneven opportunities for people to share the benefits of development and progress.

In September 2015, leaders of 193 member states of the United Nations (UN) convened at the UN General Assembly in New York to launch the Sustainable Development Goals (SDGs). Also known as the Global Goals, they present a universal plan of action to build on the progress achieved through the MDGs by addressing social, economic, and environmental aspects of sustainable development. Like the MDGs, the SDGs set forth quantifiable targets to be achieved by 2030 (with a 2015 baseline) for ending poverty, protecting the planet, and ensuring that all people enjoy peace and prosperity. The global indicator framework of the SDGs was approved during the 47th Session of the UN Statistical Commission in March 2016. Although it is still subject to further refinements and improvements as a wider array of analytical tools and innovative data sources emerge, we have a clearer picture of just how much data the world needs to help meet the Global Goals.

The approved global indicator framework of the SDGs consists of 17 goals, 169 targets, and

230 indicators. The current set of indicators is grouped into three tiers. Indicators classified in Tier 1 have a clear, established methodology and data are regularly collected by many countries. Tier 2 indicators, although they have an established methodology, are not regularly collected by many countries. Tier 3 indicators do not have an established estimation methodology and standards. Of the 230 indicators, approximately 40% have an established methodology and are regularly collected. This means that there is a huge task confronting national statistical systems to produce and compile such data. Given that the data requirements for monitoring progress and ensuring accountability toward realizing the 17 SDGs are numerous and can be a challenge for the statistical systems of both developing and developed countries, it is imperative to explore how we can capitalize on new data sources for compiling the SDG indicators.

Part I of *Key Indicators 2016* examines the status of economies of Asia and the Pacific on the SDG agenda using empirical data for selected indicators from the global indicator framework. The second section provides a brief description on how big data can be used to address some of the data gaps associated with SDG monitoring.

Section 1. Sustainable Development Goal Indicators in Asia and the Pacific

Integrating the economic, social, and environmental dimensions of sustainable development to so as to enable everyone to fully participate in the growth processes is one of the tasks enshrined in the SDGs. The SDGs set out a plan of action to create a better future for the people and its planet by promoting, prosperity, peace, and partnership (Figure 1.1).

Figure 1.1: Five Ps of the Sustainable Development Goals



Source: Adapted from <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>.

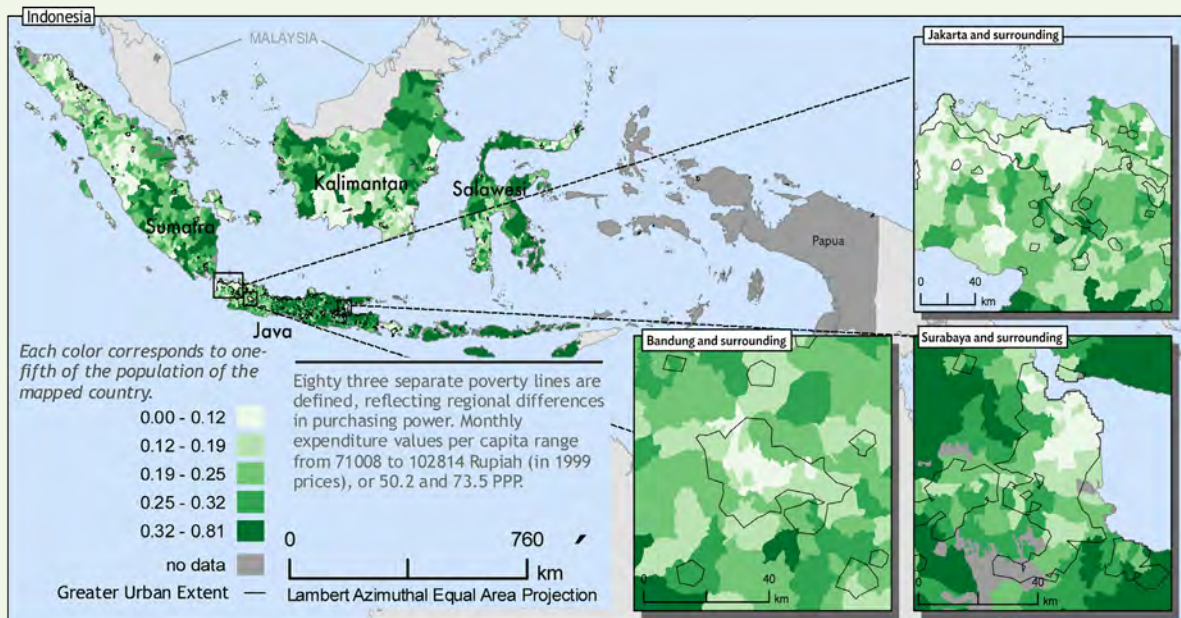
To ensure that all countries will keep track of the achievement of the SDGs, monitoring of these indicators is imperative. Monitoring should be based on a wide variety of indicators at a more regular frequency so that programs can be developed and fine-tuned to facilitate each country's achievement of the goals. The UN Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs) has been working on an indicator system for the measurement of the SDGs and a core set of 230 indicators has already been developed. Accounting for national circumstances in individual countries, this will be complemented by indicators at the national and subnational levels as committed by member states. Some thematic indicators are also being developed.

The indicator system associated with the SDGs should necessarily be linked to the policy cycle that starts with policy formulation, followed by policy legitimization, policy implementation, policy evaluation, policy change, and back to the formulation of new policies (Hak, Janouskova, and Moldan 2016). In the policy evaluation stage, the role of indicators is very crucial to ensure that certain strategies are adequately aligned toward achievement of the goals.

Along the principle of “leave no one behind,” data disaggregation is also an important facet of indicators that will be developed specifically for the vulnerable segments of society. Box 1.1 provides a brief description of the analytical techniques that can be used for disaggregating the SDG indicators.

Box 1.1: Analytical Techniques for Disaggregating the Indicators of the Sustainable Development Goals

The lack of disaggregated data is one of the main issues raised regarding the monitoring framework of the Millennium Development Goals (MDGs). Although the data collected for MDG monitoring allowed tracking of how countries fared in terms of different social and economic indicators relative to other countries, they did not reveal how inequalities within each country changed over the years. This provided limited empirical evidence on which segments of a country's population made significant progress or lagged behind in terms of the MDGs. From a policy perspective, this is problematic because there are limited data to guide the design of intervention programs meant to appropriately target the disadvantaged. In response to this concern, the 2030 Agenda for Sustainable Development has espoused the “leave no one behind” principle, which requires appropriate Sustainable Development Goal (SDG) indicators to be estimated for different subpopulation groups based on income class, gender, ethnicity, and geographic location, and other relevant dimensions.

Sample Poverty Map: Poverty Headcount Index in Indonesia, 2000

Sources: Center for International Earth Science Information Network (CIESIN), Columbia University. 2005. Poverty Head Index – Indonesia, Administrative Level 3: Subdistrict [Map]. Poverty Mapping Project: Small Area Estimates of Poverty and Inequality. Palisades, NY: NASA Socioeconomic Data and Applications Center (SEDAC). <http://dx.doi.org/10.7927/H49P2ZKM>.

Several strategies can be adopted to provide disaggregated SDG data and each technique entails varying levels of analytical rigor and data requirements. In the case of indicators estimated based on survey data, disaggregation requires that each subpopulation group for which estimates need to be provided is adequately represented in the survey. However, many of the national statistics offices from developing countries do not have adequate financial resources to employ sample sizes that are large enough to provide reliable estimates for different subpopulation groups. On the other hand, there are several small area estimation (SAE) techniques that “borrow strength” from other data sources that have wider coverage, to be able to increase the effective sample size of surveys artificially. For example, the classic method proposed by Fay and Herriot (1979) uses optimal weighting strategies to combine survey and model-based estimates to improve the precision of their proposed estimator. Over time, more sophisticated SAE techniques have been developed. The methodology proposed by Elbers, Lanjouw, and Lanjouw (2003) is a good example of a more advanced SAE technique that is widely used in poverty mapping exercises. In general, the methodology entails regressing a certain income measure (e.g., household expenditure or income) on various correlates using survey data. The methodology requires that these correlates are available in both survey and census data. Out-of-sample prediction is then used to impute the chosen income measure by applying the estimated regression coefficients into the census data. Using the information on income imputed for each unit of the census, poverty measures can then be estimated for any desired level of disaggregation, although most of the initiatives have focused on disaggregating poverty numbers based on geographic location. Nevertheless, similar SAE techniques that are grounded on the same methodology may be employed to disaggregate other SDG indicators, provided that its data requirements are met.

continued.

Box 1.1: (continued)

Availability of Small Area Poverty Estimates in Asia and the Pacific

Country	Level of Disaggregation
Armenia	district
Azerbaijan	rayon (district)
Bangladesh	upazila (subdistrict)
Bhutan	subdistrict
Cambodia	commune
Fiji	tikina (district)
India	district
Indonesia	village
Nepal	district
Mongolia	soum (district)
Pakistan	district
Papua New Guinea	local-level government area
Philippines	city, municipality
Thailand	sub-district
Viet Nam	district

Note: A number of studies on district-level poverty estimates for some of India's states were conducted in recent years.

The table above is not a comprehensive list of small area poverty estimates that are publicly available in Asia and the Pacific.

Sources: ADB compilation from international development organizations, national statistical agencies, and various sources.

However, there are several situations when it is more ideal to explore alternative methodologies to conventional SAE techniques for disaggregating the SDG indicators, e.g., reference period of the survey is far from that of the census (or other administrative records) or no conventional data collection tools exist. In such cases, big data and other new forms of data can be potentially tapped into to provide disaggregated estimates. For example, data on nighttime lights derived from satellite images can be used to provide geographically disaggregated measures of economic output. In an ongoing study undertaken by Glaeser et al. (2015), sophisticated computer algorithms are being used to process Google Street View images of houses to predict household income in New York City. A similar methodology could be explored to map wealth and poverty in other corners of the world where conventional poverty mapping tools are not available. On the other hand, a recent study by Marchetti, Guisti, and Pratesi (2016) makes use of Twitter-based emotion data (computed in the iHappy index) as a means of predicting the share of food consumption in a household's expenditure in Italy at the provincial level.

As seen above, there are several studies that have already shown that satellite images, data from everyday gadgets, social sites, and other high-throughput tools are high-density data that can be good predictors of various population traits. Since these types of data are usually high-density and available at very granular level, they can be considered promising data sources for SAE that can supplement the conventional data collected by national statistical agencies.

Sources:

C. Elbers, J. Lanjouw, and P. Lanjouw. 2003. Micro-level Estimation of Poverty and Inequality. *Econometrica* 71(1): 355–364.

R. Fay and R. Herriot. 1979. Estimates of Income for Small Places: An Application of James–Stein Procedures to Census Data. *Journal of American Statistical Association* 74 (1979): 269–277.

E. Glaeser, S. D. Kominers, M. Luca, and N. Naik. 2015. Big Data and Big Cities: The Promises and Limitations of Improved Measures for Urban Life. *NBER Working Paper* 21778. Cambridge MA: National Bureau of Economic Research (NBER).

S. Marchetti, C. Guisti, and M. Pratesi. 2016. The Use of Twitter Data to Improve Small Area Estimates of Households' Share of Food Consumption Expenditure in Italy. *AStA Wirtschafts- und Sozialstatistisches Archiv* 10(2): 79–93.

This section provides a summary of the selected SDG indicators that are widely available in ADB member countries. The data compiled here are mainly from the UN Department of Economic and Social Affairs, Statistics Division's SDG Indicators Global Database, i.e., the official SDG data repository, and data from international organizations and economy sources.

The SDG Indicators Global Database compiles data that are either directly produced by different international agencies based on their respective areas of expertise and mandates (e.g., proportion of population living below international poverty line estimated by The World Bank), data that are estimated from sample surveys which are financed and carried out by international agencies (e.g., health indicators that are estimated using data from the Multiple Indicator Cluster Surveys (MICS) and Demographic and Health Surveys (DHS)), unadjusted data that are compiled by international agencies based on what is directly produced by national statistical offices and other country sources, or data adjusted by international agencies based on what is directly produced by national statistical offices and other country sources. International agencies introduce statistical adjustments to facilitate data comparability across countries, impute estimates for years wherein data are not available, harmonize data when they are compiled from multiple national sources (e.g., surveys, administrative, and other sources) or address data quality issues. For detailed description of how international agencies compile their SDG-related data, readers may refer to the metadata available on the SDG Indicators Global Database's website.

Given the reasons cited above, the data compiled by national statistical agencies do not always match with the data compiled by international agencies. Hence, some of the data presented in this publication may differ from those available within countries.

The indicators are accompanied by a short analysis and supporting information presented in figures, boxes, and tables that are summarized according to the five themes: People, Planet, Prosperity, Peace, and Partnership. Most of the statistics presented in the tables and charts are usually presented for two data points between 2000 and 2015. In the succeeding discussion, these are occasionally referred to as the initial year (usually a year between 1998 and 2007 that is closest to 2000) and latest year (usually any year closest to 2015) depending on available data. There are also exceptions to this approach because the years for which data are available vary widely across countries. The 2015 figures shall serve as the baseline from which progress with respect to the SDGs can be assessed. However, there are instances when the latest estimates are even prior to 2010, indicating lack of timely data for monitoring the SDGs. The data for initial years allow us to gauge how countries have performed over the past 15 years and could be indicative of their future performance.

At the end of each section, issues in monitoring the goals and data gaps are briefly discussed to provide information to countries and other development partners on the amount of resources needed by statistical systems to produce and analyze the SDG indicators.

People

To end poverty and hunger, in all forms and dimensions, and to ensure that all human beings can fulfill their potential in dignity and equality and in a healthy environment.



Snapshots

- Between 2000 and 2013, approximately 707 million moved out of extreme poverty. However, around 330 million people in Asia and the Pacific still live in extreme poverty based on the \$1.90 (2011 purchasing power parity) a day poverty line.
- Approximately one in seven people in Asia and the Pacific is undernourished.
- The prevalence of wasting among children under 5 years of age is relatively high in South Asia where five out of the six developing member countries (DMCs) have reported above 10% prevalence rates.
- Stunting affects more than 20% of children under 5 years of age in 18 DMCs as indicated by latest available data.
- Latest data suggest that there are 140 fewer maternal deaths per 100,000 births today in Asia and the Pacific than in 2000. On the other hand, the region's under-5 mortality rate is 36 per 1,000 live births.
- According to latest available data for reporting economies, enrollment in preprimary education in Asia and the Pacific is estimated at approximately 60.0% of preprimary school-aged children.
- Data for Asia and the Pacific show that as much as 33% of women aged 15 to 49 years have experienced physical violence from an intimate partner while 34% have experienced sexual violence.
- Lack of granular data on poverty, health and education remains to be a big challenge for targeting and monitoring progress of relevant SDGs for the region.

This section examines several indicators that underpin the first set of SDGs where data are available for ADB member countries. SDGs 1–5 are people-centered as they aim to create conditions that ensure the lasting protection of human dignity by eradicating extreme poverty and hunger and promoting health, well-being, quality education, and gender equality.

SDG 1: End Poverty in All Forms Everywhere

It is widely recognized that eradicating extreme poverty is one of the greatest challenges of this era.

While poverty is multidimensional, the lives of the extremely poor are commonly characterized by lack of income to buy one's basic needs.

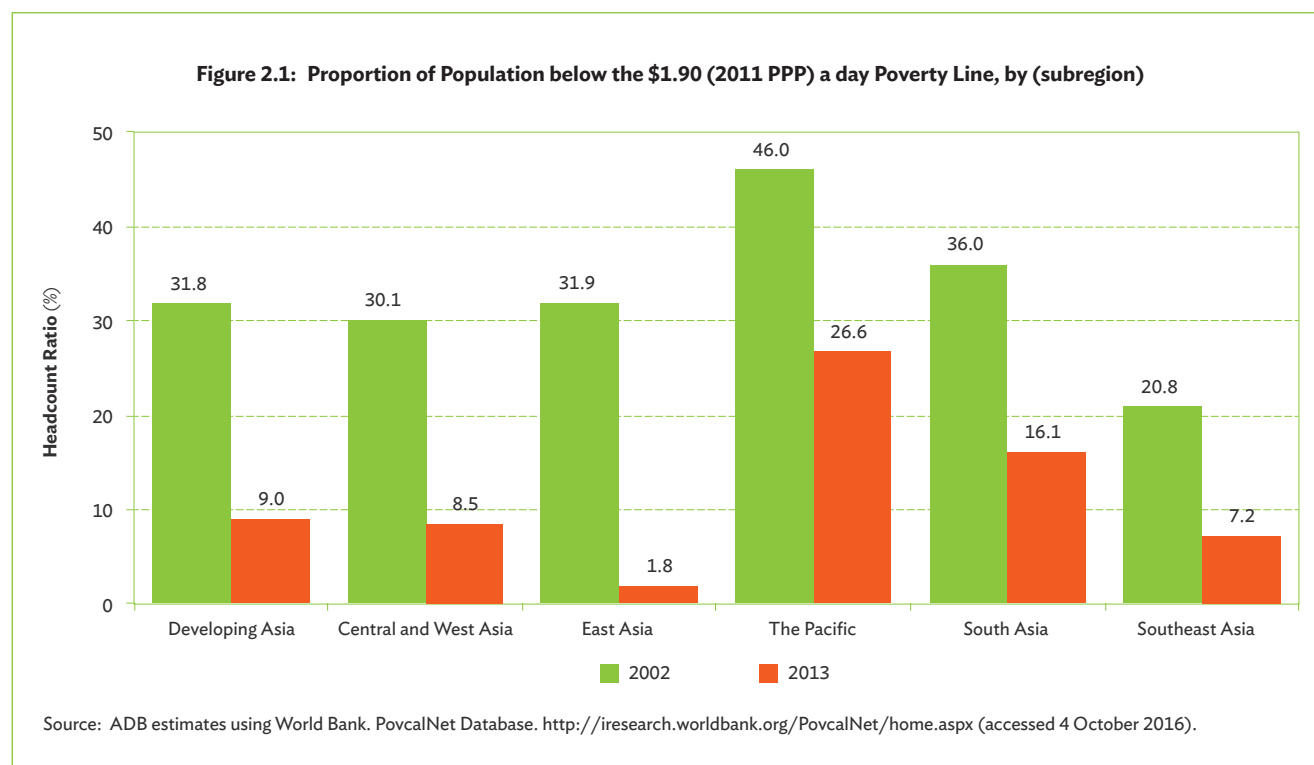
Proportion of population below the international poverty line of \$1.90 (2011 PPP) a day. Between 2002 and 2013, approximately 707 million people in Asia and the Pacific moved out of extreme poverty based on \$1.90 a day poverty line. Amid this significant poverty reduction, the region is still home to around 330 million people who are living in extreme poverty, which is equivalent to about 9.0% of the region's total population according to the latest data available.

Extreme poverty in Asia and the Pacific has a remarkable spatial feature. For instance, the proportion of people who were living in extreme poverty is 16.1% in South Asia, while in East Asia, the proportion is estimated at only 1.8% of its population (Figure 2.1).

Proportion of population living below the national poverty line. Cost of living and preference for basic necessities vary significantly across the countries. National poverty lines capture these intercountry contextual differences. The goal is to

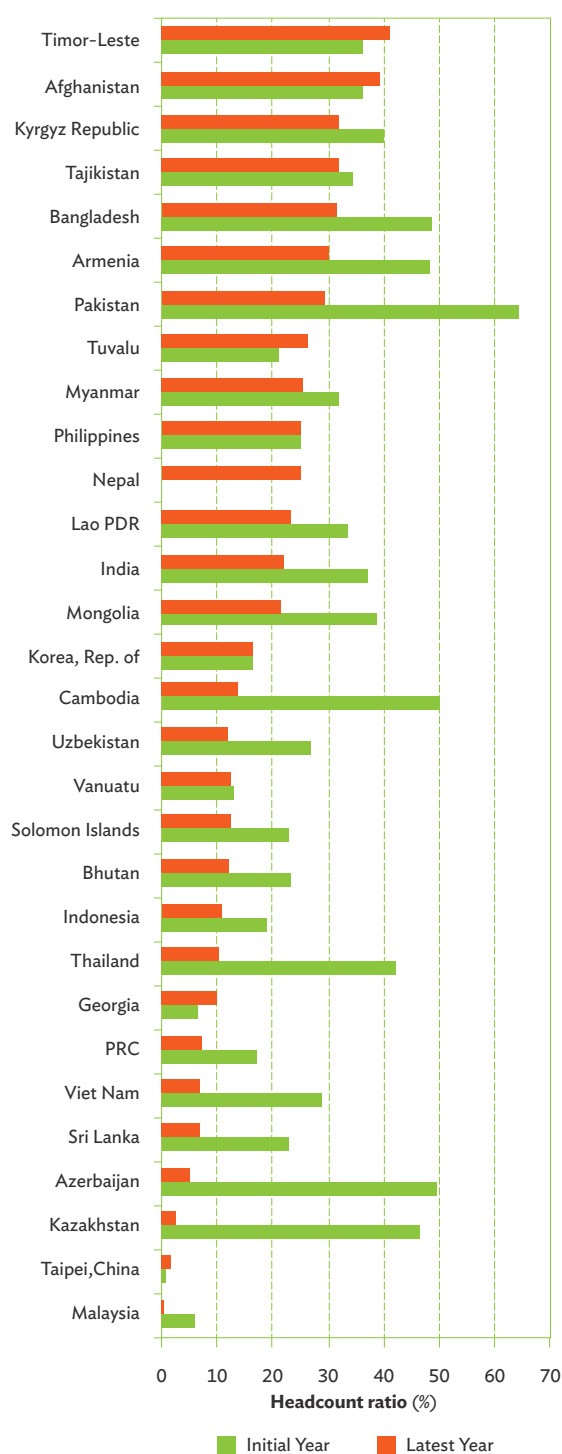
reduce the proportion of people living below the national poverty line by at least half in 2030.

Figure 2.2 shows that the proportion of people living below the national poverty line dropped by more than 10 percentage points from 2000 to the latest year in 14 developing member countries (DMCs) with available data. However, in almost half (14 out of 30), the proportion of people living below their respective national poverty lines still exceed 20%.



[Click here for figure data](#)

Figure 2.2: Proportion of Population below the National Poverty Line



Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
 Notes: Only economies with recent estimates (2010 and later) are included.
 Source: Table 2.1.

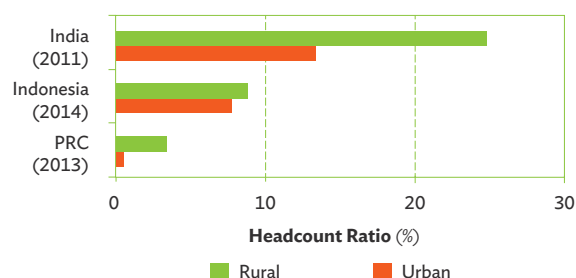
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Equity and Other Issues

While official headline statistics suggest that substantial gains have been made toward the goal of reducing poverty at the national level, some segments of the population experienced slower development than others. For instance, available poverty estimates across Asia and the Pacific suggest that in most countries, the rural population is significantly more at risk of being poor than the urban population. Figure 2.3 shows how rural poverty rates compare to urban poverty rates in some of the region's most populous economies. On the other hand, data from some countries also confirm that working poverty rates vary according to gender and age. For instance, in Bangladesh, India, and Pakistan, the proportion of employed women living below the poverty line is higher than the working poverty rate among men. The situation is opposite in the Kyrgyz Republic and the Philippines, where the poverty rate among men is higher (Figure 2.4a). On the other hand, young workers aged 15–24 years in Cambodia, India, the Lao People's Democratic Republic (Lao PDR), Papua New Guinea, and Viet Nam have significantly higher poverty risk than workers who are 25 years and older (Figure 2.4b).

Reducing poverty for a wider segment of the population requires more efficient planning and more targeted intervention programs. In general, social assistance programs are designed to help the poorest segment of the population make ends meet and reduce the poverty risk among the economically vulnerable. Available statistics show that in some countries such as Georgia, Indonesia, the Philippines, Sri Lanka, and Viet Nam, social assistance programs are targeted to the vulnerable segments of the population since the proportion of people living in the bottom income quintile covered by social assistance programs is significantly higher than the proportion of the economies' total population receiving social assistance in each of these countries.

Figure 2.3: Proportion of Population below the \$1.90 (2011 PPP) a day Poverty Line in Selected Economies, by (location)



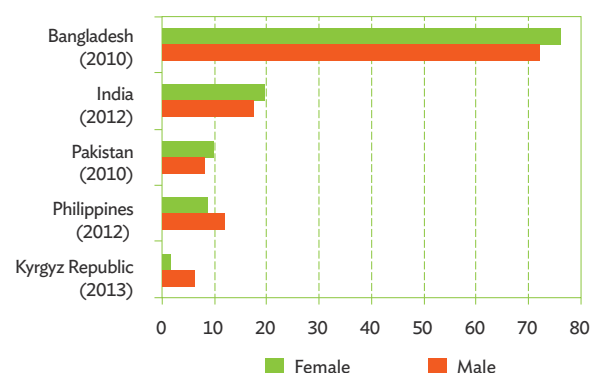
PRC = People's Republic of China.

Source: World Bank. PovcalNet Database.

<http://iresearch.worldbank.org/PovcalNet/home.aspx> (accessed 4 October 2016).

[Click here for figure data](#)

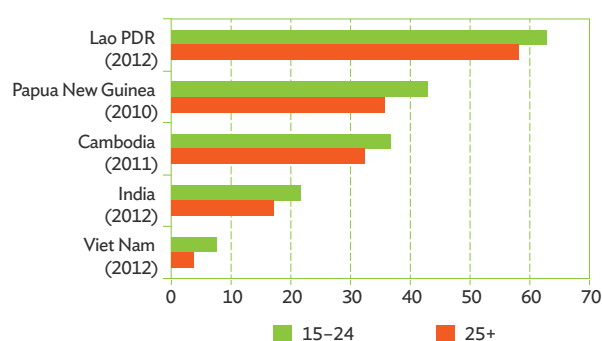
Figure 2.4a: Incidence of Working Poor among Age 15 and Up in Selected Economies, by Sex



Source: United Nations Statistics Division. Sustainable Development Goal Indicators Global Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed September 2016).

[Click here for figure data](#)

Figure 2.4b: Incidence of Working Poor among Age 15 and Up in Selected Economies, by Age Group

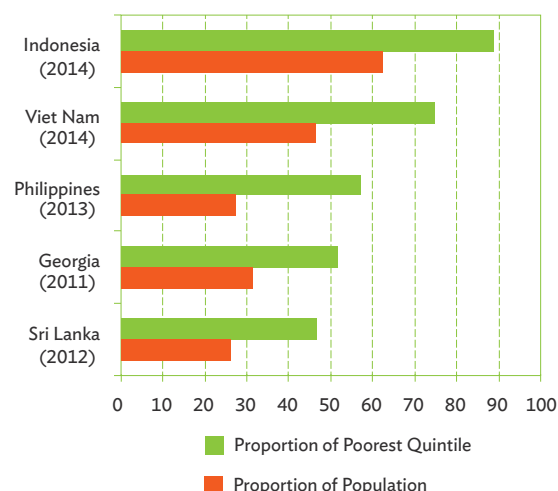


Lao PDR = Lao People's Democratic Republic.

Source: United Nations Statistics Division. Sustainable Development Goal Indicators Global Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed September 2016).

[Click here for figure data](#)

Figure 2.5: Proportion of Population Covered by Social Assistance Programs in Selected Economies (%)



Source: United Nations Statistics Division. Sustainable Development Goal Indicators Global Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed September 2016).

[Click here for figure data](#)

Data Gaps

Targeting intervention programs requires correctly identifying the most vulnerable segments. For instance, those who have managed to exit poverty also have a higher risk of sliding back into it, with the effect of shocks, such as the loss of a job, death or sickness in the family, as well as harmful effects on livelihood of price volatilities, conflicts, and natural disasters. If the SDGs aim to totally eradicate poverty, there is a need to minimize the poverty risk for these people as well.

A finer granularity of data on poverty is required to identify the segments of the population with a higher risk of being trapped in poverty. However, movements into and out of poverty are not monitored, as household income and consumption surveys used to measure poverty are mostly cross-sectional surveys that do not utilize the same set of respondents over time. As such, conventional poverty measures are usually presented as cross-sectional snapshots of disadvantage. Box 2.1 underscores how poverty (as well as inequality) can be better examined when longitudinal data are available.

Monitoring to ensure that interventions result in the achievement of goals should be done more frequently. To accomplish this, more timely data on poverty are critical. In this case, model-based estimates can be considered for monitoring purposes. As an example, spatiotemporal models can be developed to account for the dynamic behavior of poverty indicators within the country. The spatial component will facilitate borrowing of information from similar countries or segments within the country for properly disaggregated space–time poverty measures. Disaggregation of data using spatiotemporal small area estimation can use administrative data or alternative data sources (e.g., images), among others, as auxiliary information. The use of information and communication technology tools for improved data

capture and the application of big data such as the use of telecommunications for yielding small area estimates of poverty also appear to be promising means of getting poverty information faster for appropriate policy action.

Furthermore, there is a need to invest more in the collection of other indicators included in SDG 1. A quick assessment of data availability suggests that only a few of the SDG 1 indicators are regularly compiled in most countries in Asia and the Pacific. In addition, some indicators for social protection, mobilization of resources for poverty alleviation programs, and policy framework still need to be better formulated and measured more frequently to allow monitoring.

Box 2.1: Why the Sustainable Development Goal Era Necessitates Investing in Longitudinal Data

Social statistics on poverty and inequality are usually estimated using household surveys of living standards that collect data on income, consumption, and other indicators of well-being. In many developing countries, particularly in Asia and the Pacific, these surveys are conducted every 3–5 years using data from different samples of respondents. While cross-sectional surveys are useful for estimating the proportion of population who are poor during a specific survey period, they do not provide a comprehensive appraisal of the temporal dynamics of poverty.

To illustrate the limitations of cross-sectional data for poverty analysis, consider a hypothetical country with two classes of people: rich and poor. In the initial time period, 40% were rich and 60% were poor. Over time, all of the initially poor people became rich, while the initially rich slid down to poverty. From a cross-sectional perspective, we can say that there is a 20 percentage point reduction in poverty rate. While the poor were able to catch up, this development process with a complete reversal of classes may portray a very unstable distribution of economic opportunities.

Since panel data make it possible to distinguish the characteristics of people who stayed in poverty for a long time, or those who frequently move in and out of poverty from those who successfully made the transition into middle class status, and to locate where they are in the country, national governments can use the data to better determine the most effective interventions for a given population or geographical area. These inputs are vital to eradicating extreme poverty for all by 2030 (SDG 1).

The nuanced information provided by panel data are also vital to meeting other Sustainable Development Goals. Armed with panel data that can track factors and circumstances associated with the persistently marginalized, countries would be able to understand exactly when disadvantage begins to negatively affect households and when its impact becomes irreversible—and would therefore be in a better position to prevent inequality of opportunities instead of just managing its ill effects. Governments can use the same data to inform policy making on closing the income inequality gap. That way, they are also able to contribute to reducing inequality of opportunities within and among countries (SDG 10).

continued.

Box 2.1: (continued)

Although there is a clear need for panel data in light of the new SDGs, most of the long-running longitudinal data have been collected in industrialized countries simply because collecting such data is more costly and complicated. The systematic use of panel data can immensely help developing countries in Asia and the Pacific build a solid evidence base on which they can anchor policies and programs in support of the SDGs, but it will come at a price that they and all stakeholders must be willing to pay.

The good news is that longitudinal surveys are increasingly becoming available across Asia and the Pacific, and the family life surveys of Indonesia and Malaysia are some examples. However, because such initiatives have yet to be integrated in the official statistical systems of the aforementioned countries, they are not conducted regularly. But because panel surveys can build on the latest data from previous nationally representative cross-sectional household surveys, the start-up costs that may otherwise be prohibitive for many developing countries can already be reduced.

Notwithstanding the need for more funding and resources, it is important for national governments to acknowledge the potential of longitudinal panel data to better monitor our collective progress on the SDGs and foster sustainable and inclusive development, particularly when used together with cross-sectional and even big data.

SDG 2: End Hunger, Achieve Food Security and Improved Nutrition, and Promote Sustainable Agriculture

The United Nations Sustainable Development Goals Report 2016 estimates that globally, there are at least 790 million people who are undernourished. This implies that one in every nine persons is unable to put enough food on the table and is likely to go hungry. Since an undernourished person is exposed to various health risks and could render the person incapable of adequately achieving their potential, one of the Global Goals aims to end hunger and malnutrition by promoting sustainable agriculture and achieving food security by 2030.

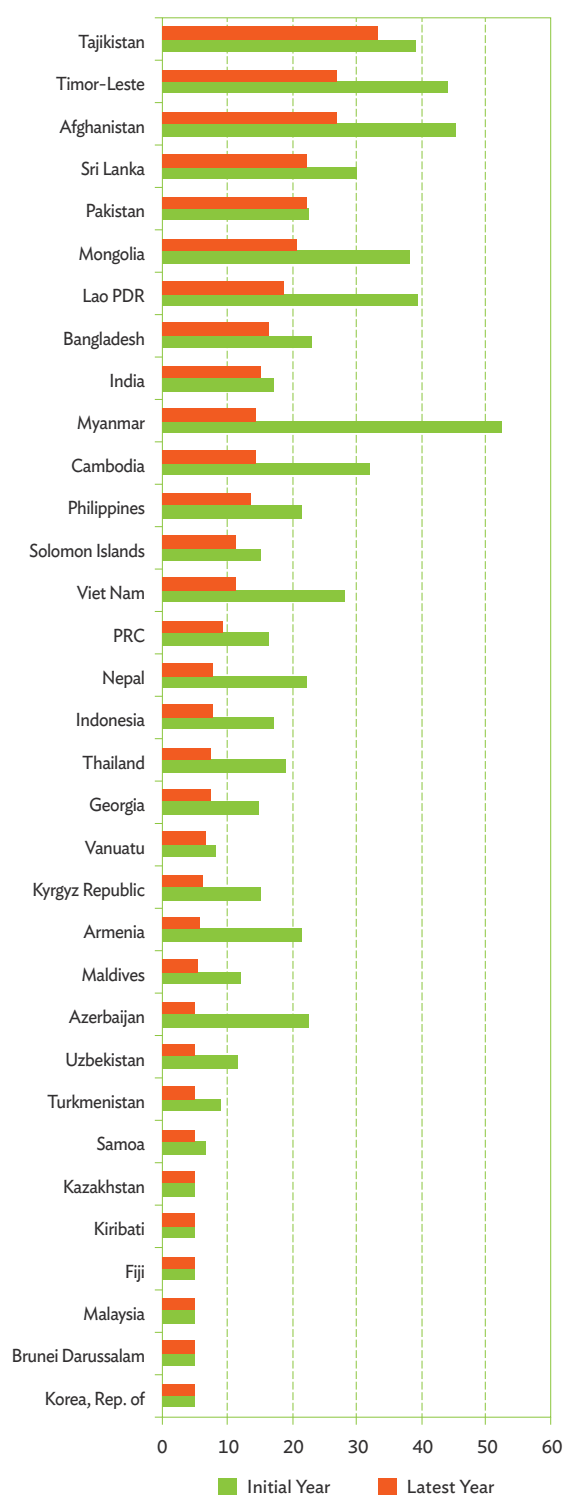
Prevalence of undernourishment. Approximately one in seven people in Asia and the Pacific today are undernourished. Although the prevalence of undernourishment in majority of member countries is less than 10.0%, 14 economies have undernourishment rates exceeding 10.0%. Among the countries included in the analysis, Tajikistan has the highest incidence of undernourishment (33.2%), followed by Timor-Leste (26.9%), and Afghanistan (26.8%).

Figure 2.6 illustrates how the prevalence of undernourishment in economies of Asia and the Pacific has declined since 2000. The undernourishment rate declined by more than 10 percentage points in 11 DMCs: Afghanistan, Armenia, Azerbaijan, Cambodia, the Lao PDR, Mongolia, Myanmar, Nepal, Thailand, Timor-Leste, and Viet Nam.

Prevalence of wasting among children under 5 years of age. Wasting among children curtails their potential to be productive individuals later in their lives. More generally, wasting, undernourishment and diseases among children are typical roadblocks in their growth to become healthy adults in the future. The SDG target is to end malnutrition by 2030.

Table 2.2 shows that in nine out of the 31 DMCs with data for the latest year, the prevalence of wasting among children under 5 years of age exceeds 10%. Five of these nine DMCs are in South Asia where the prevalence of wasting is highest compared to other subregions. Bhutan is the only exception where the prevalence is relatively low at 5.9%. In East Asia, the prevalence of wasting is low, between 1.0% and 2.3%.

Figure 2.6: Prevalence of Undernourishment (%)



Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
 Note: Latest year estimates for Azerbaijan, Uzbekistan, Turkmenistan, and Samoa are less than 5%. Initial and latest year estimates for Kazakhstan, Kiribati, Fiji, Malaysia, Brunei Darussalam, and the Republic of Korea are less than 5%.
 Source: Table 2.2.

Prevalence of stunting among children under 5 years of age.

Like wasting, stunting is a commonly used indicator of malnutrition among children. Statistics show that stunting affects more children than wasting. Table 2.2 shows that the prevalence of stunting among children under 5 years of age is higher compared to the prevalence of wasting for the same age group. In 18 economies with data for the latest year, at least two in 10 children under 5 years of age are stunted.

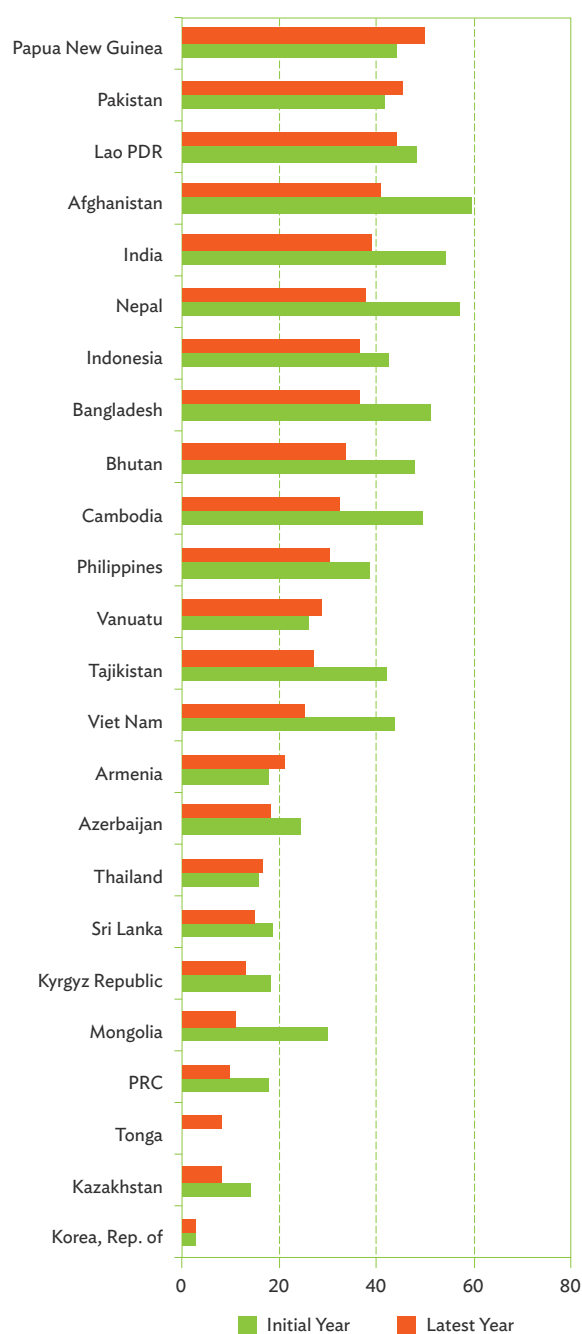
Although the prevalence of stunting among children under 5 years of age still exceeds 20% in the majority of the countries in Asia and the Pacific, it has declined in 17 economies since 2000 (Figure 2.7).

Prevalence of overweight children under 5 years of age.

Unmanaged obesity among children can cause comparable health issues to stunting and wasting when they grow as adults later.

In eight out of the 28 member countries with data for the initial and latest years, the prevalence of overweight children under 5 years of age has fallen since 2000. However, the prevalence of overweight children under 5 years of age remains above 10% for nine DMCs. Table 2.2 provides the estimates for regional member economies.

Figure 2.7: Prevalence of Stunting Among Children under 5 Years of Age (%)



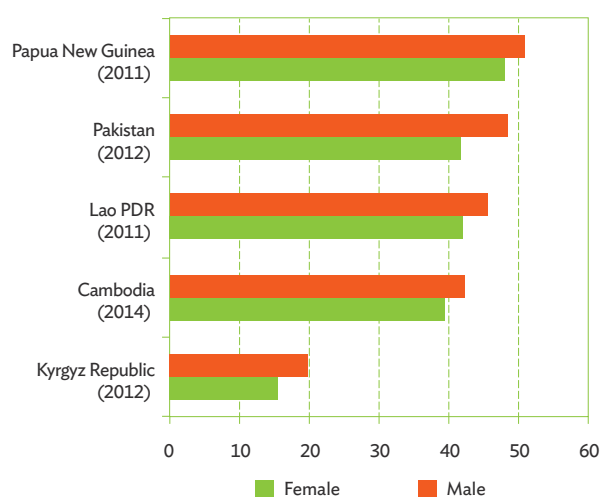
Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Notes: Only countries with recent estimates (2010 and later) are included.
Source: Table 2.2.

[Click here for figure data](#)

Equity and Other Issues

Reducing hunger and sustaining the progress made during the MDG era is expected to be challenging for countries that are prone to frequent extreme weather events and natural disasters. Equity issues also exist within each country. For instance, boys have a higher risk of stunting than girls in most member economies in Asia and the Pacific (except for Mongolia, Sri Lanka, and Tajikistan). This gender disparity is more pronounced in Cambodia, the Kyrgyz Republic, the Lao PDR, Papua New Guinea, and Pakistan. (Figure 2.8). On the other hand, cases of overweight boys are more prevalent than those of overweight girls. Significant urban–rural disparities also exist with respect to various health-related indicators. In particular, stunting in rural areas is significantly higher in most economies with available data such as Bangladesh, Cambodia, India, Nepal, and Pakistan.

Figure 2.8: Prevalence of Stunting in Selected Economies, by Sex (%)



Lao PDR = Lao People's Democratic Republic.
Source: United Nations Statistics Division. Sustainable Development Goal Indicators Global Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed September 2016).

[Click here for figure data](#)

Data Gaps

Food security can be viewed in various dimensions including food availability, food accessibility, and food utilization. Food availability is achieved with sustainable agriculture or better bilateral agreements among nonproducing countries with producing countries. Food accessibility is enhanced with sustainable production and equitable and efficient distribution of food. Food utilization initially curbs hunger, and when sustained, can lead to improved nutrition for everybody. The goal traces the cycle of food production, food security, and nourishment. There are eight targets under SDG 2 but only five indicators are regularly collected in Asia and the Pacific. There are no specific indicators on food security and only a proxy indicator for sustainable agriculture.

While nutrition and hunger data up to 2015 are readily available, many targets do not have regularly collected data on relevant indicators. This prevents the generation of a more comprehensive food security analysis of the situation in the region.

Rural infrastructure serves multiple purposes of sharing results of research and development to pursue sustainable agricultural production, procurement of inputs to enhance productivity, delivery of produce to the consumers, and mobility of rural stakeholders to expand income generation beyond agriculture. All these issues eventually boil down to understanding the dynamic food security behavior of a country. Indicators on rural infrastructure further add to data gaps for SDG 2.

Assessing food security is difficult in the absence of indicators for vulnerable segments like the agricultural productivity of small-scale farmers. These segments may contribute at least to food security concerns among their family members. Absence of disaggregated figures could further exacerbate the food security threat among the marginalized segments of the population.

SDG 3: Ensure Healthy Lives and Promote Well-Being for All at All Ages

Proportion of births attended by skilled health personnel. Table 2.4 provides the estimates for all regional member economies. Although the proportion of births attended by skilled health personnel has increased in most parts of Asia and the Pacific in the last 15 years, births in some economies are still at high risk based on the latest data available. These include Timor-Leste (only 29.3% of births are attended by skilled health personnel), the Lao PDR (41.5%), Bangladesh (42.1%), Afghanistan (45.2%), India (52.3%), Pakistan (52.1%), Papua New Guinea (53.0%), and Nepal (55.6%).

Maternal mortality ratio per 100,000 live births. Maternal death results from a composite of factors including quality of pre- and postnatal care, quality of health facilities, skills of personnel during delivery, health status of women, and the general conditions of the well-being of women. The SDG target is to have a rate of lower than 70 maternal deaths per 100,000 births by 2030.

Table 2.4 also provides the estimates of incidence of maternal death per 100,000 births for all regional member economies. As of 2015, the maternal mortality ratio is 123 per 100,000 births in Asia and the Pacific. The highest ratios of maternal death were observed in the Pacific islands (191), followed by Central and West Asia (174), and South Asia (174). The ratios are relatively lower in Southeast Asia (110) and East Asia (27). The five countries in the region with highest prevalence of maternal deaths based on latest data are Afghanistan (396), Nepal (258), Papua New Guinea (215), Timor-Leste (215), and the Lao PDR (197).

Neonatal mortality rate per 1,000 live births. Neonatal death results from poor health condition of the mother and absence of an adequate health care system (including facilities and personnel). The SDG target is to reduce the neonatal mortality rate to at least as low as 12 per 1,000 live births.

As of 2015, DMCs with the highest neonatal mortality rates were Pakistan (46), Afghanistan (36), the Lao PDR (30), India (28), and Myanmar (26). Table 2.4 provides the estimates for regional member economies.

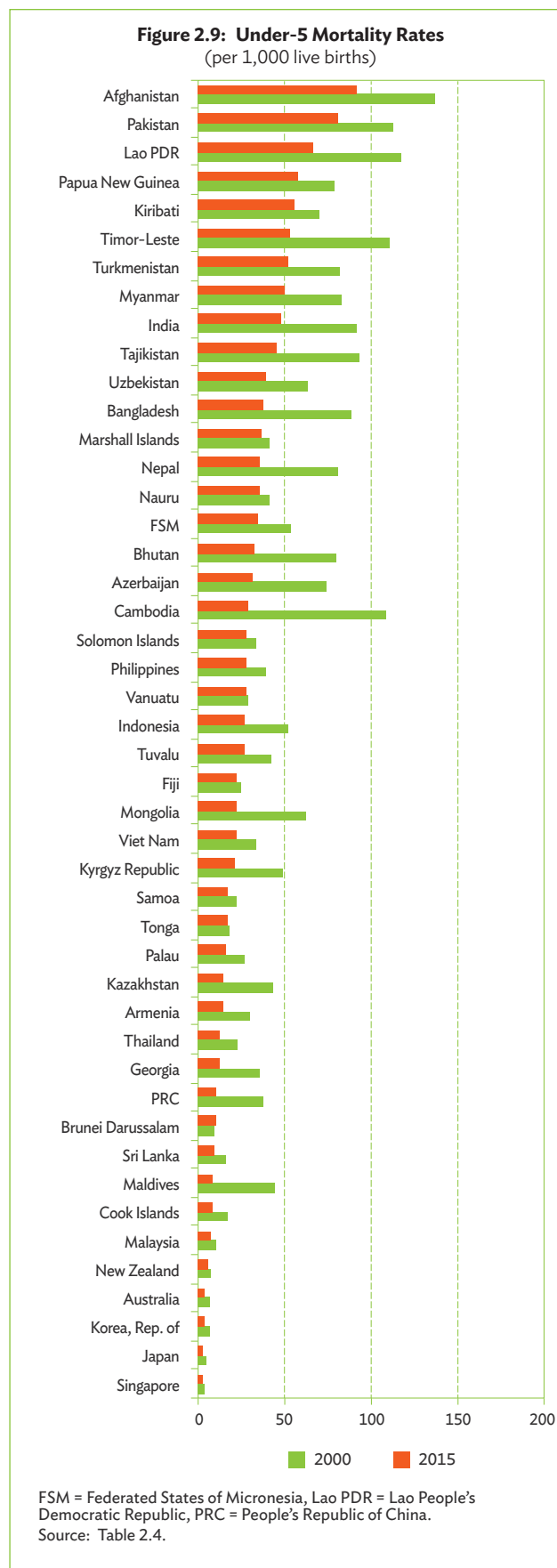
The neonatal mortality rate has been declining over the past 15 years. Among the developed member countries, neonatal mortality is down to three per 1,000 live births in New Zealand, two in Australia, and only one in Japan.

Under-5 mortality rate per 1,000 live births.

Although the under-5 mortality rate in 2015 in Asia and the Pacific is estimated at 36 per 1,000 live births, many countries are already within the SDG target of 25 deaths per 1,000 live births. For instance, the under-5 mortality rates are already below 25 deaths per 1,000 live births in almost half of the member economies. In Southeast Asia, only Cambodia, Indonesia, the Lao PDR, Myanmar, and the Philippines have rates that exceed 25. At the subregional level, Central and West Asia has the highest under-5 mortality rate of 71 deaths per 1,000 live births. Lower rates are reported in the Pacific (51), South Asia (46), Southeast Asia (27), and East Asia (11). On the other hand, under-5 mortality rates are at least three times lower in the developed economies. Figure 2.9 also summarizes how under-5 mortality rates have changed since 2000.

Tuberculosis incidence rate per 100,000 population.

The incidence of tuberculosis remains high in Asia and the Pacific. The economies with the highest incidence of tuberculosis include Timor-Leste (498), Kiribati (497), Papua New Guinea (417), Indonesia (399), and Cambodia (390). Nevertheless, the tuberculosis incidence rate has declined in all but 10 economies. In fact, the incidence of tuberculosis has dropped by at least 30 percentage points since 2000.



[Click here for figure data](#)

Number of new HIV infections per 1,000 uninfected population. The incidence of HIV in Asia and the Pacific varies throughout the region. Between 2000 and 2015, data show that new HIV infections are increasing in Central and West Asia, whereas in most parts of Southeast Asia (except for Indonesia and the Philippines), they are declining. In particular, incidence rates have significantly increased in Azerbaijan, Georgia, Indonesia, Kazakhstan, the Kyrgyz Republic, Pakistan, the Philippines, and Sri Lanka. On the other hand, substantial declines in the incidence of new HIV infections were observed in Cambodia, Malaysia, Myanmar, Nepal, Thailand, and Uzbekistan. As of 2015, HIV incidence per 1,000 uninfected population is highest in Papua New Guinea (0.36), Indonesia (0.29), Georgia (0.28), Myanmar (0.24), and Kazakhstan (0.21).

Mortality rate attributed to cardiovascular disease, cancer, diabetes, or chronic respiratory disease. Mortality rates attributed to these have fallen in all of Asia and the Pacific. During 2000–2012, the most significant reductions in death rates associated with these four main causes of noncommunicable disease were recorded in the Republic of Korea (–44.7%), the Maldives (–43.6%), Singapore (–36.2%), and New Zealand (–32.6%). In contrast, death rates have seen a rise in the Philippines (20.4%), Pakistan (5.1%), Turkmenistan (4.0%), Myanmar (3.1%), and Viet Nam (1.3%). As of 2012, the noncommunicable disease burden (i.e., from cardiovascular disease, cancer, diabetes, or chronic respiratory disease) in terms of mortality were highest in Turkmenistan (40.8%), Kazakhstan (33.9%), Mongolia (32.0%), Uzbekistan (31.0%), Fiji (30.8%), and Afghanistan (30.5%).

Equity and Other Issues

The increased mobilization of resources has paved the way to improved access to high-quality health-care services and, in turn, significant progress with regard to specific health-related targets of MDGs such as the reduction of incidence of HIV, tuberculosis, and child mortality. Nevertheless, improving the health outcomes of people remains an important goal and hence, still plays a key role in shaping sustainable development policies.

Within countries, progress has been uneven as some segments of the population still have higher risks of contracting preventable diseases primarily due to a lack of access to health care services. Hence, a more targeted and evidence-based policy intervention is needed for these vulnerable segments of society. Furthermore, efforts need to be intensified at the grassroots level, collective action needs to be fostered among stakeholders, and continuous funding remains vital especially in light of bringing more inclusive and equal health outcomes across regions and sectors.

On another note, some policy makers and stakeholders have criticized the MDGs for focusing attention and resources on the attainment of specific health-related goals at the expense of supporting broader health systems that are designed to address health issues in a more comprehensive fashion (WHO 2016). Learning from this “focusing problem” entails providing incentives to invest on broader-based health systems. Having a more integrated health system is also important as the prevailing demographic, epidemiological and health conditions within and across the region call for more integrated health systems. Systems

thinking in health—that is, anchoring and achieving efficiency and effectiveness in health organization and governance, financing, physical and human resources, and service delivery—is essential to step up the ladder in achieving the health development goals, generate more responsive policies, and achieve more sustainable outcomes.

Data Gaps

There are 13 targets under SDG 3, but data for six indicators only are widely available for economies of Asia and the Pacific. In addition to model-based estimation, administrative data and person-generated databases (e.g., medical records, transaction history, and internet searches) can be explored to augment existing data. These can also be used in the construction of early warning devices for threats to health and well-being. Disaggregation (e.g., rural–urban; male–female, wealth) of various indicators are needed to tailor-fit various intervention strategies to the most vulnerable segments.

Even for epidemics, only the indicator of tuberculosis is collected regularly. There are no defined indicators yet or they are not regularly measured for many targets including mortality from noncommunicable diseases; substance abuse; mortality from accidents; access to sexual and reproductive healthcare; universal health coverage; mortality from hazardous chemicals; WHO framework on tobacco control; research and development for vaccines and medicines; health financing and recruitment of health personnel; and early warning, risk reduction, and management of national and global health risks. National health surveys for various years, health record databases, and even social media data repositories (e.g., Google Trends) can be used in the development of indicators for other targets following certain data mining algorithms.

SDG 4: Ensure Inclusive and Equitable Quality Education and Promote Lifelong Learning Opportunities for All

There is a wide consensus that the development of skills is an important driver of inclusive growth (ADB 2015). While a person should continuously expand his or her skill set throughout his or her lifetime, a strong foundation of skill development should start during childhood. SDG 4 emphasizes lifelong learning opportunities, implying not only access, but more importantly, the outcomes of all forms of trainings (formal education and otherwise).

Participation rate in organized learning (1 year before the official primary entry age). According to latest available data, the participation rate in preprimary education for regional members is approximately 60%. In addition, 55% of these countries have participation rates greater than 70%. Data have also shown marked improvements in at least three-fourths of regional members, from the earliest to the latest available year. Overall participation rates have improved vastly in the Lao People's Democratic Republic (from 9.5% to 50.4%), Pakistan (from 57.6% to 94.5%), Bangladesh (from 30.1% to 59.9%), Australia (from 52.5% to 80.3%), and Viet Nam (from 69.2% to 94.7%).

Access to preschools among many Southeast Asian countries is comparable to that of the developed member economies. Some economies still have very low preprimary education participation rate, including Azerbaijan, Cambodia, Myanmar, Samoa, and Tajikistan, where less than a third of children are enrolled in preprimary education. While good improvement has been made in access to preschool education in many economies during 2000–2015, programs should be closely monitored to ensure universal access to preschool education by 2030. Table 2.6 provides the estimates for regional member economies.

Trained teachers in preprimary education. While preprimary education is not part of formal education, training of preschool teachers is important because they play a big role in the development of children.

A significant number of teachers in preprimary education in some economies do not have the necessary teacher training. For instance, in Central and West Asia, specifically the Kyrgyz Republic, only 46.2% of preprimary teachers have formal training. In the case of Southeast Asia, 48.4% of the teachers in preprimary education in Myanmar and 64.4% in Brunei Darussalam have formal training. Among the Pacific countries, the proportions of teachers with training are lower in Solomon Islands (59.5%) and the Cook Islands (69.7%). While Nauru has a relatively higher proportion of teachers with training at 82%, Samoa, Tonga, and Vanuatu have already achieved 100%. Table 2.7 provides the estimates for regional member economies.

Percentage of trained teachers in primary education. Among member economies in Asia and the Pacific with available data, the lowest percentage of trained teachers in primary education can be found in Bangladesh (57.7%), Vanuatu (60.5%), and Solomon Islands (64.6%). On the other hand, countries with 100% trained teachers in primary education include Cambodia, Fiji, Kazakhstan, Mongolia, the Philippines, Tajikistan, Thailand, Uzbekistan, and Viet Nam. Table 2.7 provides the estimates for regional member economies.

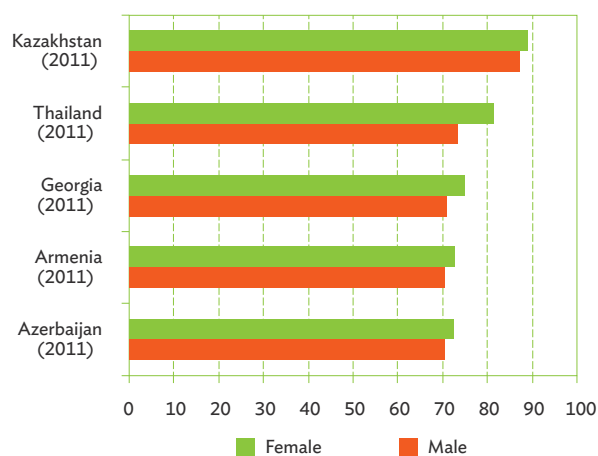
Percentage of trained teachers in lower and upper secondary education. Although data on teacher training for lower and upper secondary education are not available for many economies, empirical evidence in economies with available data suggests that at least 60% of teachers in lower secondary and 34% in upper secondary education are trained. Nine of the 27 reporting economies recorded 100% trained teachers in either lower or upper secondary education—four are from the Pacific (Fiji, Papua New Guinea, Samoa, and Tuvalu); three from Southeast Asia (Cambodia, the Philippines,

and Viet Nam); and Mongolia from East Asia and Uzbekistan from Central and West Asia. The lowest percentages, however, were noted in Bangladesh (59.6%) for lower secondary and in Kiribati (33.6%) for upper secondary education. Table 2.7 provides the estimates for regional member economies.

Equity and Other Issues

Although there has been considerable progress in improving education outcomes of children around the world, particularly enrollment in basic education, through the MDGs, there are other equity issues that the SDGs may have to confront. In Thailand and Georgia, for instance, the latest data available suggest that the proportion of girls who have attained at least a minimum proficiency in mathematics is significantly higher than that of boys (Figure 2.10) while in a few economies like Australia, boys have better proficiency in mathematics than girls. While such a trend could be partly driven by differences in motivation to learn, there is merit in investigating whether there are other gender-differentiating factors at work that lead to boys and girls being unequally prepared for higher educational career.

Figure 2.10: Proportion of Children at the End of Primary Achieving at Least a Minimum Proficiency Level in Mathematics in Selected Economies, by Sex (%)



Source: United Nations Statistics Division. Sustainable Development Goal Indicators Global Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed September 2016).

[Click here for figure data](#)

SDG 5: Achieve Gender Equality and Empower All Women and Girls

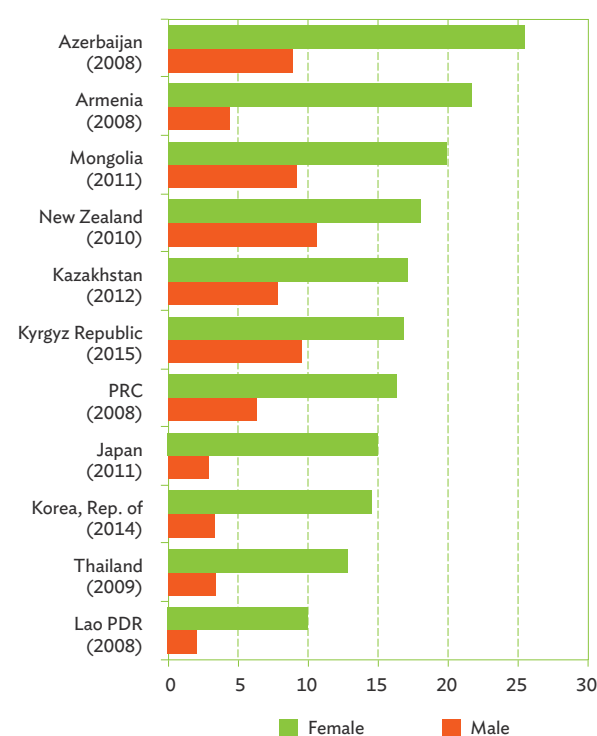
Gender equality and empowerment of women are culturally linked and among the most challenging discourse in development studies. Having recognized that women's representation in political and economic decision-making processes is a critical ingredient to fuel sustainable development, the SDGs remain committed in advancing gender equality.

Proportion of women aged 20–24 years who were married or in a union before age 15 and before age 18. Being married at a very young age may limit women's ability to optimize their potential and in turn could have adverse consequences on women's economic prospects. While available data suggest that the proportion of women who were married or in a union by the age of 15 is less than 5% in almost all member economies, in 19 out of 24 economies with available data, more than 10% of women aged 20–24 years were married or in a union before age 18.

Proportion of seats held by women in national parliaments. Table 2.8 shows the estimated proportion of seats in national parliaments held by women in economies of Asia and the Pacific. Among developed economies, Australia and New Zealand have relatively high proportion of national parliament seats held by women. On the other hand, about 9.5% of national parliament seats are held by women in Japan based on latest data. Among developing member economies, Timor-Leste (38.5%), Nepal (27.5%), Afghanistan (27.7%), the Philippines (27.2%) and Kazakhstan (26.2%) have the highest proportion of seats in national parliament that are held by women, while Solomon Islands (2.0%), Papua New Guinea (2.7%) and Sri Lanka (4.9%) have the lowest estimates.

Time spent on unpaid domestic and care work. There are differences in the amount of time men and women spend performing unpaid domestic and

Figure 2.11: Time Spent on Unpaid Domestic and Care Work in Selected Economies, by Sex (%)



Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China. Note: Only economies with recent estimates (2008 and later) are included. Source: United Nations Statistics Division. Sustainable Development Goal Indicators Global Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed September 2016).

[Click here for figure data](#)

care work. Based on available data, women in Asia and the Pacific spent anywhere between 10% and 25% of their time doing unpaid domestic and care work, while their male counterparts spent anywhere between 2% and 11% doing the same (Figure 2.11).

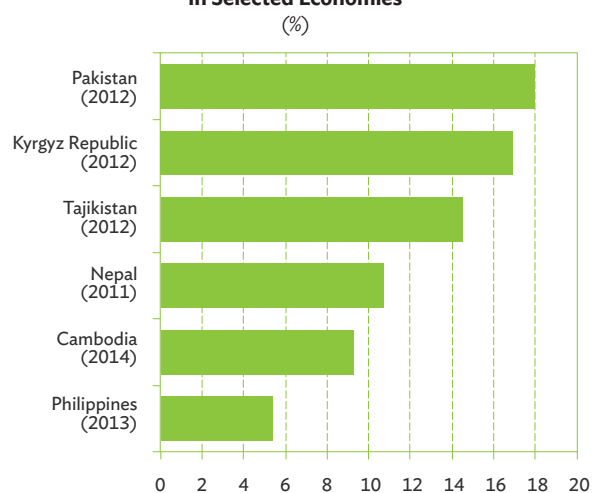
Percentage of women aged 15–49 years who have experienced physical or sexual violence by a current or former intimate partner in the previous 12 months. Empirical data suggest that in Asia and the Pacific, as much as 18.0% (Nepal) of women aged 15–49 years in some economies have experienced physical violence, while as much as 7.7% (Pakistan) experienced sexual violence by a partner. Figure 2.12a and Figure 2.12b presents the numbers for economies based on latest data available.

Data Gaps

Compared to MDG 3 that also aimed to promote gender equality and women empowerment, SDG 5 covers more areas such as elimination of violence against women and girls, addressing legal and cultural barriers that impose constraints on women's sexual and reproductive health, and the recognition of the value of unpaid and domestic work, among

others. Despite these advances, significant data gaps exist. In particular, out of the 14 indicators in SDG 5, only four are classified as Tier 1. Most of the remaining indicators do not have established data collection standards, and thus, are not collected regularly. Nevertheless, there are ongoing initiatives to address such data gaps. Box 2.2 discusses one such initiative.

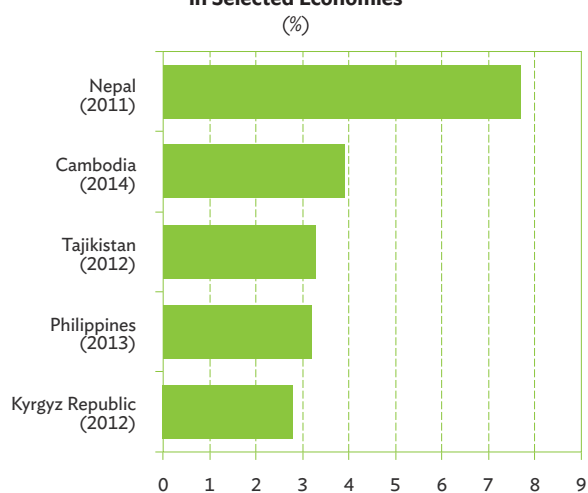
Figure 2.12a: Proportion of Women Aged 15–49 Years Who Have Experienced Physical Violence by a Current or Former Intimate Partner in the Previous 12 Months in Selected Economies



Note: Only economies with recent estimates (2010 and later) are included.
Source: United Nations. 2015. *The World's Women 2015: Trends and Statistics*. New York.

[Click here for figure data](#)

Figure 2.12b: Proportion of Women Aged 15–49 Years Who Have Experienced Sexual Violence by a Current or Former Intimate Partner in the Previous 12 Months in Selected Economies



Note: Only economies with recent estimates (2010 and later) are included.
Source: United Nations. 2015. *The World's Women 2015: Trends and Statistics*. New York.

[Click here for figure data](#)

Box 2.2: Measuring Asset Ownership and Entrepreneurship from a Gender Perspective

Like the Millennium Development Goals (MDGs), the Sustainable Development Goals (SDGs) highlight the importance of having a global action to enhance statistics capacity to address the data requirements for monitoring progress in achieving socioeconomic development that is inclusive for both men and women. Although significant progress has been made in terms of providing gender-disaggregated data on educational and occupational outcomes, major gaps in the availability and quality of gender statistics remain in terms of access to economic resources. To capture the gender dimensions in this area, the United Nations Statistics Division (UNSD) and the UN Entity for Gender Equality and the Empowerment of Women, in collaboration with other development partners like the Asian Development Bank, have launched the Evidence and Data for Gender Equality (EDGE), a global initiative on gender statistics, which aims to establish standard definitions and data collection guidelines for producing timely and reliable sex-disaggregated data on entrepreneurship and asset ownership, along with other socioeconomic development outcomes.

As part of the EDGE initiative, the Survey on Measuring Asset Ownership and Entrepreneurship from a Gender Perspective has been designed to collect empirical evidence that facilitates a more nuanced understanding of the gender inequalities that exist in terms of access to economic resources. Moreover, it potentially addresses the information gap on the disaggregated data (i.e., information available by location, age, religion, ethnicity, education, and employment). Unlike the traditional method that collects data on assets at the household level, the EDGE survey employs a data collection approach at the individual level, consequently providing and highlighting an individual unit of analysis on ownership and rights. Particularly, it seeks to determine the ownership status of the individual members of the household (i.e., whether assets are owned exclusively or jointly); how these assets are acquired, including the value and use of these assets; who has the rights to bequeath and/or sell these assets; who primarily makes the decisions regarding their economic use; and who derives income from assets.

A household member may be classified as an asset owner in two ways. The first is when an interviewed household member reports himself or herself as an owner. This is termed the *self-assigned ownership approach*. The second way is when at least one of the interviewed household members reports another household member as an owner. This is termed the *most inclusive approach*. Between the two approaches, the most inclusive approach provides a broader definition of ownership as it considers the information provided by all respondents collectively. The former dwells on interviewing a specific member of the households and is strictly based on a respondent's reporting regarding themselves. For validity and to make it comparable with intra-household reporting and/or with nonrespondents' ownership of assets, two different sets of survey weights were used. Furthermore, while broad categories of assets are captured by the survey instruments, the distinctions between reported, documented, and economic types of ownership are also taken into account. This overall approach lends itself better than other surveys due to its uniqueness. The three types of ownership are recorded by asking the following questions: Which household members own this asset (*reported*)? Whose names are listed as owners on the ownership document of this asset (*documented*)? And, if this asset is to be sold, which members of this household would be involved in the decision to sell (*economic*)?

In addition to the different types of ownership, the EDGE survey also collects information on *exclusively* and *jointly owned* assets. Knowing whether an asset is exclusively owned by a person or jointly owned with someone else is important to our understanding of the social and economic dynamics that exist within the household.

While the novelty of the EDGE survey lies in collecting data on asset ownership at the individual level, it also presents several methodological challenges. In particular, individuals within the same household may have a varying perception of which assets are owned by every member. They may also have a different understanding of how the assets are owned. For example, consider a hypothetical household consisting of three members—A, B, and C. For simplicity, let us focus on a specific type of asset, say household dwelling. Box Table shows the data on type and form of ownership as reported by each household member. The rows correspond to the information reported by each household member while the columns represent how each member perceives the ownership status of the other members. Here, member A reports that he/she is the exclusive owner of the household's dwelling and, according to him/her, B and C would be involved in making a decision to sell the dwelling but they are neither reported nor documented owners. On the other hand, B thinks that he/she jointly owns the dwelling with A, while C reports that instead of B, it is he/she who co-owns the asset with A. If we follow the self-assigned approach in estimating the distribution of type and form of ownership, we will consider all the information as if they are all true. The task becomes more complicated if we are looking at different types of assets, say parcel of land. In particular, it is difficult to come up with an inventory or full list of all land parcels owned by all household members because it is not straightforward to know if each household member is referring to the same or different parcels of land during the interview. Another source of difficulty is the possibility that some assets are hidden from some household members.

continued.

Box 2.2: *(continued)***Sample Evidence and Data for Gender Equality Survey Data on Ownership Status**

Household Member	A	B	C
A	reported, documented, economic, exclusive	economic	economic
B	reported, documented, economic, jointly	reported, economic, jointly	reported, economic, jointly
C	reported, economic, jointly	economic	reported, economic, jointly

Since perception bias among respondents regarding reporting of assets, ownership status, and overlapping of reported assets among owners is possible, further studies that focus on the rigorous approaches of developing an inventory of assets are needed. The UNSD is currently preparing a set of guidelines on measuring asset ownership and entrepreneurship from a gender perspective to be presented at the UN Security Council next year. The guidelines will benefit from the rich experience of the pilot surveys in Georgia, Mongolia, and the Philippines where the Asian Development Bank and the countries' respective national statistics offices conducted the EDGE stand-alone pilot survey, as well as from other EDGE-related surveys carried in few other countries by other collaborating agencies.

Notes: The results from the three stand-alone pilot surveys in Georgia, Mongolia, and the Philippines under ADB's Regional Technical Assistance 8243 are being finalized at the time of writing.

Table 2.1: **Selected Indicators for SDG 1 - Poverty**

By 2030, eradicate extreme poverty for all people everywhere, measured as people living below the international poverty line

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

Regional Member	1.1.1 Proportion of Population below the International Poverty Line ^a		1.2.1 Proportion of Population Living below the National Poverty Line	
	(^a)		(^a)	
	Initial Year	Latest Year	Initial Year	Latest Year
Developing Member Economies				
Central and West Asia				
Afghanistan	...	...	36.3 (2007)	39.1 (2014)
Armenia	19.3 (2001)	2.3 (2014)	48.3 (2001)	30.0 (2014)
Azerbaijan	2.7 (2001)	0.5 (2008)	49.6 (2001)	5.0 (2014)
Georgia	21.0 (2000)	9.8 (2014)	6.4 ^b (2007)	10.1 (2015)
Kazakhstan	10.5 (2001)	0.0 (2013)	46.7 (2001)	2.7 (2015)
Kyrgyz Republic	42.2 (2000)	1.3 (2014)	39.9 (2006)	32.1 (2015)
Pakistan ^c	28.7 (2001)	6.1 (2013)	64.3 (2001)	29.5 (2013)
Tajikistan	54.4 (1999)	19.5 (2014)	34.3 (2013)	32.0 (2015)
Turkmenistan	42.3 (1998)	...	...	...
Uzbekistan	68.1 (2000)	66.8 (2003)	27.5 (2001)	12.8 (2015)
East Asia				
China, People's Rep. of	40.5 ^d (1999)	1.9 ^d (2013)	17.2 ^e (2010)	7.2 ^e (2014)
Hong Kong, China	...	...	...	...
Korea, Rep. of	...	...	16.5 (2012)	16.3 (2014)
Mongolia	10.6 (2002)	0.2 (2014)	38.8 (2010)	21.6 (2014)
Taipei, China	...	...	0.7 ^f (2000)	1.5 ^f (2014)
South Asia				
Bangladesh	33.7 (2000)	18.5 (2010)	48.9 (2000)	31.5 (2010)
Bhutan ^g	35.2 (2003)	2.2 (2012)	23.2 (2007)	12.0 (2012)
India ^c	38.2 ^d (2004)	21.2 ^d (2011)	37.2 (2004)	21.9 (2011)
Maldives ^c	10.0 (2002)	7.3 (2009)	23.0 (2002)	15.0 ^h (2009)
Nepal ^c	46.1 (2003)	15.0 (2010)	...	25.2 (2010)
Sri Lanka ^c	8.3 (2002)	1.9 (2012)	22.7 (2002)	6.7 (2012)
Southeast Asia				
Brunei Darussalam	...	...	...	...
Cambodia	18.6 (2004)	2.2 (2012)	50.2 (2004)	14.0 (2014)
Indonesia	39.8 ^d (2000)	8.3 ^d (2014)	19.1 ⁱ (2000)	10.9 ^j (2016)
Lao PDR ^c	26.1 (2002)	16.7 (2012)	33.5 (2002)	23.2 (2012)
Malaysia	0.4 (2004)	0.3 (2009)	6.0 (2002)	0.6 (2014)
Myanmar	...	...	32.1 (2005)	25.6 (2010)
Philippines	18.4 (2000)	13.1 (2012)	24.9 (2003)	25.2 (2012)
Singapore	...	...	...	...
Thailand	2.6 (2000)	0.0 (2013)	42.3 (2000)	10.5 (2014)
Viet Nam ^c	38.8 (2002)	3.1 (2014)	28.9 (2002)	7.0 (2015)
The Pacific				
Cook Islands	...	...	...	28.4 ^k (2006)
Fiji ^c	5.5 (2002)	4.1 (2008)	39.8 ^k (2002)	35.2 ^k (2008)
Kiribati	14.1 (2006)	...	21.8 ^k (2006)	...
Marshall Islands	...	...	...	...
Micronesia, Fed. States of	11.4 (2005)	17.4 (2013)	27.9 ^k (1998)	31.4 ^k (2005)
Nauru	...	...	25.1 ^k (2006)	...
Palau	...	...	24.9 ^k (2006)	...
Papua New Guinea ^c	...	39.3 (2009)	...	39.9 ^l (2009)
Samoa	...	0.8 (2008)	22.9 (2002)	26.9 ^k (2008)
Solomon Islands ^c	45.6 (2005)	...	22.7 ^k (2006)	12.7 ^k (2013)
Timor-Leste	44.2 (2001)	46.8 (2007)	36.3 ^k (2001)	41.8 (2014)
Tonga	2.8 (2001)	1.1 (2009)	16.2 ^k (2001)	22.5 ^k (2009)
Tuvalu ^c	...	2.7 (2010)	21.2 ^k (2005)	26.3 ^k (2010)
Vanuatu	...	15.4 (2010)	13.0 ^k (2006)	12.7 ^k (2010)
Developed Member Economies				
Australia	1.4 (2001)	0.7 (2010)	...	...
Japan	0.4 (2008)	0.4 (2008)	...	...
New Zealand	...	...	...	...

... = data not available at cutoff date, 0.0 = magnitude is less than half of unit employed, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

a Data are consumption-based, except for Australia, Japan, and Malaysia, which are income-based. The estimates are based on \$1.90 (2011 purchasing power parity) a day poverty line.

b Refers to registered poverty. For relative poverty or share of population under 60% of median consumption, the data are 24.6% for 2004 and 20.1% for 2015.

c Household income and expenditure surveys for these economies were conducted in overlapping years. The table adopts the approach of the World Bank's World Development Indicators of using the initial year of the survey as the reference period for the poverty estimates.

d Weighted average of rural and urban estimates.

e Refers to rural areas only.

f Refers to percentage of low-income population to total population.

g Estimate for 2003 is based on data from the World Bank's PovcalNet database. An alternative estimate is from the United Nations Statistics Division's SDG Indicators Global Database, which is equal to 24.9% for the same year.

h Refers to poverty estimate for 2009/10.

i Reference period is February 2000.

j Reference period is March 2016.

k Data refer to percentage of population below the basic needs poverty line.

l Refers to poverty headcount ratio using Papua New Guinea's upper poverty line.

Sources: World Bank. PovcalNet Database. <http://iresearch.worldbank.org/PovcalNet/povDuplicateWB.aspx> (accessed 4 October 2016); economy sources; United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016); World Bank. World Development Indicators. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators> (accessed 26 April 2016).

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

Table 2.2: **Selected Indicators for SDG 2 - Malnutrition**

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

Regional Member	2.1.1 Prevalence of Undernourishment (%)		2.2.1 Prevalence of Stunting among Children under 5 Years of Age ^a (%)	
	1999–2001 ^b	2014–2016 ^c	Initial Year	Latest Year
Developing Member Economies				
Central and West Asia				
Afghanistan	45.2	26.8	59.3 (2004)	40.9 (2013)
Armenia	21.4	5.8	17.7 (2000)	20.8 (2010)
Azerbaijan	22.5	<5.0	24.1 (2000)	18.0 (2013)
Georgia	14.8	7.4	16.1 (1999)	11.3 (2009)
Kazakhstan	<5.0	<5.0	13.9 (1999)	8.0 (2015)
Kyrgyz Republic	15.2	6.0	18.1 (2006)	12.9 (2014)
Pakistan	22.4	22.0	41.5 (2001)	45.0 (2012)
Tajikistan	38.8	33.2	42.1 (2000)	26.8 (2012)
Turkmenistan	9.0	<5.0	28.1 (2000)	18.9 (2006)
Uzbekistan	11.5	<5.0	25.3 (2002)	19.6 (2006)
East Asia				
China, People's Rep. of	16.2	9.3	17.8 (2000)	9.4 (2010)
Hong Kong, China	...	...	...	...
Korea, Rep. of	<5.0	<5.0	2.5 (2003)	2.5 (2010)
Mongolia	38.2	20.5	29.8 (2000)	10.8 (2013)
Taipei, China	...	...	...	...
South Asia				
Bangladesh	23.1	16.4	50.8 (2000)	36.1 (2014)
Bhutan	...	...	47.7 (1999)	33.6 (2010)
India	17.0	15.2	54.2 (1999)	38.7 (2014)
Maldives	11.8	5.2	31.9 (2001)	20.3 (2009)
Nepal	22.2	7.8	57.1 (2001)	37.4 (2014)
Sri Lanka	29.9	22.0	18.4 (2000)	14.7 (2012)
Southeast Asia				
Brunei Darussalam	<5.0	<5.0	...	19.7 (2009)
Cambodia	32.0	14.2	49.2 (2000)	32.4 (2014)
Indonesia	17.2	7.6	42.4 (2000)	36.4 (2013)
Lao PDR	39.2	18.5	48.2 (2000)	43.8 (2011)
Malaysia	<5.0	<5.0	20.7 (1999)	17.2 (2006)
Myanmar	52.4	14.2	40.8 (2000)	35.1 (2009)
Philippines	21.3	13.5	38.3 (1998)	30.3 (2013)
Singapore	...	...	4.4 (2000)	...
Thailand	19.0	7.4	15.7 (2006)	16.3 (2012)
Viet Nam	28.1	11.0	43.4 (2000)	24.9 (2014)
The Pacific				
Cook Islands	...	...	...	...
Fiji	<5.0	<5.0	...	...
Kiribati	<5.0	<5.0	...	...
Marshall Islands	...	...	...	...
Micronesia, Fed. States of	...	...	...	...
Nauru	...	...	24.0 (2007)	...
Palau	...	...	...	...
Papua New Guinea	...	...	43.9 (2005)	49.5 (2010)
Samoa	6.6	<5.0	6.4 (1999)	...
Solomon Islands	15.0	11.3	32.8 (2007)	...
Timor-Leste ^d	43.9	26.9	55.7 (2002)	57.7 (2009)
Tonga	...	...	...	8.1 (2012)
Tuvalu	...	...	10.0 (2007)	...
Vanuatu	8.1	6.4	25.9 (2007)	28.5 (2013)
Developed Member Economies				
Australia	<5.0	<5.0	2.0 (2007)	...
Japan	<5.0	<5.0	...	7.1 (2010)
New Zealand	<5.0	<5.0	...	...

(continued)

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

Table 2.2: **Selected Indicators for SDG 2 - Malnutrition** (continued)

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

Regional Member	2.2.2.a Prevalence of Malnutrition (Wasting) among Children under 5 Years of Age ^a		2.2.2.b Prevalence of Malnutrition (Overweight) among Children under 5 Years of Age ^a	
	Initial Year	Latest Year	Initial Year	Latest Year
Developing Member Economies				
Central and West Asia				
Afghanistan	8.6 (2004)	9.5 (2013)	4.6 (2004)	5.4 (2013)
Armenia	2.5 (2000)	4.2 (2010)	16.0 (2000)	16.8 (2010)
Azerbaijan	9.0 (2000)	3.1 (2013)	6.2 (2000)	13.0 (2013)
Georgia	3.1 (1999)	1.6 (2009)	17.9 (1999)	19.9 (2009)
Kazakhstan	2.5 (1999)	3.1 (2015)	5.3 (1999)	9.3 (2015)
Kyrgyz Republic	3.4 (2006)	2.8 (2014)	10.7 (2006)	7.0 (2014)
Pakistan	14.2 (2001)	10.5 (2012)	4.8 (2001)	4.8 (2012)
Tajikistan	9.4 (2000)	9.9 (2012)	6.7 (2005)	6.6 (2012)
Turkmenistan	7.1 (2000)	7.2 (2006)	4.5 (2006)	...
Uzbekistan	8.9 (2002)	4.5 (2006)	11.1 (2002)	12.8 (2006)
East Asia				
China, People's Rep. of	2.5 (2000)	2.3 (2010)	3.4 (2000)	6.6 (2010)
Hong Kong, China	...	...	...	...
Korea, Rep. of	0.9 (2003)	1.2 (2010)	6.2 (2003)	7.3 (2010)
Mongolia	7.1 (2000)	1.0 (2013)	12.7 (2000)	10.5 (2013)
Taipei, China	...	...	...	...
South Asia				
Bangladesh	12.5 (2000)	14.3 (2014)	0.9 (2000)	1.4 (2014)
Bhutan	2.5 (1999)	5.9 (2010)	3.9 (1999)	7.6 (2010)
India	17.1 (1999)	15.1 (2014)	2.9 (1999)	1.9 (2006)
Maldives	13.4 (2001)	10.2 (2009)	3.9 (2001)	6.5 (2009)
Nepal	11.3 (2001)	11.3 (2014)	0.7 (2001)	2.1 (2014)
Sri Lanka	15.5 (2000)	21.4 (2012)	1.0 (2000)	0.6 (2012)
Southeast Asia				
Brunei Darussalam	...	2.9 (2009)	...	8.3 (2009)
Cambodia	16.9 (2000)	9.6 (2014)	4.0 (2000)	2.0 (2014)
Indonesia	5.5 (2000)	13.5 (2013)	1.5 (2000)	11.5 (2013)
Lao PDR	17.5 (2000)	6.4 (2011)	2.7 (2000)	2.0 (2011)
Malaysia	15.3 (1999)	...	5.5 (1999)	...
Myanmar	10.7 (2000)	7.9 (2009)	2.4 (2000)	2.6 (2009)
Philippines	8.0 (1998)	7.9 (2013)	1.9 (1998)	5.0 (2013)
Singapore	3.6 (2000)	...	2.6 (2000)	...
Thailand	4.7 (2006)	6.7 (2012)	8.0 (2006)	10.9 (2012)
Viet Nam	6.1 (2000)	6.8 (2014)	2.5 (2000)	3.5 (2014)
The Pacific				
Cook Islands	...	...	...	...
Fiji	6.3 (2004)	...	5.1 (2004)	...
Kiribati	...	...	...	...
Marshall Islands	...	...	...	...
Micronesia, Fed. States of	...	...	...	...
Nauru	1.0 (2007)	...	2.8 (2007)	...
Palau	...	...	...	...
Papua New Guinea	4.4 (2005)	14.3 (2010)	3.4 (2005)	13.8 (2010)
Samoa	1.3 (1999)	...	6.2 (1999)	...
Solomon Islands	4.3 (2007)	...	2.5 (2007)	...
Timor-Leste ^d	13.7 (2002)	18.9 (2009)	5.7 (2002)	5.8 (2009)
Tonga	...	5.2 (2012)	...	17.3 (2012)
Tuvalu	3.3 (2007)	...	...	6.3 (2007)
Vanuatu	5.9 (2007)	4.4 (2013)	4.7 (2007)	4.6 (2013)
Developed Member Economies				
Australia	– (2007)	...	7.7 (2007)	...
Japan	...	2.3 (2010)	...	1.5 (2010)
New Zealand	...	...	...	...

... = data not available at cutoff date, – = magnitude equals zero, 0.0 = magnitude is less than half of unit employed, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

a According to the World Health Organization, for some economies the estimates were adjusted where necessary to be nationally representative and to cover the age range 0–5 years, which might result in slight differences in prevalence from the survey results reported. Estimates for some economies are also “pending re-analysis.” Details can be found in the “Notes” column of the joint child malnutrition dataset.

b Data refer to 3-year average from 1999–2001.

c Data refer to 3-year average from 2014–2016.

d For Timor-Leste, data are available for 2013 for indicators 2.2.1(50.2%), 2.2.2a (11.0%) and 2.2.2b (1.5%) in the United Nations Statistics Division's SDG Database, but are pending re-analysis.

Sources: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016); Food and Agriculture Organization of the United Nations. FAOSTAT. <http://faostat3.fao.org/download/D/FS/E> (accessed 16 August 2016); World Bank. World Development Indicators. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators> (accessed 26 April 2016); World Health Organization. Joint Child Malnutrition Estimates – Levels and Trends (2016 Edition). <http://www.who.int/nutgrowthdb/estimates2015/en/> (accessed 28 September 2016).

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Table 2.3: **Selected Indicators for SDG 2 - Agricultural Investment**

By 2030, 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

Regional Member	2.a.2 Total Official Flows (Official Development Assistance Plus Other Official Flows) to the Agriculture Sector	
	2000 ^a	2014 ^b
Developing Member Economies		
Central and West Asia		
Afghanistan	5.0	408.6
Armenia	15.4	17.2
Azerbaijan	81.3	38.4
Georgia	39.9	27.8
Kazakhstan	4.3	6.2
Kyrgyz Republic	89.1	16.1
Pakistan	67.9	351.4
Tajikistan	25.6	27.2
Turkmenistan	0.0	0.1
Uzbekistan	0.3	54.7
East Asia		
China, People's Rep. of	355.0	307.5
Hong Kong, China	...	...
Korea, Rep. of	...	...
Mongolia	4.4	20.5
Taipei, China	...	...
South Asia		
Bangladesh	389.8	349.8
Bhutan	6.4	13.4
India	251.5	1,013.3
Maldives	0.0	1.6
Nepal	83.8	87.3
Sri Lanka	56.7	51.5
Southeast Asia		
Brunei Darussalam	...	...
Cambodia	176.2	129.4
Indonesia	229.2	314.7
Lao PDR	31.1	74.8
Malaysia	9.7	3.4
Myanmar	2.1	78.9
Philippines	384.8	99.8
Singapore	...	...
Thailand	32.0	22.5
Viet Nam	121.0	278.3
The Pacific		
Cook Islands	0.0	0.3
Fiji	1.2	7.3
Kiribati	8.1	3.3
Marshall Islands	3.3	0.7
Micronesia, Fed. States of	9.8	0.9
Nauru	0.2 (2003)	0.9
Palau	0.2	0.6
Papua New Guinea	65.8	33.2
Samoa	3.0	2.3
Solomon Islands	3.9	7.2
Timor-Leste ^d	9.9	32.2
Tonga	0.3	1.1
Tuvalu	7.4 (2001)	0.9
Vanuatu	4.3	4.6
Developed Member Economies		
Australia	...	...
Japan	...	...
New Zealand	...	...

... = data not available at cutoff date; 0.0 = magnitude is less than half of unit employed, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

a Data refer to commitments (constant 2014 \$ million) except for Nauru, which refer to gross disbursements (constant 2014 \$ million).

b Data refer to gross disbursements (constant 2014 \$ million).

Source: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016).

Table 2.4: **Selected Indicators for SDG 3 - Maternal and Child Health**

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

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 birth

Regional Member	3.1.1 Maternal Mortality Ratio (per 100,000 live births) ^a		3.1.2 Proportion of Births Attended by Skilled Health Personnel (%)		3.2.1 Under-5 Mortality Rate (per 1,000 live births) ^a		3.2.2 Neonatal Mortality Rate (per 1,000 live births) ^a	
	2000	2015	2000	2014	2000	2015	2000	2015
Developing Member Economies								
Central and West Asia	365	174			106	71	52	37
Afghanistan	1,100	396	14.3 (2003)	45.2	137	91	45	36
Armenia	40	25	96.8	99.5 (2010)	30	14	16	7
Azerbaijan	48	25	84.1	97.2 (2011)	74	32	33	18
Georgia	37	36	95.7	99.9	36	12	21	7
Kazakhstan	65	12	98.3	99.9 (2011)	44	14	20	7
Kyrgyz Republic	74	76	98.6	98.4	49	21	22	12
Pakistan	306	178	23.0 (2002)	52.1 (2013)	112	81	60	46
Tajikistan	68	32	71.1	87.4 (2012)	93	45	30	21
Turkmenistan	59	42	97.2	99.5 (2006)	82	51	31	23
Uzbekistan	34	36	95.6	99.9 (2006)	63	39	29	20
East Asia	57	27			36	11	21	5
China, People's Rep. of	58	27	96.6	99.9	37	11	21	6
Hong Kong, China	3 (2014)	2	100.0 (2005)	...	...	...	...	...
Korea, Rep. of	16	11	100.0 (2003)	...	6	3	2	2
Mongolia	161	44	96.6	98.9	63	22	26	11
Taipei, China	8	7 (2014)	...	...	...	...	...	...
South Asia	377	174			90	46	44	27
Bangladesh	399	176	13.9	42.1	88	38	43	23
Bhutan	423	148	23.7	74.6 (2012)	80	33	33	18
India	374	174	42.5	52.3 (2008)	91	48	45	28
Maldives	163	68	70.3 (2001)	95.5 (2012)	44	9	26	5
Nepal	548	258	11.9	55.6	81	36	39	22
Sri Lanka	57	30	96.0	98.6 (2007)	16	10	10	5
Southeast Asia	199	110			49	27	21	13
Brunei Darussalam	31	23	99.9 (2009)	99.7 (2013)	9	10	5	4
Cambodia	484	161	31.8	89.0	108	29	36	15
Indonesia	265	126	66.3 (2003)	87.4 (2013)	52	27	22	14
Lao PDR	546	197	19.4	41.5 (2012)	118	67	43	30
Malaysia	58	40	96.6	99.0	10	7	5	4
Myanmar	308	178	57.0 (2001)	70.6 (2010)	82	50	37	26
Philippines	124	114	59.8 (2003)	72.8 (2013)	40	28	17	13
Singapore	18	10	99.7 (2004)	...	4	3	2	1
Thailand	25	20	99.3	99.6 (2012)	23	12	13	7
Viet Nam	81	54	69.6	93.8	34	22	16	11
The Pacific	346	191			73	51	28	22
Cook Islands	...	...	98.0 (2001)	100.0 (2009)	17	8	9	4
Fiji	42	30	99.0	99.6 (2013)	25	22	14	10
Kiribati	166	90	63.0 (2005)	79.8 (2009)	71	56	29	24
Marshall Islands	...	...	86.2 (2007)	90.1 (2011)	41	36	19	17
Micronesia, Fed. States of	153	100	87.7 (2001)	100.0 (2009)	54	35	26	19
Nauru	...	...	97.4 (2007)	...	41	35	25	23
Palau	...	...	100.0 (2002)	100.0	27	16	15	9
Papua New Guinea	342	215	41.0	53.0 (2006)	79	57	30	25
Samoa	93	51	80.8 (2009)	82.5	22	18	12	10
Solomon Islands	214	114	85.5 (2007)	...	33	28	14	12
Timor-Leste	694	215	23.7 (2002)	29.3 (2010)	110	53	37	22
Tonga	97	124	95.3	97.9 (2012)	18	17	8	7
Tuvalu	...	...	100.0 (2002)	97.9 (2007)	43	27	25	18
Vanuatu	144	78	74.0 (2007)	89.4 (2013)	29	28	12	12
Developed Member Economies	10	5			5	3	2	1
Australia	9	6	100.0 (2003)	...	6	4	4	2
Japan	10	5	99.8 (2004)	...	5	3	2	1
New Zealand	12	11	96.6 (2001)	...	7	6	4	3
DEVELOPING MEMBER ECONOMIES	269	125			71	36	35	20
REGIONAL MEMBERS	263	123			70	36	35	20
WORLD	341	216			76	43	31	19

... = data not available at cutoff date, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

a Regional aggregates are weighted averages estimated using population of annual live births for the respective year headings. The data for under-five and neonatal deaths are from the UNICEF Global Databases. Aggregates are derived for reporting economies only. For maternal mortality ratio, aggregates for East Asia exclude Taipei, China.

Sources: For Indicator 3.1.1: World Health Organization. *Trends in Maternal Mortality: 1990 to 2015 Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division*; for Hong Kong, China: Centre for Health Protection. Official website: <http://www.chp.gov.hk/en/data/4/10/27/110.html> (accessed 28 September 2016) and for Taipei, China: Directorate-General of Budget, Accounting, and Statistics. http://eng.dgbas.gov.tw/public/data/dgbas03/bs2/yearbook_eng/y066.pdf. For Indicator 3.1.2: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016) and World Development Indicators. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators> (accessed 26 April 2016). For Indicators 3.2.1 and 3.2.2: United Nations International Children's Emergency Fund. Global Databases <http://www.data.unicef.org> (accessed 1 September 2016).

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

Table 2.5: **Selected Indicators for SDG 3 - Communicable and Noncommunicable Diseases, Adolescent Birthrate, and Death Rates**

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

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

Regional Member	3.3.1 Number of New HIV Infections (per 1,000 uninfected population)		3.3.2 Tuberculosis Incidence (per 100,000 population)		3.3.3 Incidence of Malaria (per 1,000 population)		3.4.1 Mortality Rate Attributed to Cardiovascular Disease, Cancer, Diabetes, or Chronic Respiratory Disease (%)	
	2000	2015	2000	2014	2000	2013	2000	2012
Developing Member Economies								
Central and West Asia								
Afghanistan	0.02	0.03	190	189	142.8	15.7	33.4	30.5
Armenia	0.12	0.14	61	45	...	...	31.5	29.7
Azerbaijan	0.05	0.12	681	77	17.9	-	32.0	23.3
Georgia	0.07	0.28	254	106	11.3	-	25.0	21.6
Kazakhstan	0.06	0.21	177	99	...	...	42.0	33.9
Kyrgyz Republic	0.05	0.16	244	142	6.7	-	34.2	28.6
Pakistan	0.01	0.09	275	270	43.3	12.8	19.5	20.5
Tajikistan	0.17	0.19	219	91	18.3	0.0	30.3	28.8
Turkmenistan	...	...	208	64	...	...	39.3	40.8
Uzbekistan	0.32	0.01	99	82	5.6	-	32.9	31.0
East Asia								
China, People's Rep. of	...	...	109	68	0.1	0.0	23.1	19.4
Hong Kong, China	...	...	110	74	...	...	...	...
Korea, Rep. of	...	...	80	86	2.8	0.2	16.9	9.3
Mongolia	-	0.02	253	170	...	...	39.6	32.0
Taipei, China	...	...	...	...	...	...	...	...
South Asia								
Bangladesh	-	0.01	225	227	364.9	68.7	18.7	17.5
Bhutan	...	...	402	164	27.5	0.1	23.8	20.5
India	...	...	216	167	40.4	23.7	28.7	26.3
Maldives	...	...	64	41	...	...	28.3	16.0
Nepal	0.32	0.05	163	158	10.8	1.2	26.0	21.6
Sri Lanka	0.01	0.03	66	65	107.0	-	23.4	17.6
Southeast Asia								
Brunei Darussalam	...	...	80	62	...	...	18.4	16.8
Cambodia	0.82	0.05	575	390	252.9	10.6	20.1	17.7
Indonesia	0.07	0.29	449	399	44.7	41.8	25.8	23.1
Lao PDR	...	...	330	189	101.1	29.8	29.2	24.2
Malaysia	0.55	0.17	78	103	16.3	3.2	25.0	19.6
Myanmar	0.84	0.24	411	369	60.4	45.0	23.6	24.4
Philippines	0.01	0.06	368	288	3.4	0.4	23.1	27.9
Singapore	...	...	52	49	...	...	16.5	10.5
Thailand	0.52	0.11	241	171	12.0	6.5	19.5	16.2
Viet Nam	0.34	0.16	197	140	9.3	0.9	17.2	17.4
The Pacific								
Cook Islands	...	...	7	12	...	...	...	...
Fiji	...	...	53	67	...	...	33.4	30.8
Kiribati	...	...	372	497	...	...	...	...
Marshall Islands	...	...	81	335	...	...	...	...
Micronesia, Fed. States of	...	...	279	195	...	...	...	...
Nauru	...	...	46	73	...	...	...	...
Palau	...	...	135	42	...	...	...	...
Papua New Guinea	0.87	0.36	418	417	270.3	185.1	28.4	26.4
Samoa	...	...	23	19	...	...	...	...
Solomon Islands	...	...	185	86	476.3	75.4	26.0	24.1
Timor-Leste	...	...	498 (2002)	498	336.7	89.7	29.9	23.8
Tonga	...	...	31	14	...	...	...	...
Tuvalu	...	...	357	190	...	...	...	...
Vanuatu	...	...	110	63	127.4	31.3	...	...
Developed Member Economies								
Australia	0.05	0.05	6	6	...	...	13.0	9.4
Japan	...	...	35	18	...	...	11.5	9.4
New Zealand	...	...	11	7	...	...	15.9	10.7

(continued)

Table 2.5: **Selected Indicators for SDG 3 - Communicable and Noncommunicable Diseases, Adolescent Birthrate, and Death Rates** (*continued*)

Regional Member	3.6.1 Death Rate due to Road Traffic Injuries (per 100,000 population)		3.7.2 Adolescent Birthrate (Aged 10–14 Years; Aged 15–19 Years) per 1,000 Women in That Age Group		3.9.1 Mortality Rate Attributed to Household and Ambient Air Pollution (per 100,000 population)		3.9.2 Mortality Rate Attributed to Unsafe Water, Unsafe Sanitation, and Lack of Hygiene (per 100,000 population)
	2000	2013	2000	2013	2000	2012	2012
Developing Member Economies							
Central and West Asia							
Afghanistan	15.7	15.5	146.0 (2003)	51.9 (2011)	...	113.0	34.6
Armenia	20.6	18.3	32.8	22.7	...	125.0	1.1
Azerbaijan	7.9	10.0	28.7	47.2	...	68.0	2.1
Georgia	10.5	11.8	39.9	41.5	...	292.0	0.2
Kazakhstan	14.1	24.2	31.1	36.4	...	93.0	1.2
Kyrgyz Republic	12.0	22.0	33.6	42.1	6.7	– (2013)	1.8
Pakistan	14.8	14.2	55.0 (2004)	44.0 (2011)	43.3	12.8 (2013)	20.7
Tajikistan	19.7	18.8	37.3	54.0 (2011)	18.3	0.0 (2013)	7.5
Turkmenistan	18.0	17.4	26.1	21.0 (2006)	...	73.0	5.8
Uzbekistan	9.7	11.2	20.9	29.5 (2010)	5.6	– (2013)	2.4
East Asia							
China, People's Rep. of	18.0	18.8	6.0	6.2 (2011)	...	163.0	0.4
Hong Kong, China	...	...	4.3	2.7	...	...	...
Korea, Rep. of	26.4	12.0	2.6	1.7	2.8	0.2 (2013)	0.2
Mongolia	18.7	21.0	27.6	26.7 (2014)	...	132.0	3.1
Taipei, China	...	...	...	...	...	...	...
South Asia							
Bangladesh	14.3	13.6	134.0	113.0	...	68.0	6.0
Bhutan	16.5	15.1	61.7	28.4 (2012)	...	60.0	7.1
India	16.3	16.6	51.0	28.1	...	130.0	27.4
Maldives	2.9	3.5	28.9	13.7 (2012)	...	21.0	0.6
Nepal	16.9	17.0	106.0 (2003)	71.0	10.8	1.2 (2013)	12.9
Sri Lanka	18.3	17.4	30.8	20.3 (2008)	107.0	– (2013)	3.4
Southeast Asia							
Brunei Darussalam	16.3	8.1	31.8	16.6 (2008)	...	0.2	–
Cambodia	17.8	17.4	52.0 (2003)	57.0	...	71.0	5.6
Indonesia	15.2	15.3	54.0	48.0 (2010)	...	84.0	3.7
Lao PDR	14.0	14.3	96.0	94.0 (2010)	101.1	29.8 (2013)	13.9
Malaysia	26.6	24.0	12.0	12.7 (2012)	16.3	3.2 (2013)	0.4
Myanmar	21.8	20.3	22.7	22.0	60.4	45.0 (2013)	10.5
Philippines	9.9	10.5	55.0 (2001)	57.0 (2012)	3.4	0.4 (2013)	5.1
Singapore	6.7	3.6	7.7	2.7	...	21.0	0.1
Thailand	37.7	36.2	33.1	60.0 (2012)	12.0	6.5 (2013)	1.9
Viet Nam	23.6	24.5	25.0	36.0	9.3	0.9 (2013)	2.0
The Pacific							
Cook Islands	5.6	24.2	47.0 (2001)	56.0 (2011)	...	10.0	...
Fiji	9.6	5.8	34.8 (2002)	27.5 (2008)	...	77.0	3.0
Kiribati	8.5	2.9	70.8	49.0 (2010)	...	48.0	15.9
Marshall Islands	17.3	5.7	71.9 (2002)	85.0 (2011)	...	26.0	7.6
Micronesia, Fed. States of	16.8	1.9	58.5	32.6 (2010)	...	41.0	9.7
Nauru	19.9	19.9	113.8	105.3 (2011)	...	2.9	...
Palau	15.6	4.8	25.9	27.0 (2010)	...	0.9	4.8
Papua New Guinea	17.3	16.8	70.0	65.0 (2004)	270.3	185.1 (2013)	12.4
Samoa	16.6	15.8	33.6 (2001)	39.2 (2011)	...	32.0	3.7
Solomon Islands	18.7	19.2	82.0	62.0 (2008)	476.3	75.4 (2013)	10.4
Timor-Leste	17.1	16.6	78.3 (2001)	51.0 (2008)	336.7	89.7 (2013)	10.3
Tonga	15.3	7.6	18.7	30.0 (2011)	...	30.0	4.8
Tuvalu	21.2	20.3	48.9	42.0 (2007)	...	18.0	...
Vanuatu	15.7	16.6	66.0 (2009)	78.0 (2011)	127.4	31.3 (2013)	7.3
Developed Member Economies							
Australia	9.5	5.4	17.8	14.2	...	0.4	0.0
Japan	12.3	4.7	5.4	4.4	...	24.0	0.1
New Zealand	12.1	6.0	27.9	19.1 (2014)	...	0.5	0.6

... = data not available at cutoff date, – = magnitude equals zero, 0.0 = magnitude is less than half of unit employed, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

Sources: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016); World Health Organization. Global Health Observatory (GHO) data. <http://www.who.int/gho> (accessed September 2016).

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

Table 2.6: **Selected Indicators for SDG 4 - Early Childhood Education**

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

Regional Member	4.2.2 Participation Rate in Organized Learning (1 year before the official primary entry age) ^a					
	(%)					
	2000			2014		
	Total	Female	Male	Total	Female	Male
Developing Member Economies						
Central and West Asia						
Afghanistan	...	...	...	...	...	...
Armenia	...	...	...	...	...	...
Azerbaijan	15.7	16.0	15.4	20.5	21.0	20.2
Georgia	50.0 (2004)	53.3 (2004)	47.0 (2004)	53.1 (2007)	57.1 (2007)	49.7 (2007)
Kazakhstan	75.7 (2001)	76.5 (2001)	74.8 (2001)	94.6 (2015)	100.0 (2015)	89.6 (2015)
Kyrgyz Republic	42.1	42.9	41.3	67.4	68.6	66.2
Pakistan	57.6 (2004)	56.1 (2004)	59.0 (2004)	94.5	88.5	100.0
Tajikistan	12.1	7.9	8.7	11.8 (2015)	11.1 (2015)	12.5 (2015)
Turkmenistan	...	...	...	...	...	...
Uzbekistan	36.6 (2008)	37.1 (2008)	36.1 (2008)	33.4 (2011)	33.8 (2011)	33.0 (2011)
East Asia						
China, People's Rep. of	...	...	...	...	...	...
Hong Kong, China	92.6 (2002)	93.5 (2002)	91.7 (2002)	99.2 (2011)	98.3 (2011)	100.0 (2011)
Korea, Rep. of	...	...	...	98.8 (2013)	98.8 (2013)	98.8 (2013)
Mongolia	50.4 (2000)	51.9 (2000)	49.0 (2000)	71.0 (2012)	71.2 (2012)	70.8 (2012)
Taipei, China	...	...	...	...	...	...
South Asia						
Bangladesh	30.1 (2009)	30.6 (2009)	29.6 (2009)	59.9 (2011)	59.6 (2011)	60.3 (2011)
Bhutan	4.6 (2000)	4.5 (2000)	4.7 (2000)	...	...	...
India	...	...	...	...	...	...
Maldives	69.5	70.0	69.1	80.2 (2007)	80.4 (2007)	80.0 (2007)
Nepal	77.9 (2011)	82.2 (2011)	73.9 (2011)	80.7 (2015)	80.6 (2015)	80.9 (2015)
Sri Lanka	...	...	...	...	...	...
Southeast Asia						
Brunei Darussalam	99.5 (2005)	99.1 (2005)	100.0 (2005)	99.6	100.0	99.3
Cambodia	12.9	13.1	12.7	32.7	31.6	33.6
Indonesia	79.2 (2005)	78.5 (2005)	80.0 (2005)	99.3	98.7	100.0
Lao PDR	9.5	9.8	9.1	50.4	51.1	49.8
Malaysia	77.2	...	...	95.9	...	...
Myanmar	5.0 (2006)	5.0 (2006)	5.1 (2006)	22.9	23.4	22.5
Philippines	24.0 (2001)	23.8 (2001)	24.1 (2001)	42.2 (2009)	43.0 (2009)	41.4 (2009)
Singapore	...	...	...	...	...	...
Thailand	99.1 (2006)	100.0 (2006)	98.2 (2006)	99.7 (2011)	99.4 (2011)	100.0 (2011)
Viet Nam	69.2	...	...	94.7 (2013)	...	...
The Pacific						
Cook Islands	98.4 (2013)	100.0 (2013)	96.8 (2013)	94.1	100.0	88.4
Fiji	48.6 (2004)	50.2 (2004)	47.1 (2004)	49.7 (2006)	50.6 (2006)	48.8 (2006)
Kiribati	...	...	...	...	...	...
Marshall Islands	62.1 (2002)	62.4 (2002)	61.9 (2002)	...	...	...
Micronesia, Fed. States of	...	...	...	...	...	...
Nauru	89.4 (2007)	78.5 (2007)	100.0 (2007)	71.2	82.3	61.6
Palau	...	...	...	90.8	81.1	100.0
Papua New Guinea	...	...	...	...	...	...
Samoa	39.0	43.5	34.9	29.5	32.2	27.1
Solomon Islands	...	...	...	...	...	...
Timor-Leste	58.5 (2013)	61.9 (2013)	55.3 (2013)	63.5	67.8	59.4
Tonga	...	...	...	...	...	...
Tuvalu	...	...	...	...	...	...
Vanuatu	...	...	...	...	...	...
Developed Member Economies						
Australia	52.5 (2001)	53.2 (2001)	51.9 (2001)	80.3 (2013)	80.4 (2013)	80.3 (2013)
Japan	97.3	...	...	95.7 (2013)	...	...
New Zealand	89.6	89.1	90.1	92.9	93.6	92.1

... = data not available at cutoff date, 0.0 = magnitude is less than half of unit employed, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

a Covers participation in early childhood education and preprimary education.

Source: United Nations Educational, Scientific, and Cultural Organization Institute for Statistics. Data Centre. <http://www.uis.unesco.org/datacentre/Pages/default.aspx> (accessed August 2016).

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

Table 2.7: **Selected Indicators for SDG 4 - Teacher Training and Supply**

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

Regional Member	4.c.1.a Proportion of Teachers in Preprimary Education Who Have Received at Least the Minimum Organized Teacher Training (% of total teachers)		4.c.1.b Proportion of Teachers in Primary Education Who Have Received at Least the Minimum Organized Teacher Training (% of total teachers)	
	2000	2015	2000	2015
Developing Member Economies				
Central and West Asia				
Afghanistan	...	...	...	...
Armenia	97.1 (2002)	79.7 (2012)	66.7 (2004)	77.5 (2005)
Azerbaijan	79.2	85.2 (2014)	99.9	99.6 (2014)
Georgia	99.1	96.6 (2003)	94.7	94.6 (2009)
Kazakhstan	...	100.0 (2014)	100.0 (2014)	100.0
Kyrgyz Republic	32.1	46.2 (2011)	46.3	72.0 (2012)
Pakistan	...	...	78.0 (2004)	84.0 (2014)
Tajikistan	91.3 (2001)	100.0	81.6 (2001)	100.0
Turkmenistan	...	...	...	...
Uzbekistan	100.0 (2006)	100.0 (2011)	100.0 (2006)	100.0 (2011)
East Asia				
China, People's Rep. of	...	...	...	...
Hong Kong, China	...	...	87.5	96.4 (2014)
Korea, Rep. of	...	...	...	...
Mongolia	100.0	93.6 (2012)	100.0	100.0 (2014)
Taipei, China	...	...	...	...
South Asia				
Bangladesh	...	...	53.4 (2005)	57.7 (2011)
Bhutan	93.8	...	94.8	91.5 (2008)
India	...	...	...	...
Maldives	47.2	73.2 (2014)	66.5	86.1 (2014)
Nepal	72.7 (2008)	87.5	15.4 (2001)	94.4
Sri Lanka	...	...	82.1 (2010)	80.2 (2013)
Southeast Asia				
Brunei Darussalam	64.4 (2005)	64.38 (2014)	84.5 (2005)	87.4 (2014)
Cambodia	98.1 (2001)	100.0 (2014)	95.9 (2001)	100.0 (2014)
Indonesia	...	...	...	...
Lao PDR	83.1	90.6 (2014)	76.7	98.3 (2014)
Malaysia	98.6 (2011)	100.0 (2014)	97.9	98.6 (2014)
Myanmar	50.3 (2006)	48.4 (2014)	62.7	99.5 (2014)
Philippines	...	...	...	100.0 (2013)
Singapore	...	...	96.1 (2007)	94.3 (2009)
Thailand	...	...	...	100.0 (2014)
Viet Nam	50.5	97.8 (2014)	80.0	100.0 (2014)
The Pacific				
Cook Islands	60.9 (2005)	69.7 (2014)	79.2 (2007)	89.2 (2014)
Fiji	...	...	97.8 (2008)	100.0 (2012)
Kiribati	...	...	93.9 (2005)	85.4 (2008)
Marshall Islands	100.0 (2002)	...	...	...
Micronesia, Fed. States of	...	...	...	...
Nauru	77.5 (2006)	82.1 (2007)	...	74.2 (2007)
Palau	...	...	...	...
Papua New Guinea	...	...	...	...
Samoa	...	100.0 (2014)	...	...
Solomon Islands	61.3 (2011)	59.5 (2014)	58.0 (2010)	64.6 (2014)
Timor-Leste	...	...	...	...
Tonga	...	100.0 (2012)	99.6 (2013)	97.1 (2014)
Tuvalu	...	74.6 (2014)	...	...
Vanuatu	...	100.0 (2007)	100.0 (2007)	60.5 (2013)
Developed Member Economies				
Australia	...	...	...	...
Japan	...	...	...	...
New Zealand	...	...	...	...

(continued)

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

Table 2.7: **Selected Indicators for SDG 4 - Teacher Training and Supply** (*continued*)
 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

Regional Member	4.c.1.c Proportion of Teachers in Lower Secondary Education Who Have Received at Least the Minimum Organized Teacher Training (% of total teachers)		4.c.1.d Proportion of Teachers in Upper Secondary Education Who Have Received at Least the Minimum Organized Teacher Training (% of total teachers)	
	2000	2015	2000	2015
Developing Member Economies				
Central and West Asia				
Afghanistan	...	...	...	...
Armenia	...	...	...	...
Azerbaijan	...	...	...	...
Georgia	76.8	94.6 (2009)	93.0	94.8 (2009)
Kazakhstan	...	...	...	...
Kyrgyz Republic	...	...	71.8 (2003)	84.6 (2010)
Pakistan	...	...	...	...
Tajikistan	94.0	...	93.6 (2002)	92.1 (2004)
Turkmenistan	...	...	...	...
Uzbekistan	...	...	100.0 (2006)	100.0 (2011)
East Asia				
China, People's Rep. of	...	...	...	...
Hong Kong, China	...	...	...	...
Korea, Rep. of	...	...	...	...
Mongolia	100.0	100.0 (2007)	100.0	100.0 (2006)
Taipei, China	...	...	...	...
South Asia				
Bangladesh	36.8	59.6 (2013)	22.4	56.2 (2013)
Bhutan	93.5 (2005)	90.2 (2008)	...	72.2 (2008)
India	...	...	...	...
Maldives	76.3	92.8 (2014)	54.3 (2002)	...
Nepal	32.6	80.6	28.5 (2002)	83.0
Sri Lanka	...	72.1 (2013)	...	82.1 (2011)
Southeast Asia				
Brunei Darussalam	...	94.0 (2014)	85.2 (2005)	87.8 (2013)
Cambodia	99.7 (2001)	100.0 (2014)	99.1 (2001)	99.8 (2007)
Indonesia	...	...	...	...
Lao PDR	98.5	99.5 (2014)	95.6	99.9 (2014)
Malaysia	...	...	...	...
Myanmar	62.1	93.2 (2014)	97.1	95.2 (2014)
Philippines	...	...	...	100.0 (2013)
Singapore	94.4 (2007)	91.6 (2009)	95.0 (2007)	91.7 (2009)
Thailand	...	...	...	...
Viet Nam	86.3	100.0 (2014)	...	...
The Pacific				
Cook Islands	...	...	96.7 (2005)	90.6 (2013)
Fiji	...	100.0 (2012)	94.8 (2008)	100.0 (2012)
Kiribati	83.6 (2005)	86.7 (2014)	43.1 (2005)	33.6 (2008)
Marshall Islands	...	...	...	...
Micronesia, Fed. States of	...	...	...	...
Nauru	...	...	...	36.4 (2007)
Palau	...	...	...	...
Papua New Guinea	...	...	...	100.0 (2012)
Samoa	...	...	71.9 (2009)	100.0 (2014)
Solomon Islands	...	70.8 (2010)	70.8 (2010)	84.6 (2013)
Timor-Leste	...	...	...	...
Tonga	...	...	...	65.1 (2013)
Tuvalu	...	...	...	100.0 (2013)
Vanuatu	...	66.7 (2013)	...	...
Developed Member Economies				
Australia	...	...	...	...
Japan	...	...	...	...
New Zealand	...	...	...	...

... = data not available at cutoff date, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

Sources: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016); United Nations. Economic and Social Commission for Asia and the Pacific (ESCAP) Online Statistical Database <http://www.unescap.org/statdb/DataExplorer.aspx> (accessed 18 April 2016); World Bank. World Development Indicators. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators> (accessed 26 April 2016).

Table 2.8: **Selected Indicators for SDG 5 - Early Marriage and Women in Leadership**
 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation
 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decisionmaking in political, economic and public life

Regional Member	5.3.1 Proportion of Women Aged 20–24 Years Who Were Married or in a Union (%)				5.5.1 Proportion of Seats Held by Women in National Parliaments (%)	
	Before Age 15		Before Age 18		2000	2015
	Initial Year	Latest Year	Initial Year	Latest Year		
Developing Member Economies						
Central and West Asia						
Afghanistan	32.8 (2013)	27.3 (2005)	27.7
Armenia	...	– (2010)	...	7.2 (2010)	3.1	10.7
Azerbaijan	...	1.9 (2011)	...	11.0 (2011)	10.5 (2001)	16.9
Georgia	...	1.1 (2010)	...	14.0 (2010)	7.2	11.3
Kazakhstan	...	0.3 (2011)	...	6.1 (2011)	10.4	26.2
Kyrgyz Republic	...	0.9 (2014)	...	11.6 (2014)	2.3	19.2
Pakistan	...	2.8 (2013)	...	21.0 (2013)	21.1 (2002)	20.6
Tajikistan	...	0.1 (2012)	...	11.6 (2012)	15.0	19.0
Turkmenistan	0.6 (2006)	...	7.3 (2006)	...	26.0	25.8
Uzbekistan	0.3 (2006)	...	7.2 (2006)	...	7.2	16.0
East Asia						
China, People's Rep. of	21.8	23.6
Hong Kong, China
Korea, Rep. of	5.9	16.3
Mongolia	...	0.1 (2010)	...	4.7 (2010)	10.5	14.5
Taipei, China
South Asia						
Bangladesh	...	18.1 (2013)	...	52.3 (2013)	9.1	20.0
Bhutan	...	6.2 (2010)	...	25.8 (2010)	9.3	8.5
India	18.2 (2006)	...	47.4 (2006)	...	9.0	12.0
Maldives	...	0.3 (2009)	...	3.9 (2009)	6.0	5.9
Nepal	...	10.4 (2014)	...	36.6 (2014)	5.9	29.5
Sri Lanka	1.7 (2007)	...	11.8 (2007)	...	4.4 (2002)	4.9
Southeast Asia						
Brunei Darussalam
Cambodia	...	1.9 (2014)	...	18.5 (2014)	7.4	20.3
Indonesia	13.6 (2013)	8.0	17.1
Lao PDR	...	8.9 (2012)	...	35.4 (2012)	21.2	25.0
Malaysia	10.4	10.4
Myanmar	4.3 (2010)	12.7
Philippines	...	2.0 (2013)	...	15.0 (2013)	11.3	27.2
Singapore	4.3	23.9
Thailand	...	3.8 (2012)	...	22.1 (2012)	4.8	6.1
Viet Nam	...	0.9 (2014)	...	10.6 (2014)	26.0	24.3
The Pacific						
Cook Islands
Fiji	5.7 (2001)	16.0
Kiribati	...	2.8 (2009)	...	20.3 (2009)	4.9	8.7
Marshall Islands	5.6 (2007)	...	26.3 (2007)	...	3.0	9.1
Micronesia, Fed. States of	–	–
Nauru	1.9 (2007)	...	26.8 (2007)	...	– (2001)	5.3
Palau	–	–
Papua New Guinea	2.1 (2006)	...	21.3 (2006)	...	1.8	2.7
Samoa	...	0.7 (2014)	...	10.8 (2014)	8.2	6.1
Solomon Islands	3.1 (2007)	...	22.4 (2007)	...	2.0	2.0
Timor-Leste	...	3.0 (2009)	...	18.9 (2009)	26.1 (2003)	38.5
Tonga	...	0.3 (2012)	...	5.6 (2012)	–	–
Tuvalu	– (2007)	...	9.9 (2007)	...	–	6.7
Vanuatu	...	2.5 (2013)	...	21.4 (2013)	–	–
Developed Member Economies						
Australia	23.0	26.7
Japan	7.3	9.5
New Zealand	30.8	31.4

... = data not available at cutoff date, — = magnitude equals zero, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

Sources: United Nations. Sustainable Development Goals Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed April 2016); Inter-Parliamentary Union. Women in National Parliaments. <http://www.ipu.org/wmn-e/classif-arc.htm> (accessed September 2016).

Planet

To protect the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change, so that it can support the needs of the present and future generations.



Snapshots

- More than nine out of every 10 people in Asia and the Pacific have access to improved drinking water sources while approximately two-thirds have access to improved sanitation.
- The freshwater extraction rate has increased in the majority of economies in the region since 2000.
- In Asia and the Pacific region, 32 out of 36 economies with available data have air pollution levels exceeding the maximum recommended air pollution level set by the World Health Organization.
- Seventeen out of the 46 reporting economies indicated an increase in their forest-covered area between 2000 and 2015.

Against a backdrop of continuing environmental challenges such as climate change, increased instances of natural disaster, and food and water insecurity around the world, the SDGs integrate environmental sustainability into one of the central pillars for eradication of poverty and achieving inclusive growth. In particular, SDGs 6, 11, 14, and 15 are planet-centered as they aim to ensure ecological integrity that can support the sustainable development of humankind. This section examines several indicators where data are available for relevant indicators.

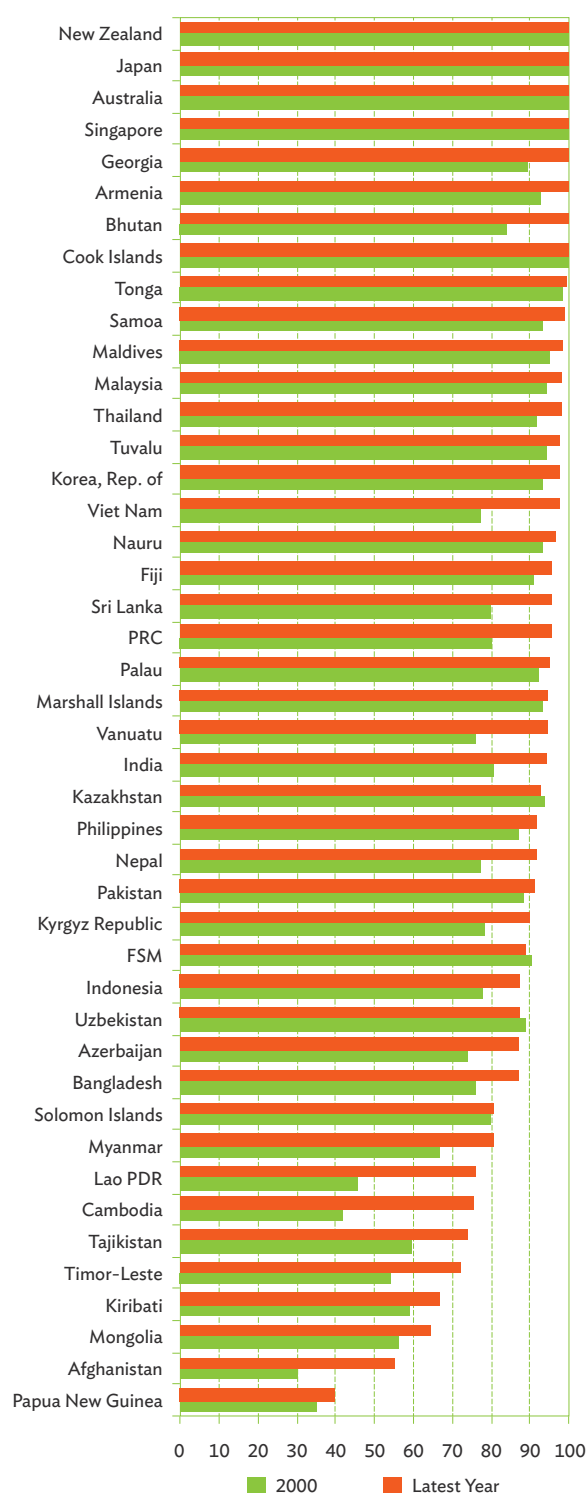
SDG 6: Ensure Availability and Sustainable Management of Water and Sanitation for All

Water, sanitation, and complementary resources have remarkable linkage to the environment. In particular, inefficient usage of water causes stress

on the limited resources available. Poor sanitation, on the other hand, threatens the health and well-being of people. The sixth goal seeks for a sustainable management of water and sanitation for all.

Proportion of population using safely managed drinking water services. About 93.3% of the population of Asia and the Pacific has access to improved drinking water sources based on latest data. However, in some countries like Afghanistan, Kiribati, Mongolia, and Papua New Guinea, about two-thirds or less of their population have access to improved drinking water sources. Nevertheless, access to improved drinking water sources has increased in most of the countries since 2000, particularly Afghanistan (82.8%), Cambodia (81.6%), the Lao People's Democratic Republic (Lao PDR) (66.4%), Timor-Leste (32.3%), Viet Nam (26.1%), Vanuatu (24.7%), Tajikistan (23.9%), Myanmar (21.1%), and Sri Lanka (20.0%). Figure 3.1 presents the estimates for economies of Asia and the Pacific.

Figure 3.1: Proportion of Population Using Safely Managed Drinking Water Services (%)



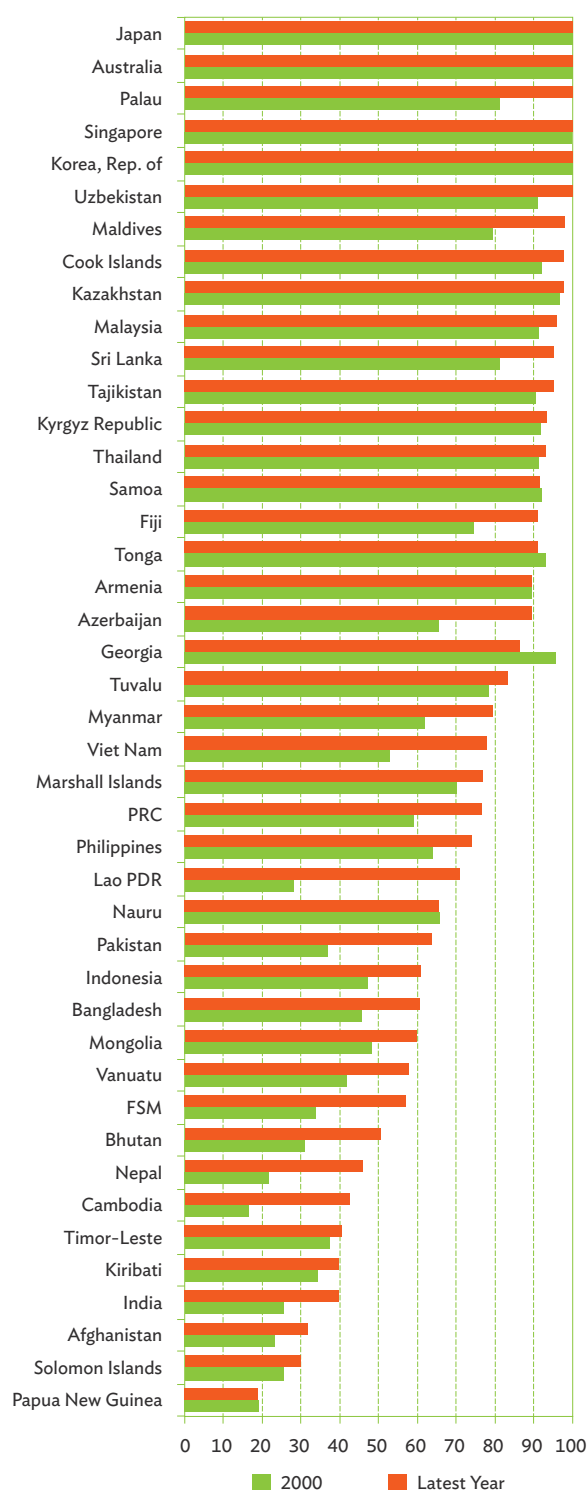
FSM = Federated States of Micronesia, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
 Note: Only economies with recent estimates (2010 and later) are included.
 Source: Table 3.1.

Proportion of population using safely managed sanitation services. Less than two-thirds (63.8%) of Asia and the Pacific's population have access to improved sanitation. In East Asia, for instance, 77.2% of the population is covered by safely managed sanitation services; 72.2% in Southeast Asia; 68.5% in Central and West Asia; 42.8% in South Asia; and 31.7% in the Pacific islands. However, within these regions, there are countries where less than half of the population has access to safely managed sanitation services (Figure 3.2). These include Papua New Guinea (18.9%), Solomon Islands (29.8%), Afghanistan (31.9%), India (39.6%), Kiribati (39.7%), Timor-Leste (40.6%), Cambodia (42.4%), and Nepal (45.8%).

Level of water stress: Freshwater withdrawal as a proportion of available freshwater resources. Figure 3.3 presents the estimates of freshwater withdrawal as a proportion of available freshwater resources in reporting economies of Asia and the Pacific with data available for 2010 and onward. Armenia (37.9%), Azerbaijan (34.5%), and India (33.9%) recorded the highest levels of water stress in the region.

Table 3.1 shows the estimates for earlier years. Between and within regional disparities with respect to this indicator are also apparent in the data. For instance, among developed economies, Japan's 18.9% withdrawal rate is significantly higher than Australia's 3.9% and New Zealand's 1.6%. With the exception of Georgia, the withdrawal rate in Central and West Asian countries exceeds 18.0%. In East Asia, a high water withdrawal rate is reported for the Republic of Korea (41.9%) and the People's Republic of China (PRC) (21.2%). In South Asia, India has been withdrawing freshwater resources at a rate of 33.9% and Sri Lanka at 24.5%. On another note, the withdrawal rate in most Southeast Asian countries is at most 17.0%.

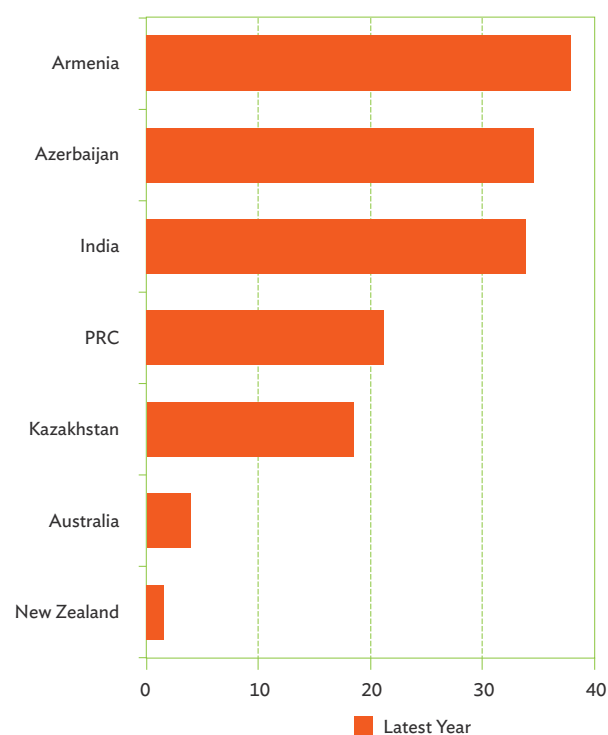
Figure 3.2: Proportion of Population Using Safely Managed Sanitation Services (%)



FSM = Federated States of Micronesia, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
 Note: Only economies with recent estimates (2010 and later) are included.
 Source: Table 3.1.

[Click here for figure data](#)

Figure 3.3: Level of Water Stress: Freshwater Withdrawal as a Proportion of Available Freshwater Resources in Selected Economies (%)



PRC = People's Republic of China.
 Source: Table 3.1.

[Click here for figure data](#)

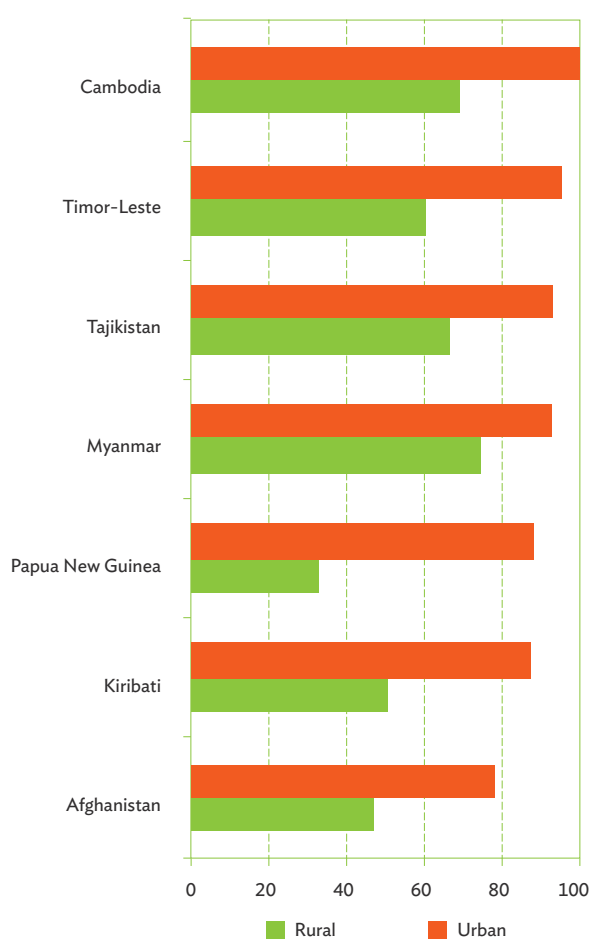
Equity and Other Issues

Improving access to clean water and sanitation facilities can have multiplier effects on many socioeconomic indicators like poverty, health, and productivity. However, some segments of the population still have a disproportionately lower access to these basic services. For instance, in Kiribati, Papua New Guinea, and Timor-Leste, there are significant urban–rural disparities in terms of the proportion of population using improved drinking water sources, while in Bhutan, Cambodia, and Solomon Islands, significant urban–rural disparities in terms of the proportion of people using safely

managed sanitation exist (Figures 3.4a and 3.4b). The influx of migrants from rural areas may also lead to a significant strain on water and sanitation facilities of urban areas. People who lack access to clean water and sanitation facilities are exposed to higher risks of contracting diseases like cholera, typhoid, and

hepatitis, and these health shocks may erode the savings of the affected people. Hence, there is an urgent need to identify the best cost-effective and environmentally sustainable practices of delivering safe water and sanitation services.

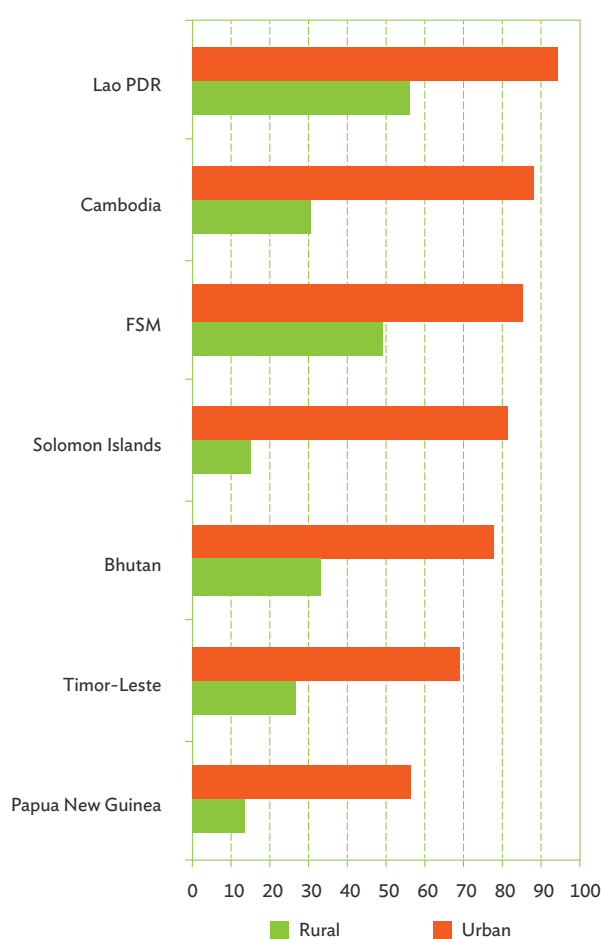
Figure 3.4a: Proportion of Population Using Improved Drinking Water Sources by Area in Selected Economies, 2015



Source: United Nations Statistics Division. Sustainable Development Goal Indicators Global Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed August 2016).

[Click here for figure data](#)

Figure 3.4b: Proportion of Population Using Safely Managed Sanitation Facilities by Area in Selected Economies, 2015



FSM = Federated States of Micronesia, Lao PDR = Lao People's Democratic Republic
Source: United Nations Statistics Division. Sustainable Development Goal Indicators Global Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed August 2016).

[Click here for figure data](#)

Data Gaps

Sustainability of natural resources like water relies to a large extent on benchmark information that should serve as the basis of a regulatory framework for extraction. A comprehensive database of water resources that is updated regularly provides an indispensable instrument in the sustainable management not only of water but also its twin issue of sanitation.

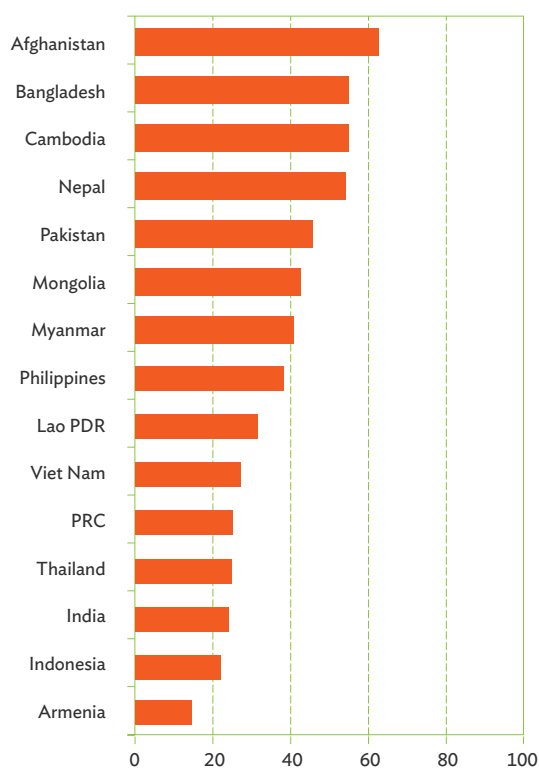
In general, many of the targets under SDG 6 have no existing data collection system especially those related to water quality, efficiency of use, water resource management, and protection and restoration of water-related ecosystems. To complement the goal of strengthening the participation of local communities in improving water and sanitation management, a community-based reporting system of various indicators may be included in the package of programs intended to measure achievement of the targets under this goal.

SDG 11: Make Cities and Human Settlements Inclusive, Safe, Resilient and Sustainable

Housing and the environment are important dimensions of a person's well-being. Studies show that where a child grows up can have a strong impact on his or her long-term economic competitiveness. Given its key role as an enabler of economic prospects, housing and environmental investments should be linked to the development of economic policies.

Proportion of urban population living in slums, informal settlements or inadequate housing. In the majority of the reporting economies of Asia and the Pacific, at least a third of their respective urban population has inadequate housing. The highest numbers, based on latest data, are in Afghanistan (62.7%), Bangladesh (55.1%), Cambodia (55.1%), and Nepal (54.3%) (Figure 3.5). Nevertheless, there are indications that the proportion of people living in urban slums has decreased significantly. In Bangladesh, for instance, the percentage of people living in urban slums was 87.3% in 2000. Like Bangladesh, Cambodia, Nepal, Mongolia, and Viet Nam have also made significant improvements on this front.

Figure 3.5: Proportion of Urban Population Living in Slums, 2014



Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Source: United Nations Statistics Division. Sustainable Development Goal Indicators Global Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed August 2016).

[Click here for figure data](#)

Average annual mean of particulate matter of 2.5 microns in diameter or smaller (PM_{2.5}) concentration levels. Prolonged exposure to high levels of air pollution is a major risk to a person's health. Globally, millions of premature deaths are associated to ambient air pollution. The maximum safety standard air pollution level set by the World Health Organization (WHO) is 10 $\mu\text{g}/\text{m}^3$. However, available data for 36 economies of Asia and the Pacific suggest that 32 economies have air pollution level exceeding 10 $\mu\text{g}/\text{m}^3$. Of these 32 economies, 21 economies have air pollution levels that are at least 2.5 times the WHO's threshold. The economies with air pollution levels that are below the maximum air pollution level set by the WHO include Australia, Brunei Darussalam, the Federated States of Micronesia, and New Zealand. (Figure 3.6).

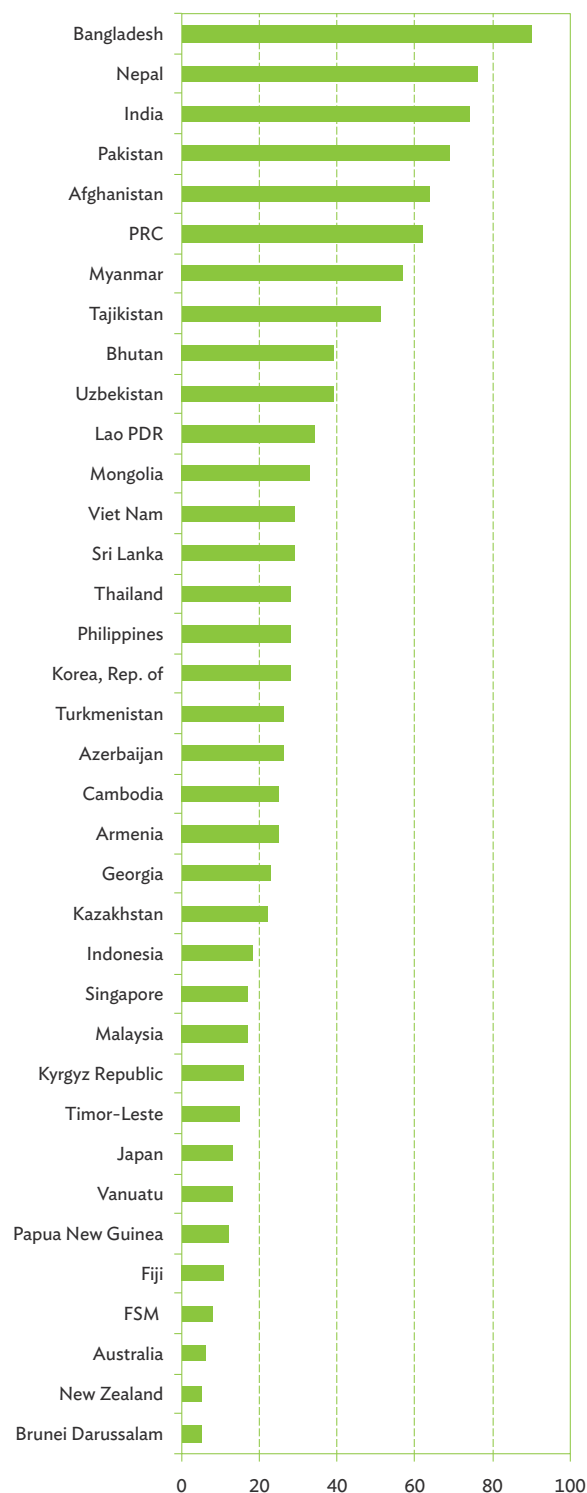
Equity and Other Issues

While cities and urban areas are expected to be the locus of developing economies' economic growth in the coming years, there are several issues that need to be addressed. For instance, the increasing concentration of urban population in capital cities may drive rural migrants to live in slums or other areas with slum-like conditions. On the other hand, secondary cities are also confronted with other challenges such as the lack of strong linkages to markets and poor infrastructure (UNDP 2013). If rapid urbanization is left unchecked, the number of people who are exposed to makeshift housing, fire hazards, poor sanitation, pollution, and crime may increase significantly.

Data Gaps

Pollution indicators are not regularly updated. In fact, they are not usually collected in many countries. Inclusiveness, safety, resilience, and sustainability of cities and human settlements are dependent on an efficient monitoring system that will ensure adequacy of mitigation programs and

Figure 3.6: Average Annual Mean of Particulate Matter of 2.5 Microns in Diameter or Smaller (PM_{2.5}) Concentration Levels in Urban Areas ($\mu\text{g}/\text{m}^3$)



FSM = Federated States of Micronesia, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Source: Table 3.2.

[Click here for figure data](#)

policy regulations. For countries with lacking data, sustainability may be compromised, and worse, the damage could be unrepairable if detected only at an advanced stage.

SDG 14: Conserve and Sustainably Use the Oceans, Seas, and Marine Resources for Sustainable Development

Oceans and seas cover about three-quarters of the world's surface and their health is critical to ensure ecological balance. The role of oceans and seas cannot be undermined—not only in the provision of food, but also, more importantly, in weather and climate regulation, to ensure a state of equilibrium in various physical, chemical, and biological processes happening in marine waters. Furthermore, conservation and sustainable use of marine waters and resources are important for food and for equilibrium of weather systems originating from the seas.

Coverage of protected areas in relation to marine areas. To ensure sustainability of marine resources, conservation areas should be properly delineated to ensure diversity and continuously link the food chain in marine waters.

Table 3.2 presents the estimates of coverage of protected areas in relation to marine areas for economies with available data. The highest estimates were recorded in the Philippines (47.1%), New Zealand (44.4%), and Kiribati (36.4%). Among economies with available data in the region, only Indonesia, the Philippines, Australia, and Japan have expanded the coverage of marine protected area between 2000 and 2016.

SDG 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

Agriculture and other human activities have profound impact on terrestrial ecosystems resulting in certain processes like biodiversity loss, land degradation, or even desertification.

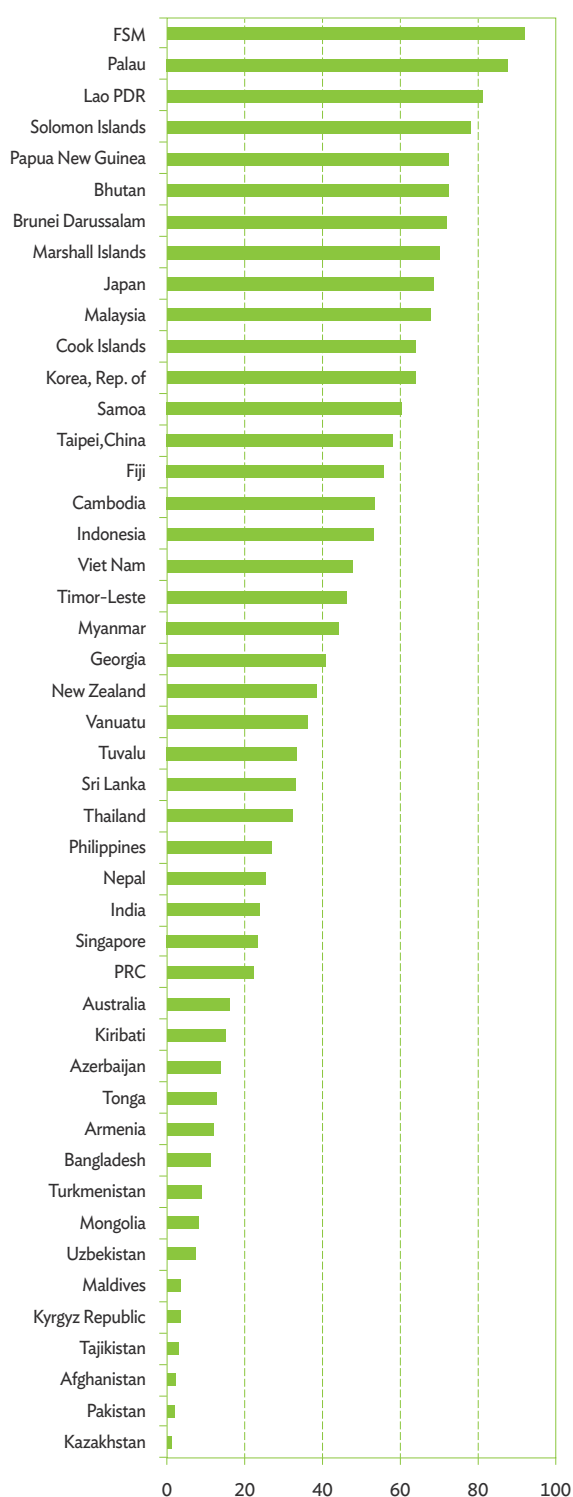
Forest area as a proportion of total land area.

Forest area is a crucial foundation for maintenance of biodiversity, management of sustainable water sources, and even in mitigation of harmful consequences of extreme weather conditions.

Estimates based on the latest data suggest that about 22.2% of Asia and the Pacific's total land area is covered by forest. Forest cover in East Asia is estimated at 30.9% and in Southeast Asia at 28.6%. On the other hand, forest cover in Central and West Asia is estimated at 2.6%.

Figure 3.7 illustrates the forest cover for each country. The proportion of forest cover to total land area in developed economies of Asia and the Pacific ranges from as high as 68.5% in Japan to as low as 16.2% in Australia. Within Southeast Asia, the Lao PDR has the highest forest cover at 81.3% while Singapore has the lowest at 23.4%. In East Asia, the economies with the largest forest cover are the Republic of Korea and Taipei, China. In South Asia, except for Bangladesh and the Maldives, all economies have forest cover exceeding 23.0%. In Central and West Asia, however, all economies except Georgia have less than 20.0% land area covered with forest.

Figure 3.7: Proportion of Forest Area to Total Land Area, 2015
(%)



FSM = Federated States of Micronesia, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Source: Table 3.2.

Data Gaps, Equity, and Other Issues

While data on forest cover is reasonably adequate, indicators for other targets under this goal to promote the implementation of sustainable management of all types of forests, combat desertification and restore degraded land and soil, reduce degradation of natural habitat, promote the fair and equitable sharing of the benefits from utilization of genetic resources, poaching, the impact of invasive alien species, resources for biodiversity, etc., are sparsely available. Lack of data or absence of framework of monitoring terrestrial ecosystem may endanger the ecological integrity of this ecosystem.

[Click here for figure data](#)

Ensure availability and sustainable management of water and sanitation for all

Table 3.1: **Selected Indicators for SDG 6 - Water and Sanitation**

By 2030, achieve universal and equitable access to safe and affordable drinking water for all

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

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

Regional Member	6.1.1 Proportion of Population Using Safely Managed Drinking Water Services (%)		6.2.1 Proportion of Population Using Safely Managed Sanitation Services, Including a Hand-Washing Facility with Soap and Water (%)		6.4.2 Level of Water Stress: Freshwater Withdrawal as a Proportion of Available Freshwater Resources (%) ^a		6.a.1 Amount of Water- and Sanitation-Related Official Development Assistance That Is Part of a Government-Coordinated Spending Plan (\$ million)	
	2000	2015	2000	2015	Initial Year	Latest Year	2000	2014
Developing Member Economies								
Central and West Asia								
Afghanistan	30.3	55.3	23.4	31.9	31.0 (2000)	...	4.9	66.9
Armenia	92.6	100.0	89.3	89.5	22.3 (2002)	37.9 (2012)	11.8	41.9
Azerbaijan	74.1	87.0	65.6	89.3	29.0 (2002)	34.5 (2012)	23.7	38.0
Georgia	89.3	100.0	95.7	86.3	2.9 (2005)	2.9 (2008)	0.8	61.5
Kazakhstan	93.8	92.9	96.8	97.5	17.2 (2002)	18.4 (2010)	8.1	0.0
Kyrgyz Republic	78.4	90.0	91.8	93.3	42.7 (2000)	32.6 (2006)	0.5	24.3
Pakistan	88.5	91.4	36.9	63.5	69.9 (2000)	74.4 (2008)	4.5	50.9
Tajikistan	59.6	73.8	90.4	95.0	53.2 (2000)	51.1 (2006)	4.3	30.3
Turkmenistan	59.6	60.4 (2006)	62.3	62.7 (2006)	100.6 (2000)	112.5 (2004)	0.0	0.3 (2011)
Uzbekistan	88.7	87.3 (2012)	90.9	100.0	110.0 (2001)	100.6 (2005)	2.4	95.6
East Asia								
China, People's Rep. of	80.3	95.5	58.8	76.5	19.5 (2005)	21.2 (2013)	584.5	164.9
Hong Kong, China	...	...	...	...	...	...	...	...
Korea, Rep. of	93.4	97.6 (2012)	100.0	100.0	41.8 (2002)	41.9 (2005)	...	...
Mongolia	56.3	64.4	48.2	59.7	1.6 (2006)	1.6 (2009)	0.3	18.4
Taipei, China	...	...	...	...	...	...	...	...
South Asia								
Bangladesh	76.0	86.9	45.4	60.6	2.9 (2008)	...	87.5	181.0
Bhutan	83.9	100.0	31.0	50.4	0.4 (2008)	...	0.2	5.1
India	80.6	94.1	25.6	39.6	31.9 (2000)	33.9 (2010)	182.8	398.9
Maldives	95.2	98.6	79.4	97.9	15.7 (2008)	...	0.6 (2001)	5.1
Nepal	77.1	91.6	21.7	45.8	4.5 (2000)	4.5 (2006)	67.4	73.2
Sri Lanka	79.7	95.6	81.2	95.1	24.6 (2000)	24.5 (2005)	34.2	126.8
Southeast Asia								
Brunei Darussalam	...	...	...	...	...	...	...	...
Cambodia	41.6	75.5	16.3	42.4	0.5 (2006)	...	1.9	43.2
Indonesia	77.9	87.4	47.1	60.8	3.7 (1990)	5.6 (2000)	92.6	87.7
Lao PDR	45.5	75.7	28.0	70.9	1.0 (2005)	...	42.1	31.0
Malaysia	94.1	98.2	91.2	96.0	1.6 (2000)	1.9 (2005)	394.6	68.3
Myanmar	66.6	80.6	61.9	79.6	2.8 (2000)	...	1.6	14.6
Philippines	87.1	91.8	63.8	73.9	16.5 (2006)	17.0 (2009)	22.1	15.4
Singapore	100.0	100.0	99.7	100.0	...	...	...	...
Thailand	91.9	97.8	91.3	93.0	13.1 (2007)	...	78.4	25.7
Viet Nam	77.4	97.6	52.9	78.0	9.3 (2005)	...	191.5	437.3
The Pacific								
Cook Islands	99.9	99.9	92.1	97.6	...	...	0.4	2.4
Fiji	90.7	95.7	74.6	91.1	0.3 (2000)	0.3 (2005)	0.5	4.1
Kiribati	58.9	66.9	34.2	39.7	...	...	0.7 (2001)	5.6
Marshall Islands	93.1	94.6	70.1	76.9	...	...	0.0 (2003)	1.1
Micronesia, Fed. States of	90.1	89.0	33.6	57.1	...	...	0.0 (2003)	1.8
Nauru	93.0	96.5	65.7	65.6	...	...	0.0 (2005)	0.1
Palau	92.2	95.3 (2011)	81.0	100.0	...	...	0.0 (2003)	0.6
Papua New Guinea	35.1	40.0	19.2	18.9	0.0 (2000)	0.0 (2005)	14.4	5.0
Samoa	93.3	99.0	92.2	91.5	...	...	0.3	15.2
Solomon Islands	79.7	80.8	25.5	29.8	...	...	2.4	5.1
Timor-Leste	54.3	71.9	37.4	40.6	14.3 (2004)	...	4.4	12.4
Tonga	98.6	99.6	93.0	91.0	...	...	10.4	1.6
Tuvalu	94.0	97.7	78.4	83.3 (2013)	...	...	0.6 (2002)	0.2
Vanuatu	75.8	94.5	41.7	57.9	...	...	0.6 (2003)	4.7
Developed Member Economies								
Australia	100.0	100.0	100.0	100.0	4.4 (2001)	3.9 (2013)	...	...
Japan	100.0	100.0	100.0	100.0	20.9 (2001)	18.9 (2009)	...	...
New Zealand	100.0	100.0	...	...	1.5 (2006)	1.6 (2010)	...	...

... = data not available at cutoff date, 0.0 = magnitude is less than half of unit employed, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

a The UN's presentation for the indicator is for a range of years. For instance, 2002 refers to 1998–2002, 2007 refers to 2003–2007, and so on. The original source, AQUASTAT, gives the exact years pertaining to the specific figures. Hence, years indicated in the latter were reflected herein.

Sources: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016); Food and Agriculture Organization of the United Nations. AQUASTAT. <http://www.fao.org/nr/water/aquastat/main/index.stm> (accessed August 2016); World Health Organization and United Nations Children's Fund (UNICEF). Joint Monitoring Programme for Water Supply and Sanitation. <http://www.wssinfo.org/> (accessed August 2016); Organisation for Economic Co-operation and Development. Creditor Reporting System. <http://stats.oecd.org/Index.aspx?DataSetCode=CRS1> (accessed August 2016).

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

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

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

Table 3.2: **Selected Indicators for SDGs 11, 14 and 15 - Air Quality; Forest, Marine Areas, and Terrestrial Ecosystems**

By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

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

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

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

Regional Member	11.6.2 Average Annual Mean of Particulate Matter of 2.5 Microns in Diameter or Smaller (PM2.5) Concentration Levels in Urban Areas (µg/m3)	14.5.1 Coverage of Protected Areas in Relation to Marine Areas (%)	
	(%)		
	2014	2000	2016
Developing Member Economies			
Central and West Asia			
Afghanistan	64.0	...	...
Armenia	25.0	...	...
Azerbaijan	26.0	...	...
Georgia	23.0	...	...
Kazakhstan	22.0	...	...
Kyrgyz Republic	16.0	...	...
Pakistan	69.0	...	...
Tajikistan	51.0	...	...
Turkmenistan	26.0	...	...
Uzbekistan	39.0	...	...
East Asia			
China, People's Rep. of	62.0	3.5	3.5
Hong Kong, China ^a	...	...	...
Korea, Rep. of	28.0	...	7.1
Mongolia	33.0	...	...
Taipei, China ^b	...	...	...
South Asia			
Bangladesh	90.0	33.3	33.3
Bhutan	39.0	...	...
India	74.0	4.2	4.2
Maldives	...	...	...
Nepal	76.0	...	...
Sri Lanka	29.0	...	...
Southeast Asia			
Brunei Darussalam	5.0	...	...
Cambodia	25.0	...	...
Indonesia	18.0	7.5	12.8
Lao PDR	34.0	...	...
Malaysia	17.0	...	...
Myanmar	57.0	...	...
Philippines	28.0	29.4	47.1
Singapore	17.0	...	...
Thailand	28.0	...	...
Viet Nam	29.0	7.7	7.7
The Pacific			
Cook Islands	...	...	...
Fiji	11.0	...	5.9
Kiribati	...	...	36.4
Marshall Islands	...	...	...
Micronesia, Fed. States of	8.0	...	...
Nauru	...	...	...
Palau	...	12.5	12.5
Papua New Guinea	12.0	...	...
Samoa	...	...	...
Solomon Islands	...	...	...
Timor-Leste	15.0	...	7.7
Tonga	...	...	...
Tuvalu	...	...	...
Vanuatu	13.0	...	...
Developed Member Economies			
Australia	6.0	29.4	33.6
Japan	13.0	32.6	34.8
New Zealand	5.0	44.4	44.4

(continued)

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

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

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

Table 3.2: **Selected Indicators for SDGs 11, 14 and 15 - Air Quality; Forest, Marine Areas, and Terrestrial Ecosystems** (*continued*)

Regional Member	15.1.1 Forest Area as a Proportion of Total Land Area (%)		15.5.1 Red List Index (%)	
	2000	2015	2000	2016
Developing Member Economies				
Central and West Asia				
Afghanistan	2.1	2.1	0.8	0.8
Armenia	11.8	11.8	0.9	0.8
Azerbaijan	10.6	13.8	0.9	0.9
Georgia	39.7	40.6	0.9	0.9
Kazakhstan	1.3	1.2	0.9	0.9
Kyrgyz Republic	4.5	3.3	1.0	1.0
Pakistan	2.7	1.9	0.9	0.9
Tajikistan	3.0	3.0	1.0	1.0
Turkmenistan	8.8	8.8	1.0	1.0
Uzbekistan	7.3	7.3	1.0	1.0
East Asia				
China, People's Rep. of	18.8	22.1	0.8	0.8
Hong Kong, China ^a	...	...	1.0	1.0
Korea, Rep. of	64.8	63.7	0.8	0.8
Mongolia	7.5	8.1	1.0	1.0
Taipei, China ^b	58.1	58.1 (2014)	...	...
South Asia				
Bangladesh	11.3	11.0	0.8	0.8
Bhutan	68.4	72.3	0.8	0.8
India	22.0	23.8	0.8	0.7
Maldives	3.3	3.3	0.9	0.9
Nepal	27.2	25.4	0.8	0.8
Sri Lanka	35.0	33.0	0.7	0.6
Southeast Asia				
Brunei Darussalam	75.3	72.1	0.9	0.8
Cambodia	65.4	53.6	0.9	0.8
Indonesia	57.8	53.0	0.8	0.8
Lao PDR	71.6	81.3	0.8	0.8
Malaysia	65.7	67.6	0.8	0.7
Myanmar	53.0	44.2	0.9	0.8
Philippines	23.6	27.0	0.7	0.7
Singapore	23.4	23.4	0.9	0.9
Thailand	33.3	32.1	0.9	0.8
Viet Nam	37.8	47.6	0.8	0.8
The Pacific				
Cook Islands	64.0	64.0	0.8	0.8
Fiji	53.7	55.7	0.7	0.7
Kiribati	15.0	15.0	0.8	0.8
Marshall Islands	70.2	70.2	0.9	0.8
Micronesia, Fed. States of	91.4	91.9	0.8	0.7
Nauru	-	-	0.8	0.8
Palau	86.1	87.6	0.9	0.8
Papua New Guinea	72.6	72.5	0.9	0.8
Samoa	60.4	60.4	0.8	0.8
Solomon Islands	81.0	78.1	0.8	0.8
Timor-Leste	57.4	46.1	0.9	0.9
Tonga	12.5	12.5	0.7	0.7
Tuvalu	33.3	33.3	0.9	0.8
Vanuatu	36.1	36.1	0.7	0.7
Developed Member Economies				
Australia	16.8	16.2	0.9	0.8
Japan	68.3	68.5	0.8	0.8
New Zealand	38.5	38.6	0.7	0.6

... = data not available at cutoff date, - = magnitude equals zero, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

a The proportion of land area covered by forest in Hong Kong, China is included in the data of the People's Republic of China.

b The proportion of land area covered by forest for Taipei, China does not include Kinmen County and Lienchiang County.

Sources: Food and Agriculture Organization of the United Nations; United Nations Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016); World Bank; for Taipei, China: economy source.

Prosperity

To ensure that all human beings can enjoy prosperous and fulfilling lives and that economic, social, and technological progress occurs in harmony with nature.



Snapshots

- In the majority of the economies of Asia and the Pacific, more than 80% of the population has access to electricity. However, at least 400 million people within the region did not have access to electricity in 2012.
- In some regional economies, there are still significant gender disparities in terms of employment prospects.
- In 11 out of 18 economies of Asia and the Pacific with available data for recent years, the average income of the bottom 40% grew faster than the average income of the general population.

As more people exit extreme poverty through the efforts galvanized by the international and national communities, there is a critical need to sustain the improvements on living standards of all. Hence, promoting shared prosperity is an important theme of the SDGs. In particular, SDGs 7, 8, 9, and 10 aim to provide everyone with prosperous and fulfilling lives. This section examines data for several indicators that focus on the equitable utilization of resources for the enhancement of people's living conditions.

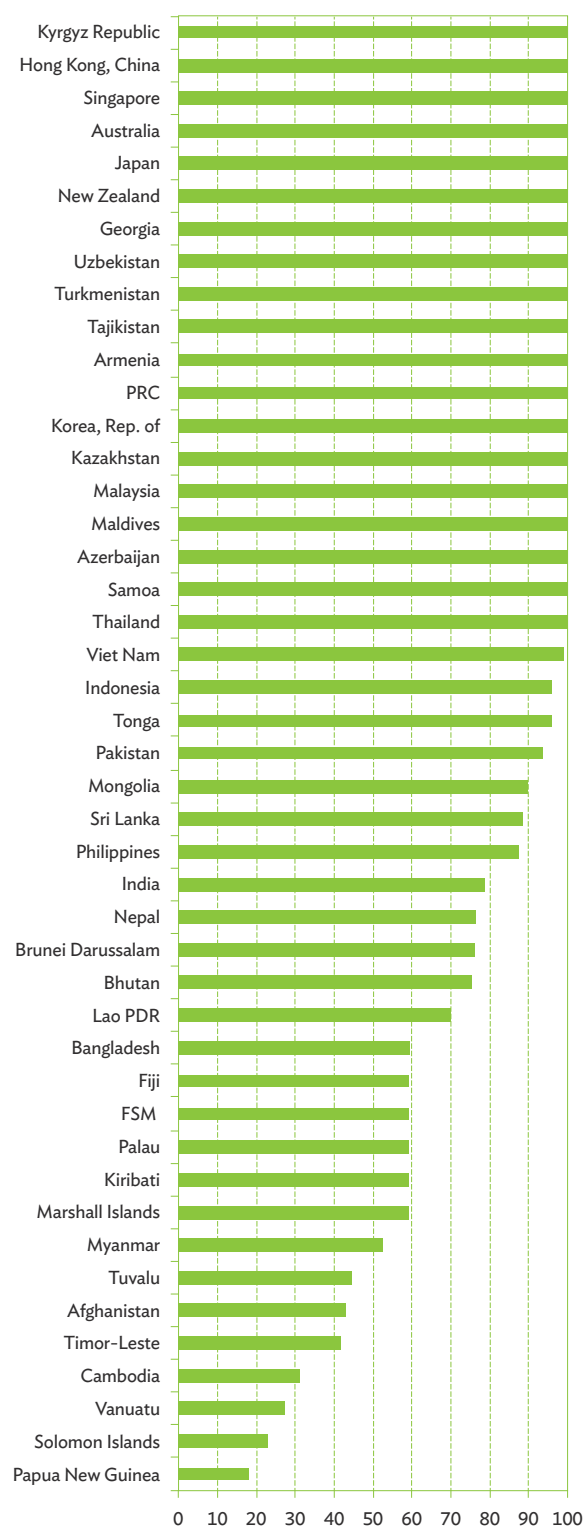
SDG 7: Ensure Access to Affordable, Reliable, Sustainable and Modern Energy for All

Energy is a necessity for industrial development. It facilitates the accomplishment of household chores, delivers forms of entertainment and other household convenience, and, more generally, enhances the living conditions of the population.

Proportion of population with access to electricity. In 2012, about nine in 10 people had access to electricity in Asia and the Pacific.

In 22 economies of the region (Armenia; Australia; Azerbaijan; the People's Republic of China (PRC); Georgia; Hong Kong, China; Indonesia; Japan; Kazakhstan; the Republic of Korea; the Kyrgyz Republic; Malaysia; the Maldives; New Zealand; Samoa; Singapore; Tajikistan; Thailand; Tonga; Turkmenistan; Uzbekistan; and Viet Nam), almost everyone (95%–100%) had access to electricity. On the other hand, about 87%–94% of the population in Mongolia, Pakistan, the Philippines, and Sri Lanka had electricity access, while at least one in every five people did not have access to electricity in 19 economies (Afghanistan, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, the Federated States of Micronesia, Fiji, India, Kiribati, the Lao People's Democratic Republic (Lao PDR), the Marshall Islands, Myanmar, Nepal, Palau, Papua New Guinea, Solomon Islands, Timor-Leste, Tuvalu, and Vanuatu). In total, at least 400 million people within the region did not have access to electricity in 2012. Figure 4.1 presents the estimates for all economies of Asia and the Pacific.

Figure 4.1: Proportion of Population with Access to Electricity, 2012 (%)



FSM = Federated States of Micronesia, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Source: Table 4.1.

[Click here for figure data](#)

Renewable energy share in total final energy consumption. Some energy sources can be exhausted; others have negative repercussions on the environment. As scientists continue to search for various renewable energy sources, countries should increase outputs from commercially viable renewable sources. The target is to increase the share of renewable energy in the global energy mix significantly by 2030.

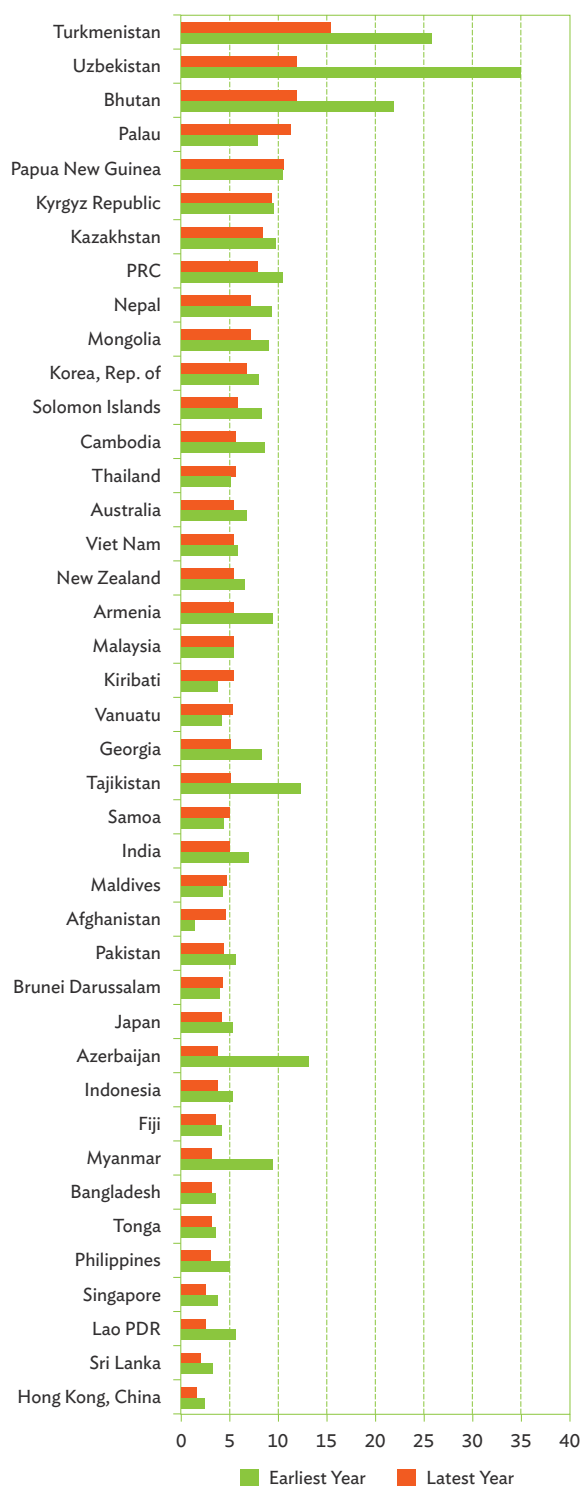
In Bhutan, the Lao PDR, and Nepal, over 80% of final energy consumption is already based on renewable sources. In other countries like Cambodia, Myanmar, Papua New Guinea, Solomon Islands, Sri Lanka, and Tajikistan, more than half of energy consumption is currently derived from renewable sources. However, in most countries, the share of renewable energy in total final energy consumption has decreased since 2000.

Energy intensity measured in terms of primary energy and GDP. Figure 4.2 shows the estimates of energy intensity for each country. At present, energy intensity levels are highest in Bhutan (11.8 megajoules per US dollar constant 2011 purchasing power parity GDP (megajoule per dollar (MJ/\$) in 2011 PPP GDP)), Palau (11.3 MJ/\$ 2011 PPP GDP), Papua New Guinea (10.5 MJ/\$ 2011 PPP GDP), Turkmenistan (15.5 MJ/\$ 2011 PPP GDP), and Uzbekistan (11.9 MJ/\$ 2011 PPP GDP). In other developing economies, the energy intensity level ranges between 1.6 MJ/\$ 2011 PPP GDP and 9.3 MJ/\$ 2011 PPP GDP. On the other hand, the average intensity level in the three developed member countries is around 5 MJ/\$ 2011 PPP GDP.

Data Gap, Equity and Other Issues

The current data on certain indicators are not regularly updated. For other indicators, especially on research and development, resources allocated for the identification and development of clean and renewable sources need to be developed. Indicators on the expansion of infrastructure and upgrading of technology for the delivery of modern and sustainable energy services can be based, for example, on grid capacity and grid length per land area.

Figure 4.2: Energy Intensity Level of Primary Energy
(MJ/\$ 2011 PPP GDP)



GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic, MJ = megajoule, PPP = purchasing power parity, PRC = People's Republic of China. Notes: Earliest year data is for 2000 except in Afghanistan, which is 2002. Latest year varies between 2012 and 2013 across economies. Source: Table 4.1.

[Click here for figure data](#)

SDG 8: Promote Sustained, Inclusive, and Sustainable Economic Growth, Full and Productive Employment and Decent Work for All

While economic growth is essential for a country's progress, its inclusivity is equally important since it will ensure that growth is fairly cascaded at the grassroots of society. Promoting full and productive employment and decent work for all is one of the main channels through which economic growth can be more inclusive for the lower echelons of society.

Annual growth rate of real GDP per capita.

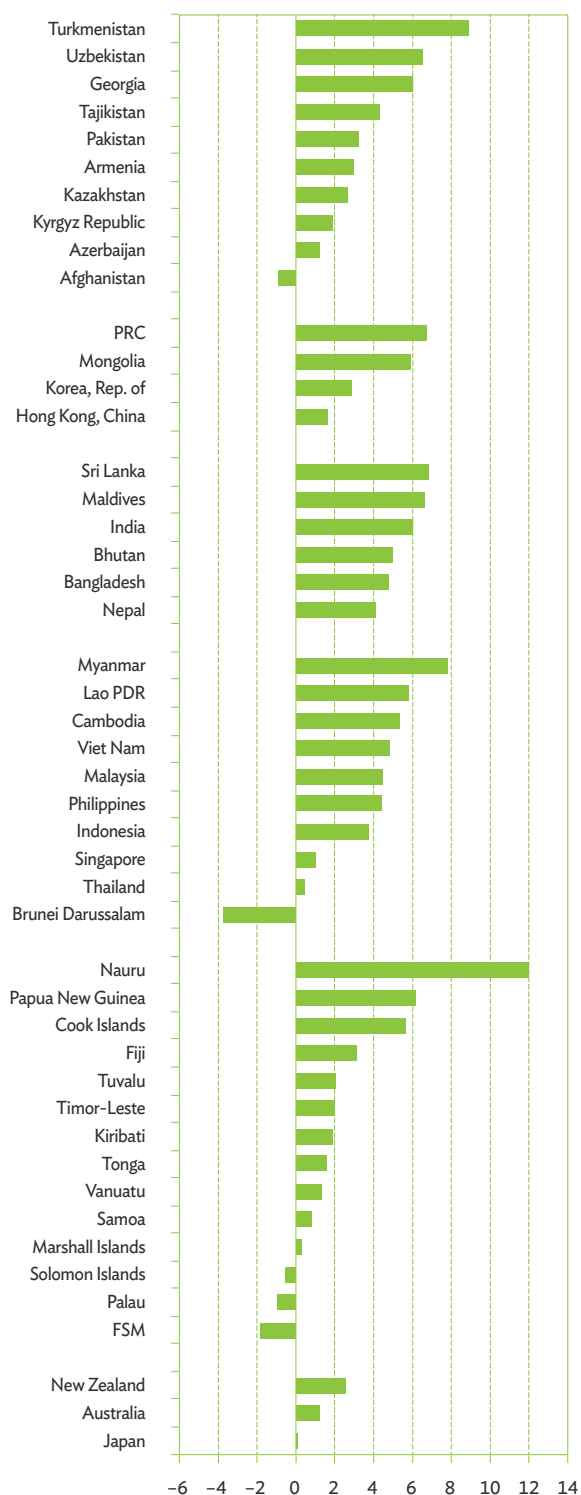
The target is to ensure that GDP per capita grows by at least 7% annually in the least developed countries, and at a level in accordance with national circumstances in other countries.¹

In developing economies of Asia and the Pacific, the average annual growth rate in 2014 is estimated at 3.9%. Higher average growth can be observed in South Asia at 5.6%, followed by 4.3% in East Asia and 3.7% in Central and West Asia. Southeast Asia and the Pacific had an average growth of 3.4% and 2.4%, respectively. In 2014, the annual growth rate of GDP per capita in the majority of developing economies in the region ranged between -3.7% and 12.0%. On the other hand, the average annual growth rate of GDP per capita of the region's three developed economies rose by roughly 1.3%. Figure 4.3 presents the results for all reporting economies.

Higher growth of real GDP per employed person can also be seen in Turkmenistan (7.9%), Myanmar (6.8%), the PRC (6.7%), Sri Lanka (6.3%), and Uzbekistan (6.1%). These growth rates are much higher compared with those of the developed member countries Australia (2.1%), Japan (0.3%), and New Zealand (1.2%) (Table 4.2).

1 The estimates provided here are sourced from UN SDG Indicators Global Database. More updated estimates from economy sources are provided in Part II: Regional Trends and Tables.

Figure 4.3: Annual Growth Rate of Real GDP per Capita in constant 2005 \$, 2013–2014 (%)



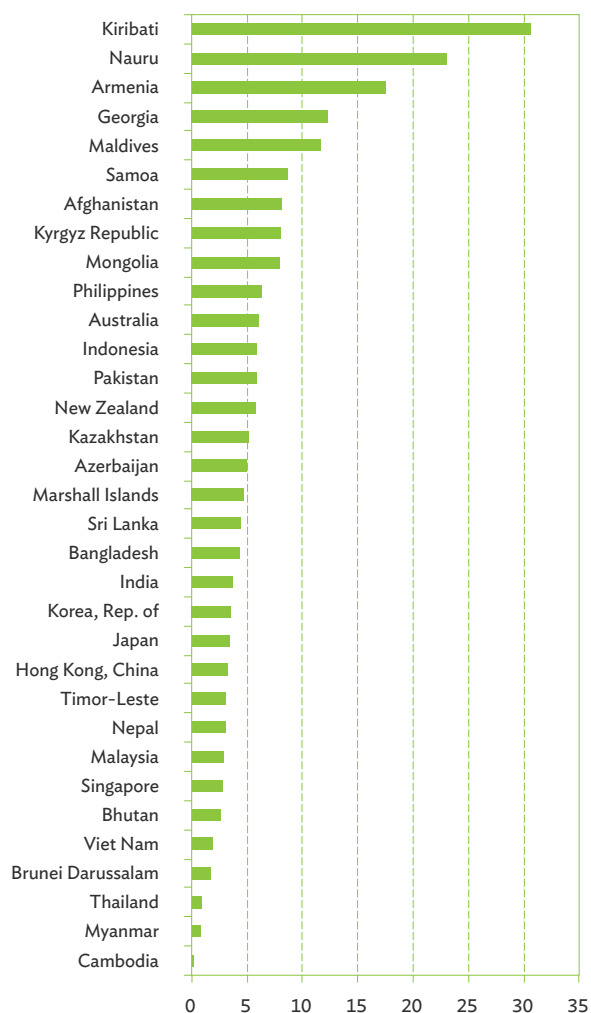
FSM = Federated States of Micronesia, GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Source: Table 4.2

[Click here for figure data](#)

Unemployment rate. The target is to achieve full and productive employment and decent work for all by 2030.

Figure 4.4 shows the distribution of unemployment rates among the reporting member economies based on latest data. The highest unemployment rates are recorded in Kiribati (30.6%), Nauru (23.0%), Armenia (17.6%), Georgia (12.4%), and the Maldives (11.7%). On the other hand, the lowest unemployment rates are noted in Cambodia (0.1%), Myanmar (0.8%), Thailand (0.8%), Brunei Darussalam (1.7%), and Viet Nam (1.9%).

Figure 4.4: Unemployment Rate, 2014 or Nearest Year (%)

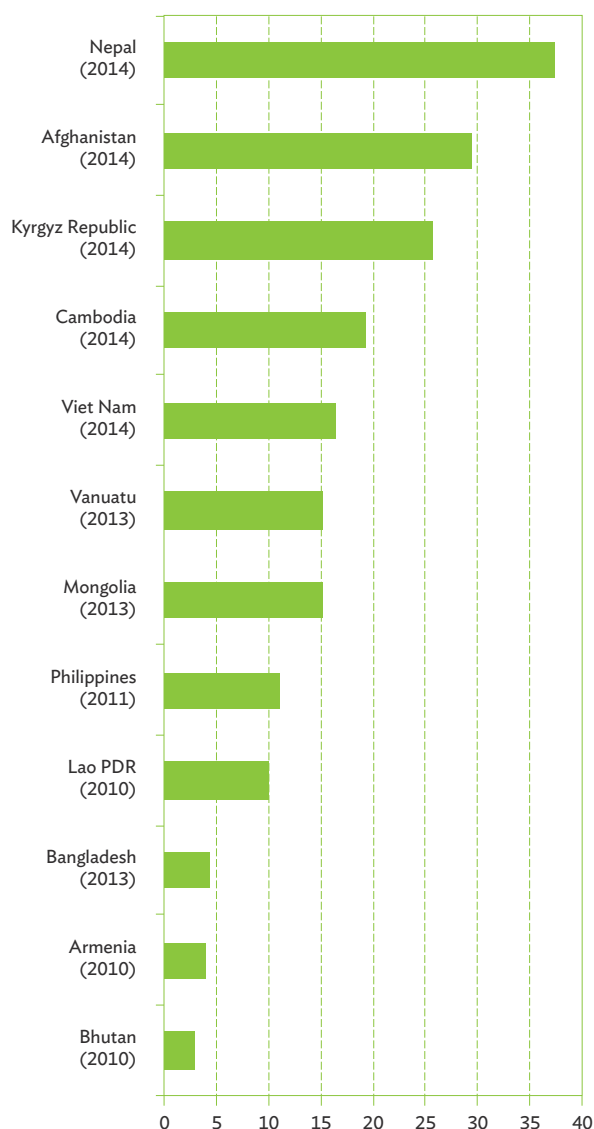


Note: Only economies with recent estimates (2010 and later) are included.
Source: Table 4.3.

[Click here for figure data](#)

Proportion of children aged 5–17 years engaged in child labor. The highest prevalence rates of child labor are observed in Nepal (37.4%), Afghanistan (29.4%), the Kyrgyz Republic (25.8%), and Cambodia (19.3%), while the lowest rates are noted in Bhutan (2.9%) and Armenia (3.9%) (Figure 4.5). Table 4.3 also presents estimates for earlier years.

Figure 4.5: Proportion of Children Aged 5–17 Years Engaged in Child Labor in Selected Economies, Latest Year (%)



Lao PDR = Lao People's Democratic Republic.

Note. Only economies with recent estimates (2010 and later) are included.

Source: Table 4.3.

[Click here for figure data](#)

Number of commercial bank branches and ATMs per 100,000 population. The number of commercial banks per 100,000 adults in developed member economies ranges between 29.1 and 34.1 based on latest available data. In developing economies of the region, the estimates range between 1.8 and 71.5. Some economies like Mongolia (71.5) and Uzbekistan (37.9) have a higher number of commercial banks per 100,000 adults compared with other economies. The numbers in Central and West Asia, South Asia, and Southeast Asia are generally lower compared with other regions.

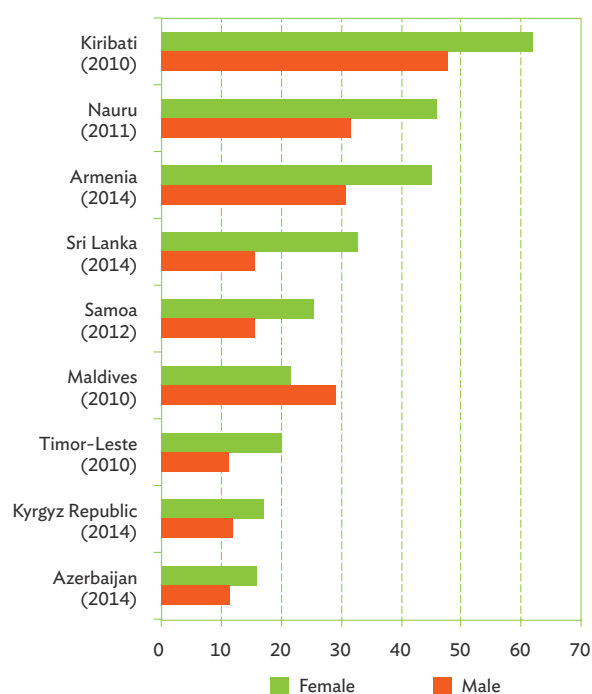
Meanwhile, the number of ATMs per 100,000 adults in developed member economies ranges between 70.9 and 160.0 based on latest data available. In developing economies of the region, the estimates range between 1.0 and 280.8. Some economies like the Republic of Korea (280.0) and Thailand (111.3) have a higher number of ATMs per 100,000 adults compared with other economies.

Proportion of adults with an account at a bank or other financial institutions. Since 2011, the proportion of adults with an account in a bank or other financial institutions has grown by more than 8 percentage points in the majority of the member economies in Asia and the Pacific. Close to more than 90% of adults in East Asia have an account at a bank or other financial institutions, more than 50% in Southeast Asia and South Asia. The estimate is slightly lower for Central and West Asia where only 26% of adults have a bank account or one in other financial institutions.

Equity and Other Issues

Many member economies in the region confront the challenge of ensuring that there are enough good-quality and productive jobs for everyone. However, empirical data suggest that in many countries, women are still exposed to higher risks of unemployment. For instance, in Sri Lanka, the unemployment rate among women is higher by 17.0 percentage points than among men. In Nauru, the difference is 14.2 percentage points and in Kiribati 14.6 percentage points. On the other hand, the Maldives and Tajikistan exhibit higher unemployment rates among men. Furthermore, several countries need to work harder in reducing youth unemployment rates. For instance, Armenia, and Kiribati have significantly higher rates of unemployment in the 15–24 age group than in the group 25 years old and over.

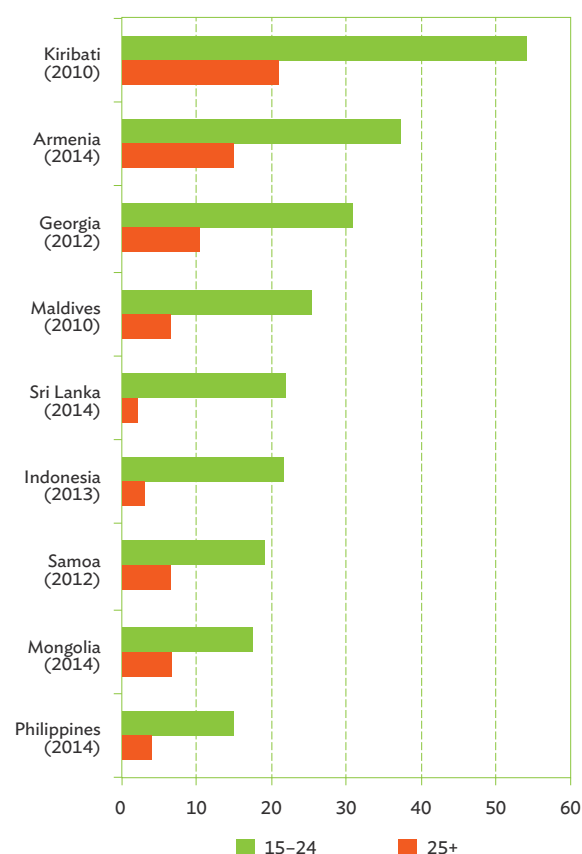
Figure 4.6: Unemployment Rate in Selected Economies, by Sex (%)



Source: United Nations Statistics Division. Sustainable Development Goal Indicators Global Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed September 2016).

[Click here for figure data](#)

Figure 4.7: Unemployment Rate in Selected Economies, by Age Group (%)



Source: United Nations Statistics Division. Sustainable Development Goal Indicators Global Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed September 2016).

[Click here for figure data](#)

Data Gaps

Designing effective policies that promote inclusive growth requires finer granularity of data on GDP, employment rates, and other socioeconomic indicators. While most of the economic growth and employment indicators relevant to SDG 8 are widely available in many countries, they are usually presented at highly aggregated levels. In Part II, we provide examples on how nonconventional types of data, particularly satellite images, can be used to monitor progress with respect to SDG 8.

SDG 9: Build Resilient Infrastructure, Promote Inclusive and Sustainable Industrialization and Foster Innovation

Sustaining socioeconomic development and empowering societies hinge on channeling more investments to smart infrastructure. Smart infrastructure should be designed not only to make the delivery of basic services more efficient, but also to spur income-generating activities that result in an environment-friendly industrialization. To accomplish this, everyone should capitalize on the lessons from both developed and developing countries that have allocated a significant amount of resources on smart infrastructure-related research and development.

Air transport, passengers carried and freight volume. In 2014, a total of 1.1 billion air passengers traveled to and from Asia and the Pacific. Within the developing region, 543 million or 48.1% traveled to and from East Asia, 279.4 million or 24.7% in Southeast Asia, 91.5 million or 8.1% in South Asia, 18.9 million or 1.7% in Central and West Asia, and 4.3 million or less than 1% in the Pacific.

Freight volume by air transport in the region reached 18.1 billion metric tons (mt) in 2014, a 42.6% increase from 12.7 billion mt in 2000. East Asia accounts for 57.3% or 10.34 billion mt in 2014, the largest share in the region, followed by Southeast Asia with 19.8% and South Asia with 5.0% of the total freight volume transported by air. From 2000 to 2014, a significant increase in freight volume by air by more than 100% was observed in South Asia (154.7%) while it was almost doubled in Central and West Asia (95.6%) and East Asia (95.2%).

Manufacturing value added per capita. In the majority of regional member economies in 2015, the value added per capita in the manufacturing sector ranged between \$8.71 and \$9,292.02 at constant 2010 US dollars. Between 2000 and 2015, a significant increase in the value added per capita in the manufacturing sector can be seen in Myanmar (943%), the PRC (313%),

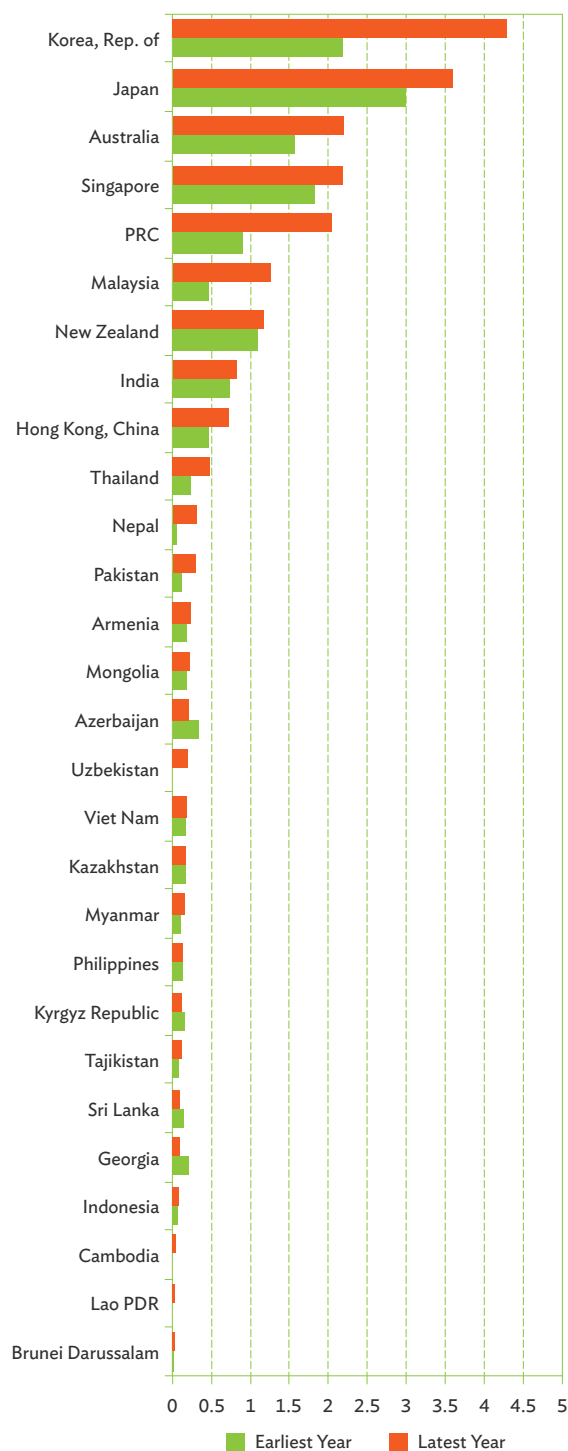
Viet Nam (252%), Cambodia (250%), Turkmenistan (226%), Georgia (212%), the Lao PDR (199%), Nauru (199%), Bangladesh (172%), and Bhutan (132%).

Manufacturing value added share in GDP. In proportion to GDP, the share of the manufacturing sector has increased in 16 of 48 member economies in the region between 2000 and 2015. A significant increase is observed in the following economies: 13.6 percentage points in Myanmar, 8.6 percentage points in Nauru, and 6.9 percentage points in Viet Nam. Currently, the relative share of the manufacturing sector to the total economic output is highest in the PRC (33.0%); the Republic of Korea (29.0%); Thailand (28.3%); Indonesia (24.6%); Malaysia (23.9%); Nauru (23.7%); Taipei, China (23%); the Philippines (22.5%); Myanmar (22.1%); and Viet Nam (20.3%).

Between 2000 and 2015, six economies from Central and West Asia recorded the biggest declines in the share of manufacturing sector to GDP—Afghanistan, Armenia, Azerbaijan, the Kyrgyz Republic, Tajikistan, and Uzbekistan—with a decrease ranging from 4.2 to 9.9 percentage points. Meanwhile, seven of 14 Pacific economies had the lowest shares of manufacturing value added to GDP—the Cook Islands, the Marshall Islands, the Federated States of Micronesia, Palau, Timor-Leste, Tuvalu, and Vanuatu—ranging from 0.2% to 4.0%.

Research and development expenditure as a proportion of GDP. Developed and other middle-to high-income economies of Asia and the Pacific top the list of regional economies with the highest research and development expenditure as a proportion of GDP (Figure 4.8). The list includes the Republic of Korea (4.3%), Japan (3.6%), Australia (2.2%), Singapore (2.2%), the PRC (2.0%), Malaysia (1.3%), and New Zealand (1.2%). In other economies, research and development expenditure is less than 1% of their respective GDP. Since 2000, there have been modest increases in Hong Kong, China; India; Nepal; Pakistan; and Thailand.

Figure 4.8: Research and Development Expenditure as a Proportion of GDP (%)



Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Source: Table 4.7.

[Click here for figure data](#)

Data Gaps, Equity and Other Issues

While there are signs that investments in smart infrastructure are generally improving in many countries, the availability of key infrastructure in some remote areas still compares unfavorably with that in capital cities and urban centers. In addition to initiating more infrastructure investments, governments can respond to this issue by providing an economic environment that will attract nongovernment players to be more active in ensuring that the economic benefits of infrastructure are accessible to everyone.

SDG 10: Reduce Inequality within and among Countries

Reducing high levels of social and economic inequalities could be beneficial for various reasons. For instance, with lower inequality and more equitable access to economic opportunities, it will be easier for people from lower echelons of society to fully realize their economic potential. With lower inequality, there is also presumably less risk of social conflict arising from some segments of the population being left out from enjoying the benefits of economic development. SDG 10 aims to arrest the potential threat to long-term social and economic development accompanying high inequality.

Annualized growth rates in average household income or expenditure per capita and average household income or expenditure per capita among the bottom 40% of the population. Figure 4.9 shows the estimates of growth rates of average household income or expenditure per capita for the entire population and for the bottom 40%. Between 2000 and 2015, the annualized growth rates in household income or expenditure per capita for the entire population were highest in Kazakhstan (8.9%), Cambodia (8.5%), Nepal (7.5%), the PRC (7.2%), Bhutan (6.5%), Viet Nam (6.2%), Thailand (4.8%),

Australia (4.4%), Pakistan (3.8%), Indonesia (3.8%), and India (3.2%). On the other hand, the annualized growth rates in household income or expenditure per capita among the bottom 40% of population were highest in the PRC (7.9%), Viet Nam (7.8%), Kazakhstan (7.6%), Bhutan (6.5%), Australia (4.7%), Nepal (4.1%), Cambodia (4.1%), Thailand (4.0%),

India (3.7%), and Indonesia (3.4%). Interestingly, the empirical data suggest that some economies that have experienced faster growth among the bottom 40% than the mean are those that have a slower reduction in poverty (Box Figure 4.1.1).

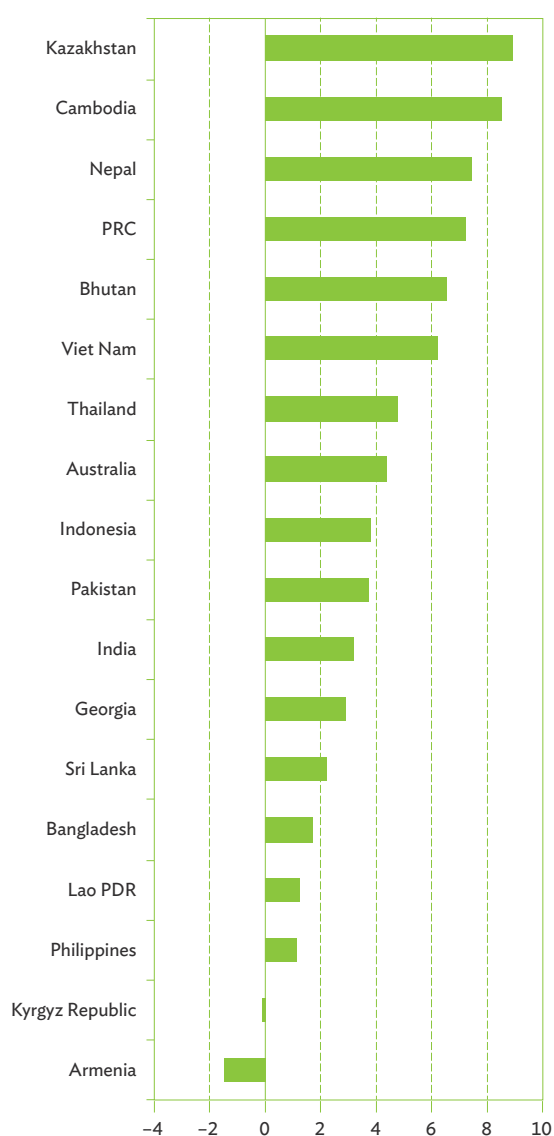
Equity and Other Issues

Not everyone benefits from economic growth equally. A high level of inequality indicates that the different segments of the population benefit from economic growth at different rates. There will be income convergence if the initially poor experience faster income growth than the rich. However, policy makers should be careful in implementing programs and interventions that are solely designed to minimize inequalities but disregard their impact on other SDGs such as poverty reduction. Box 4.1 discusses this issue by examining the performance of different countries with respect to SDGs 1 and 10.

Data Gaps

Although high and increasing inequality could threaten the sustainability of economic development, social and economic experts have long underscored the pitfalls of taking a normative negative perception about inequality. For instance, these experts argue that inequality arising from people having different skill sets and exerting different amounts of effort could be considered a positive type of inequality based on the principle of meritocracy. On the other hand, “bad” inequality refers to socioeconomic disparities that are driven by gender, race, parental background, and other uncontrollable circumstances that people are born into. Despite this distinction between “good” and “bad” inequality, conventional measures of inequality are essentially measures of total inequality, which is the sum of the good and bad components. A more thorough assessment of inequality can be done if inequality decomposition is also undertaken.

Figure 4.9: Growth Rates of Household Income or Expenditure per Capita among the Bottom 40% of the Population (%)



Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Source: Table 4.9.

[Click here for figure data](#)

Box 4.1: Complexities in the Inequality and Poverty Reduction Relationship

Asia and the Pacific has an impressive development scorecard: a massive reduction in poverty, an expansion in access to clean drinking water, and close to universal primary education. Where the region has not improved is reducing inequality.

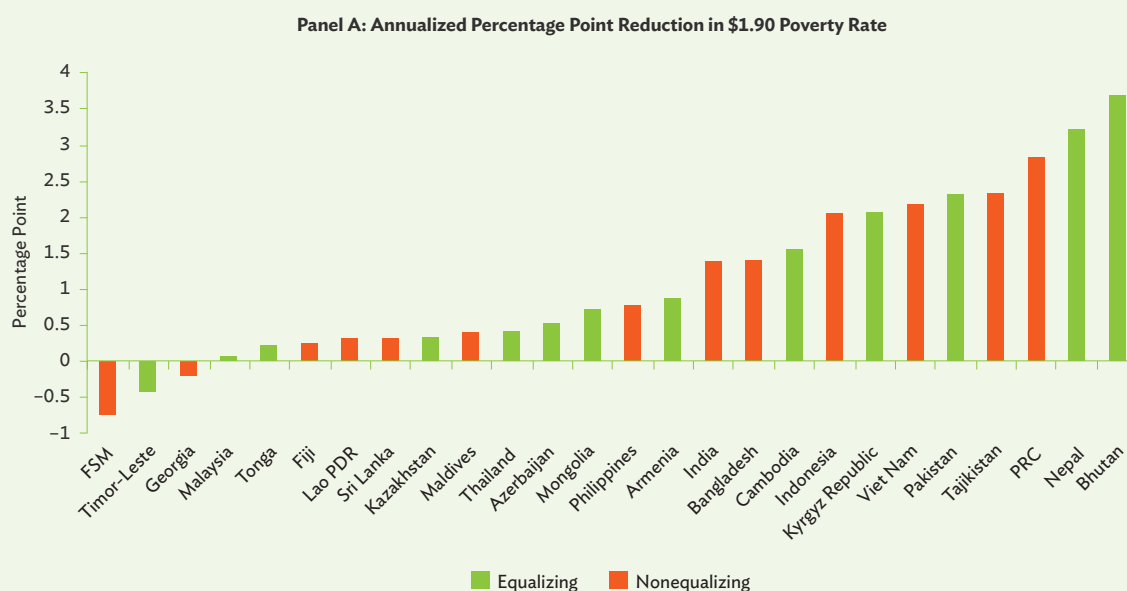
The gap between the haves and have-nots within countries continues to widen, leading the United Nations to last year adopt Sustainable Development Goal (SDG) 10, which focuses on reducing inequalities within and among countries.

To monitor progress toward this goal, the SDGs track on the difference between the income growth of the bottom 40% of their population and the national average. This is founded on the assumption that fostering faster income growth for the bottom 40% relative to the national average will allow them to catch up with the rest and, thus, bring about a more equitable distribution of economic opportunities.

We analyzed data from the World Bank's PovcalNet database for 26 of ADB's developing member countries with sufficient data between 1990 and the present and found that there may be an elements of a trade-off between fighting poverty and reducing inequality.

Box Figure 4.1 describes the rate at which \$1.90 and \$3.10 a day poverty incidence have changed for 26 DMCs with available data. It also distinguishes between countries on the basis of whether the bottom 40% experienced higher income growth than average incomes or not. The former countries are labeled as having “equalizing” distribution, while the latter are labeled as having “nonequalizing” distribution. The data show that some of the fastest reduction in poverty were registered by countries with growing inequality as defined by the SDG 10 target. This pattern is consistent even if we use the \$3.10 poverty line or other measures of inequality such as the Palma ratio.

Box Figure 4.1.1: Comparison of Change in Poverty Rates between Countries with Equalizing and Nonequalizing Distribution, 1990–Present



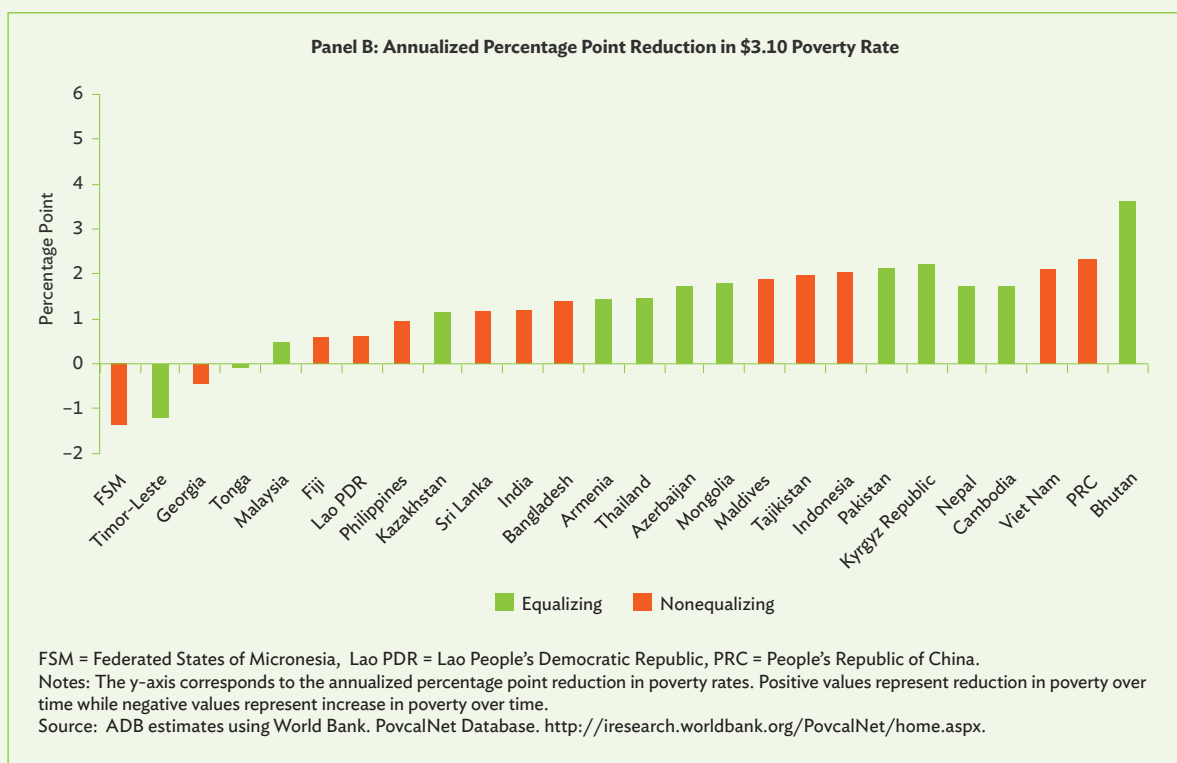
FSM = Federated States of Micronesia, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.

Notes: The y-axis corresponds to the annualized percentage point reduction in poverty rates. Positive values represent reduction in poverty over time while negative values represent increase in poverty over time.

Source: ADB estimates using World Bank, PovcalNet Database. <http://iresearch.worldbank.org/PovcalNet/home.aspx>.

continued.

Box 4.1: (continued)



In fact, countries with the highest average income growth (but higher levels of inequality) saw some of the largest reductions in poverty. Millions of people have been lifted out of poverty in countries like Bangladesh, the People's Republic of China (PRC), Indonesia, and Viet Nam because these developing member countries have posted remarkable average income growth rates. For instance, per capita income in the PRC has grown at an annual rate of 7% since the 1990s, while the annual growth rates for Viet Nam and Indonesia for the same period have been 6% and 3%, respectively.

Thus, assessments based solely on the distribution of income growth, without any regard for its impact on other SDGs such as putting an end to poverty (SDG 1) can be problematic. In some cases, it is conceivable that a naïve reliance on this SDG 10 target would even render countries with declining average income and declining income of the bottom 40% as “performers” simply because the average income growth declined faster compared to the income of the bottom 40%.

As we have seen in the cases of the PRC, India, Indonesia, and Viet Nam, countries can succeed in reducing poverty significantly for as long as their average income growth is also fast—even if the income of the upper 60% grew faster than that of the bottom 40%. On the other hand, in countries such as the Philippines where growth in the income of the upper 60% was not significantly faster relative to that of the bottom 40%, the average income—and the national poverty rates—hardly budged.

There is no question that inequality is an important development issue that needs to be addressed and must therefore be included in the SDGs. However, it is important to examine the interlinkages possible trade-offs between changes in poverty and inequality, without losing sight of other important dimensions of development such as increasing the poor's access to high-quality jobs, services, and infrastructure.

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

Table 4.1: **Selected Indicators for SDG 7 - Energy Efficiency and Modern, Renewable Energy Sources**

By 2030, ensure universal access to affordable, reliable and modern energy services

By 2030, increase substantially the share of renewable energy in the global energy mix

By 2030, double the global rate of improvement in energy efficiency

Regional Member	7.1.1 Proportion of Population with Access to Electricity (%)		7.2.1 Renewable Energy Share in the Total Final Energy Consumption (%)		7.3.1 Energy Intensity Measured in Terms of Primary Energy and GDP (MJ/\$ 2011 PPP GDP)	
	2000	2012	2000	2012	2000	2013
Developing Member Economies						
Central and West Asia						
Afghanistan	37.5	43.0	59.5	10.8 (2011)	1.4 (2002)	4.6 (2012)
Armenia	98.0	100.0	7.2	6.6	9.4	5.4
Azerbaijan	96.0	100.0	2.1	2.9	13.2	3.7
Georgia	99.9	100.0	47.3	28.7	8.3	5.2
Kazakhstan	97.0	100.0	2.5	1.4	9.7	8.4
Kyrgyz Republic	100.0	100.0	35.2	22.5	9.6	9.3
Pakistan	79.5	93.6	50.4	45.5	5.5	4.4
Tajikistan	99.0	100.0	62.4	58.0	12.3	5.2
Turkmenistan	99.6	100.0	-	-	25.9	15.5
Uzbekistan	99.7	100.0	1.2	2.4	35.0	11.9
East Asia						
China, People's Rep. of	98.0	100.0	29.2	18.4	10.5	7.9
Hong Kong, China	100.0	100.0	0.6	1.1	2.5	1.6
Korea, Rep. of	98.0	100.0	0.7	1.6	8.1	6.7
Mongolia	82.7	89.8	5.7	3.2	9.0	7.1
Taipei, China	...	...	...	...	...	...
South Asia						
Bangladesh	32.0	59.6	59.4	38.3	3.5	3.2
Bhutan	68.5	75.6	95.5	90.0 (2011)	21.9	11.8 (2012)
India	62.3	78.7	52.4	39.0	7.0	5.0
Maldives	96.4	100.0	9.3	3.2 (2011)	4.3	4.7 (2012)
Nepal	72.8	76.3	88.3	84.7	9.3	7.1
Sri Lanka	80.7	88.7	64.2	60.9	3.3	2.0
Southeast Asia						
Brunei Darussalam	69.4	76.2	-	0.0	4.0	4.4
Cambodia	16.6	31.1	81.1	72.6	8.5	5.6
Indonesia	87.6	96.0	45.2	37.1	5.3	3.7
Lao PDR	46.3	70.0	91.2	86.5 (2011)	5.7	2.6 (2012)
Malaysia	96.4	100.0	8.2	6.8	5.5	5.4
Myanmar	47.0	52.4	80.2	78.7	9.4	3.2 (2012)
Philippines	71.3	87.5	34.9	29.4	5.1	3.0
Singapore	100.0	100.0	0.3	0.5	3.8	2.6
Thailand	82.5	100.0	22.0	23.0	5.2	5.6
Viet Nam	89.1	99.0	58.0	35.6	5.8	5.5
The Pacific						
Cook Islands	...	...	...	...	...	...
Fiji	52.5	59.3	13.4	12.2 (2011)	4.2	3.7 (2012)
Kiribati	52.5	59.3	11.1	2.9 (2011)	3.8	5.4 (2012)
Marshall Islands	52.5	59.3	...	...	...	...
Micronesia, Fed. States of	52.5	59.3	...	...	...	...
Nauru	...	...	...	...	...	...
Palau	52.5	59.3	3.3 (2001)	2.7 (2011)	7.8	11.3 (2012)
Papua New Guinea	11.0	18.1	66.4	53.4 (2011)	10.4	10.5 (2012)
Samoa	89.4	100.0	49.5	23.2 (2011)	4.4	5.0 (2012)
Solomon Islands	15.7	22.8	86.9	67.2 (2011)	8.3	5.9 (2012)
Timor-Leste	34.5	41.6	52.8 (2002)	38.3 (2010)	...	...
Tonga	85.8	95.9	2.5	1.1 (2011)	3.6	3.1 (2012)
Tuvalu	37.5	44.6	...	...	...	...
Vanuatu	19.1	27.1	68.8	34.2 (2011)	4.2	5.3 (2012)
Developed Member Economies						
Australia	100.0	100.0	8.4	8.4	6.7	5.5
Japan	100.0	100.0	3.9	4.5	5.3	4.2
New Zealand	100.0	100.0	28.9	30.8	6.6	5.5

... = data not available at cutoff date, - = magnitude equals zero, 0.0 = magnitude is less than half of unit employed, GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic, MJ = megajoule, PPP = purchasing power parity, SDG = Sustainable Development Goal.

Sources: For Indicators 7.1.1 and 7.2.1: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016). For Indicator 7.3.1: For economies whose latest year estimates are for 2013, ADB estimates using the International Energy Agency's energy balances data and the World Bank's GDP data; for the rest: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016).

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

Table 4.2: **Selected Indicators for SDG 8 - Economic Growth per Capita**
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

Regional Member	8.1.1 Annual Growth Rate of Real GDP per Capita at Constant 2005 \$ (%)		8.2.1 Annual Growth Rate of Real GDP per Employed Person (%)	
	2000	2014	2000	2015
Developing Member Economies				
Central and West Asia				
Afghanistan	-8.7	-0.9	...	...
Armenia	6.5	3.0	7.6	-0.4
Azerbaijan	10.1	1.2	6.7	1.4
Georgia	3.1	6.0	-3.9	4.3
Kazakhstan	10.6	2.7	8.2	1.0
Kyrgyz Republic	4.1	1.9	5.2	2.1
Pakistan	1.9	3.2	4.5	1.2
Tajikistan	6.8	4.3	7.7	2.6
Turkmenistan	4.3	8.9	7.9	7.9
Uzbekistan	2.6	6.5	2.7	6.1
East Asia				
China, People's Rep. of	7.8	6.8	7.9	6.7
Hong Kong, China	6.2	1.6	4.9	1.6
Korea, Rep. of	8.2	2.8	4.4	1.5
Mongolia	0.2	5.9	...	...
Taipei, China	...	...	...	...
South Asia				
Bangladesh	3.9	4.8	1.9	3.7
Bhutan	5.7	5.0	...	...
India	2.2	6.0	3.0	4.2
Maldives	2.5	6.6	...	...
Nepal	4.2	4.1	...	...
Sri Lanka	5.3	6.9	2.2	6.3
Southeast Asia				
Brunei Darussalam	0.8	-3.7	...	...
Cambodia	6.4	5.3	5.6	5.5
Indonesia	3.5	3.7	3.7	3.3
Lao PDR	4.1	5.8	...	...
Malaysia	6.4	4.5	3.4	2.3
Myanmar	12.4	7.8	10.6	6.8
Philippines	2.2	4.4	6.7	4.0
Singapore	6.2	1.0	5.1	1.2
Thailand	3.3	0.5	2.4	2.8
Viet Nam	5.6	4.8	2.2	4.8
The Pacific				
Cook Islands	13.8	5.6	...	...
Fiji	-2.3	3.1	...	...
Kiribati	10.1	1.9	...	...
Marshall Islands	5.0	0.3	...	...
Micronesia, Fed. States of	5.0	-1.9	...	...
Nauru	-6.8	12.0	...	...
Palau	-1.3	-1.0	...	...
Papua New Guinea	-4.9	6.2	...	...
Samoa	6.6	0.8	...	...
Solomon Islands	-16.5	-0.5	...	...
Timor-Leste	12.8	2.0	...	...
Tonga	2.6	1.6	...	...
Tuvalu	12.8	2.1	...	...
Vanuatu	3.1	1.3	...	...
Developed Member Economies				
Australia	0.9	1.2	0.7	2.1
Japan	2.1	0.1	3.0	0.3
New Zealand	1.7	2.5	2.5	1.2

... = data not available at cutoff date, GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

Source: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016).

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

Table 4.3: **Selected Indicators for SDG 8 - Unemployment, Youth Participation in Education and Work, and Child Labor**

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

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

Regional Member	8.5.2 Unemployment Rate, by Sex (%)					
	2000			2014		
	Total	Female	Male	Total	Female	Male
Developing Member Economies						
Central and West Asia						
Afghanistan	...	...	...	8.2 (2011)	16.5 (2011)	6.4 (2011)
Armenia	16.4 (2008)	18.6 (2008)	14.4 (2008)	17.6	19.5	15.8
Azerbaijan	11.8	12.7	10.9	4.9	5.8	4.0
Georgia	10.8	10.5	11.1	12.4	10.5	14.0
Kazakhstan	10.4 (2001)	12.0 (2001)	8.9 (2001)	5.2 (2013)	5.9 (2013)	4.6 (2013)
Kyrgyz Republic	12.6 (2002)	14.3 (2002)	11.2 (2002)	8.1	9.5	7.0
Pakistan	7.2	15.8	5.5	5.9 (2015)	9.0 (2015)	5.0 (2015)
Tajikistan	...	...	...	11.5 (2009)	10.5 (2009)	12.3 (2009)
Turkmenistan	...	...	...	...	...	...
Uzbekistan	...	...	...	...	...	...
East Asia						
China, People's Rep. of	...	...	...	...	...	...
Hong Kong, China	4.9	4.0	5.6	3.3 (2015)	3.1 (2015)	3.4 (2015)
Korea, Rep. of	4.4	3.6	5.0	3.6 (2015)	3.6 (2015)	3.7 (2015)
Mongolia	6.2 (2002)	6.2 (2002)	6.2 (2002)	7.9	7.3	8.5
Taipei, China	...	...	...	...	...	...
South Asia						
Bangladesh	3.3	3.3	3.2	4.3 (2013)	7.2 (2013)	3.0 (2013)
Bhutan	1.9 (2001)	3.2 (2001)	1.3 (2001)	2.6	3.5	1.9
India	4.3	4.3	4.3	3.6 (2012)	4.2 (2012)	3.4 (2012)
Maldives	14.4 (2006)	23.8 (2006)	7.9 (2006)	11.7 (2010)	13.8 (2010)	10.4 (2010)
Nepal	2.1 (2008)	2.0 (2008)	2.3 (2008)	3.0	3.4	2.6
Sri Lanka	7.7	11.4	5.9	4.4	7.3	2.9
Southeast Asia						
Brunei Darussalam	...	...	...	1.7 (2011)	2.4 (2011)	1.3 (2011)
Cambodia	2.5	2.8	2.1	0.1	0.1	0.1
Indonesia	6.1	6.7	5.7	5.9	6.3	5.8
Lao PDR	1.4 (2005)	1.4 (2005)	1.3 (2005)	...	...	...
Malaysia	3.0	3.1	3.0	2.9	3.2	2.7
Myanmar	...	...	...	0.8 (2015)	0.9 (2015)	0.7 (2015)
Philippines	11.2	11.5	11.0	6.3 (2015)	5.8 (2015)	6.6 (2015)
Singapore	3.7	3.5	3.9	2.8	3.0	2.6
Thailand	2.4	2.3	2.4	0.8	0.8	0.9
Viet Nam	2.3	2.1	2.4	1.9	1.8	1.9
The Pacific						
Cook Islands	...	...	...	...	...	...
Fiji	4.7 (2004)	6.0 (2004)	4.1 (2004)	8.6 (2007)	12.9 (2007)	6.4 (2007)
Kiribati	14.7 (2005)	18.2 (2005)	12.3 (2005)	30.6 (2010)	34.1 (2010)	27.6 (2010)
Marshall Islands	...	...	...	4.7 (2011)	4.5 (2011)	4.9 (2011)
Micronesia, Fed. States of	...	...	...	...	...	...
Nauru	22.8 (2002)	29.7 (2002)	17.0 (2002)	23.0 (2011)	25.5 (2011)	21.4 (2011)
Palau	...	...	...	...	...	...
Papua New Guinea	2.9	1.3	4.3	...	...	...
Samoa	5.0 (2001)	6.2 (2001)	4.4 (2001)	8.7 (2012)	10.3 (2012)	7.8 (2012)
Solomon Islands	...	...	...	...	...	...
Timor-Leste	9.9 (2001)	13.7 (2001)	8.0 (2001)	3.1 (2010)	4.8 (2010)	2.8 (2010)
Tonga	5.2 (2003)	7.4 (2003)	3.6 (2003)	...	...	...
Tuvalu	6.5 (2002)	8.6 (2002)	4.9 (2002)	...	...	...
Vanuatu	...	...	...	5.5 (2009)	6.2 (2009)	4.9 (2009)
Developed Member Economies						
Australia	6.3	6.1	6.5	6.1 (2015)	6.1 (2015)	6.1 (2015)
Japan	4.7	4.5	4.9	3.4 (2015)	3.1 (2015)	3.6 (2015)
New Zealand	6.1	6.0	6.3	5.8 (2015)	6.3 (2015)	5.3 (2015)

Table 4.3: **Selected Indicators for SDG 8 - Unemployment, Youth Participation in Education and Work, and Child Labor** (continued)

Regional Member	8.6.1 Proportion of Youth (Aged 15–24 Years) Not in Education, Employment, or Training (%)		8.7.1 Proportion of Children Aged 5–17 Years Engaged in Child Labor (%)	
	2000	2014	2000	2014
Developing Member Economies				
Central and West Asia				
Afghanistan	...	...	...	29.4
Armenia	42.1 (2011)	40.9 (2013)	...	3.9 (2010)
Azerbaijan	19.5 (2005)	...	6.5 (2007)	...
Georgia	...	...	18.4 (2005)	...
Kazakhstan	...	...	2.2 (2006)	...
Kyrgyz Republic	10.6 (2007)	21.2 (2013)	...	25.8
Pakistan	...	...	...	...
Tajikistan	38.2 (2007)	...	10.0 (2005)	...
Turkmenistan	...	...	...	...
Uzbekistan	...	...	...	...
East Asia				
China, People's Rep. of	...	...	...	...
Hong Kong, China	7.4 (2009)	6.6 (2013)	...	...
Korea, Rep. of	18.5 (2008)	18.8 (2011)	...	...
Mongolia	18.5 (2006)	1.5 (2013)	...	15.2 (2013)
Taipei, China	...	...	...	...
South Asia				
Bangladesh	31.5 (2002)	40.3 (2013)	...	4.3 (2013)
Bhutan	...	...	...	2.9 (2010)
India	26.1 (2004)	27.2 (2010)	11.8 (2006)	...
Maldives	...	56.4 (2010)	...	...
Nepal	...	9.2 (2013)	...	37.4
Sri Lanka	22.9 (2010)	0.5 (2012)	...	2.5 (2009)
Southeast Asia				
Brunei Darussalam	...	...	...	...
Cambodia	21.1 (1998)	7.8 (2012)	...	19.3
Indonesia	29.6 (2008)	24.1 (2013)	...	6.9 (2009)
Lao PDR	...	...	...	10.1 (2010)
Malaysia	0.9 (2012)	1.1 (2013)	...	...
Myanmar	...	...	...	...
Philippines	24.7 (2009)	24.8 (2012)	...	11.1 (2011)
Singapore	16.9 (2009)	18.9 (2010)	...	...
Thailand	13.7 (2009)	13.8	8.3 (2006)	...
Viet Nam	11.3 (2012)	9.3 (2013)	...	16.4
The Pacific				
Cook Islands	...	...	...	...
Fiji	...	...	...	...
Kiribati	...	...	...	...
Marshall Islands	...	...	...	...
Micronesia, Fed. States of	...	...	...	...
Nauru	...	...	...	...
Palau	...	...	...	...
Papua New Guinea	...	...	...	...
Samoa	...	38.2 (2012)	...	...
Solomon Islands	...	...	...	...
Timor-Leste	...	...	4.2 (2002)	...
Tonga	...	...	...	...
Tuvalu	...	...	...	...
Vanuatu	...	...	...	15.2 (2013)
Developed Member Economies				
Australia	10.1 (2002)	9.8 (2012)	...	...
Japan	4.4 (2009)	3.9 (2013)	...	...
New Zealand	11.6 (2004)	11.9 (2013)	...	...

... = data not available at cutoff date, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

Sources: International Labour Organization. Key Indicators of the Labour Market (KILM) 2015. 9th Edition, Table 10c. http://www.ilo.org/global/statistics-and-databases/WCMS_424979/lang--en/index.htm (accessed 17 September 2016); United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016).

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

Table 4.4: **Selected Indicators for SDG 8 - Access to Banking, Insurance, and Financial Services**
Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all

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

Regional Member	8.10.1 Number of Commercial Bank Branches and 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.1 Aid for Trade Commitments and Disbursements (constant \$ million) ^a	
	Commercial Bank Branches		ATMs		2011	2014	2006	2014
	2004	2015	2004	2015				
Developing Member Economies								
Central and West Asia								
Afghanistan	0.4	2.4	0.0	1.0	14.4	12.2	4,357	9,989
Armenia	10.8	21.7 (2014)	3.0	56.7 (2014)	18.6	21.8	382	446
Azerbaijan	6.5	10.7 (2014)	17.0 (2006)	35.1 (2014)	18.5	30.7	160	187
Georgia	9.3	...	1.9	56.8	39.8	47.5	513	514
Kazakhstan	3.7	3.0	10.0	71.6	47.5	59.0	80	72
Kyrgyz Republic	5.1	7.9 (2014)	0.6	24.8 (2014)	6.0	20.9	146	439
Pakistan	7.7	9.7 (2014)	0.8	7.5 (2014)	13.1	10.4	688	4,735
Tajikistan	5.0	6.5 (2013)	0.6 (2005)	10.4 (2013)	3.6	16.0	126	303
Turkmenistan	...	...	...	...	0.7	2.2	2	13
Uzbekistan	38.8	37.9	1.0	10.7	24.9	45.2	92	1,085
East Asia								
China, People's Rep. of	...	8.0 (2014)	9.6 (2006)	54.4 (2014)	75.6	83.6	1,516	829
Hong Kong, China	23.5	22.7 (2014)	...	49.7 (2011)	92.9	97.1	1,323	586
Korea, Rep. of	16.8	17.1	208.3	280.8	94.8	95.7	...	...
Mongolia	40.0	71.5 (2014)	...	58.6 (2014)	81.2	93.7	193	243
Taipei, China	...	...	...	...	...	...	...	...
South Asia								
Bangladesh	6.9	8.2 (2014)	0.1	9.3 (2014)	39.8	34.5	4,586	12,618
Bhutan	14.4	15.5 (2014)	0.5	22.2 (2014)	...	38.9	903	2,790
India	9.0	12.8 (2014)	2.3 (2005)	17.8 (2014)	40.5	58.6	48	151
Maldives	10.3	12.1 (2014)	7.4	26.9 (2014)	...	...	2,684	7,317
Nepal	2.6	8.4 (2014)	...	8.8 (2014)	32.6	41.1	3	72
Sri Lanka	8.7	18.6 (2014)	9.2 (2007)	17.0 (2014)	76.5	85.4	350	975
							598	1,314
Southeast Asia								
Brunei Darussalam	21.2	20.7	35.3	78.6	...	...	5,239	9,696
Cambodia	2.3 (2006)	5.7 (2014)	0.0 (2005)	10.9 (2014)	5.6	15.3	...	...
Indonesia	5.2	11.0 (2014)	8.6	49.5 (2014)	26.0	45.3	318	985
Lao PDR	...	2.9 (2014)	...	19.9 (2014)	31.2	...	1,647	1,185
Malaysia	14.1	10.9	27.2	52.1	77.1	84.1	247	470
Myanmar	1.8	3.3 (2014)	...	1.6 (2014)	...	27.0	62	14
Philippines	8.2	8.7 (2014)	10.3	23.4 (2014)	37.1	37.1	34	1,113
Singapore	11.7	9.4 (2014)	47.9	59.5 (2014)	99.3	96.5	412	444
Thailand	7.8	12.6 (2014)	19.9	111.3 (2014)	78.5	82.3	...	...
Viet Nam	...	3.9 (2014)	1.4	23.8 (2014)	29.5	39.5	320	419
							2,199	5,067
The Pacific								
Cook Islands	...	...	...	...	...	...	559	1,257
Fiji	9.3	12.2 (2014)	19.0	44.5 (2014)	...	...	1	34
Kiribati	...	5.7 (2013)	...	14.3 (2013)	...	...	22	28
Marshall Islands	12.0	17.7 (2014)	3.0 (2007)	5.9 (2014)	...	...	11	65
Micronesia, Fed. States of	12.3	14.7 (2014)	3.1	14.7 (2014)	...	...	2	11
Nauru	...	...	...	...	...	...	22	80
Palau	...	...	...	...	...	...	23	4
Papua New Guinea	1.9	1.8 (2014)	31.2 (2007)	47.6	...	...	9	5
Samoa	17.6	21.7	3.8 (2006)	8.2 (2014)	...	...	238	492
Solomon Islands	7.5	4.1	12.1	41.7	...	...	12	110
Timor-Leste	1.2	5.0 (2014)	1.5	11.9	...	...	75	155
Tonga	24.1	21.2 (2013)	...	5.3 (2014)	...	...	46	111
Tuvalu	...	...	22.5	27.2 (2013)	...	...	9	50
Vanuatu	19.6	22.6 (2014)	...	...	...	...	8	53
			4.9	34.8 (2014)	...	...	78	57
Developed Member Economies								
Australia	30.7	29.1 (2014)	133.8	160.0 (2014)	99.7	99.2	...	...
Japan	34.6	34.1	124.3	127.6	96.4	97.5	...	...
New Zealand	35.0	29.6	59.1	70.9	99.4	99.9	...	...

... = data not available at cutoff date, 0.0 = magnitude is less than half of unit employed, ATMs = automated teller machines, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

a Sum of total official flows commitments for Aid for Trade (by recipient) and total official flows disbursed for Aid for Trade (by recipient).

Sources: For Indicator 8.10.1: International Monetary Fund. IMF Financial Access Survey Database. <http://data.imf.org/?sk=E5DCAB7E-A5CA-4892-A6EA-598B5463A34C> (accessed 31 August 2016). For Indicators 8.10.2 and 8.a.1: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016).

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Table 4.5: **Selected Indicators for SDG 9 - Air Transport Passenger and Freight Volumes**
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

Regional Member	9.1.2 Freight Volume, by Air Transport (thousand metric tons)		9.1.2 Passenger Volume, by Air Transport (number of passengers)	
	2000	2014	2000	2014
Developing Member Economies				
Central and West Asia				
Afghanistan	10,514.0	134,368.0	149,705.0	2,144,208.9
Armenia	3,830.0	3,227.8 (2010)	298,232.0	704,753.0 (2010)
Azerbaijan	40,600.0	10,318.4	545,800.0	1,770,192.0
Georgia	1,100.0	208.6	117,521.0	196,589.0
Kazakhstan	5,011.0	16,184.5	461,283.0	4,918,574.1
Kyrgyz Republic	2,229.0	111.7	240,954.0	712,285.9
Pakistan	100,609.0	165,305.0	5,293,541.0	5,559,595.5
Tajikistan	1,274.0	153.0	168,006.0	312,685.8
Turkmenistan	4,960.0	995.9	1,283,780.0	57,281.4
Uzbekistan	19,570.0	40,235.7	1,744,510.0	2,545,935.0
East Asia				
China, People's Rep. of	1,884,521.0	5,907,105.9	61,891,807.0	390,878,784.0
Hong Kong, China	1,330,362.0	2,167,753.1	14,377,973.0	37,455,220.0
Korea, Rep. of	2,106,801.0	2,311,971.4	34,331,368.0	59,067,351.2
Mongolia	3,029.0	6,699.9	253,917.0	683,225.2
Taipei, China	1,338.2	2,221.7	48,407,000.0	55,357,000.0
South Asia				
Bangladesh	40,178.0	98,425.9	1,331,369.0	3,116,217.4
Bhutan	2,069.0 (2005)	768.7	34,425.0	302,158.1
India	244,208.0	686,779.4	17,303,059.0	82,751,554.9
Maldives	6,839.0	224.0 (2005)	315,108.0	81,945.0 (2005)
Nepal	9,136.0	10,954.8	643,332.0	517,541.9
Sri Lanka	55,365.0	114,208.1	1,755,567.0	4,756,137.6
Southeast Asia				
Brunei Darussalam	29,177.0 (2000)	21,225.7	863,547.0	1,087,699.8
Cambodia	5,408.0 (2005)	2,836.6	168,810.0 (2005)	1,089,788.3
Indonesia	181,432.0	747,177.4	9,916,365.0	94,504,086.1
Lao PDR	1,369.0	1,331.3	210,847.0	1,310,119.9
Malaysia	447,003.0	630,537.7	16,560,793.0	47,555,552.8
Myanmar	1,625.0	4,146.7	437,600.0	1,272,290.3
Philippines	143,122.0	165,326.5	5,756,288.0	30,932,992.8
Singapore	2,014,269.0	1,137,149.0	16,704,341.0	32,883,396.8
Thailand	512,489.0	649,035.0	17,392,091.0	44,039,176.2
Viet Nam	45,992.0	225,333.4	2,877,894.0	24,703,605.2
The Pacific				
Cook Islands	2,455.4 (2010)	3,548.0	77,557.6 (2010)	87,303.0
Fiji	18,678.0	28,658.0	586,043.0	1,248,767.9
Kiribati	...	...	...	...
Marshall Islands	206.0	297.0 (2005)	16,109.0	25,789.0 (2005)
Micronesia, Fed. States of	...	...	...	...
Nauru	799.0	4,757.0	160,587.0	34,576.8
Palau	...	...	...	...
Papua New Guinea	14,027.0	16,932.8	1,099,772.0	2,074,021.3
Samoa	1,198.0	53.8	164,142.0	76,946.4
Solomon Islands	582.0	1,044.9	75,262.0	330,451.6
Timor-Leste	...	...	...	...
Tonga	0.0	0.0 (2004)	51,615.0	75,416.0 (2004)
Tuvalu	...	...	...	...
Vanuatu	977.0	1,356.9	101,503.0	320,226.6
Developed Member Economies				
Australia	433,393.0	316,076.1	32,577,569.0	67,686,801.2
Japan	2,855,581.0	2,325,844.0	109,123,312.0	110,544,000.0
New Zealand	130,155.0	168,163.6	10,781,314.0	15,050,502.2

... = data not available at cutoff date, 0.0 = magnitude is less than half of unit employed, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

Sources: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016); for Taipei, China: Directorate-General of Budget, Accounting and Statistics. 2015. *Statistical Yearbook 2014*. Nantou City.

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Table 4.6: **Selected Indicators for SDG 9 - Growth in Manufacturing^a**

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

Regional Member	9.2.1.a Manufacturing Value Added Share in GDP (%)		9.2.1.b Manufacturing Value Added per Capita (at constant 2010 \$)		9.2.2 Manufacturing Employment as a Proportion of Total Employment (%)	
	2000	2015	2000	2015	2000	2013
Developing Member Economies						
Central and West Asia						
Afghanistan	17.2	11.2	45.1	75.2	20.9	18.0
Armenia	15.3	11.1	210.3	421.3	8.8	8.3
Azerbaijan	9.6	5.3	158.2	330.9	4.6	5.0
Georgia	9.5	11.7	127.2	396.8	5.9	4.4
Kazakhstan	13.0	10.3	594.1	1,150.4	7.6	6.4
Kyrgyz Republic	23.2	14.6	149.9	151.9	9.1	7.0
Pakistan	10.1	12.6	80.8	145.9	12.5	13.0
Tajikistan	27.2	17.3	114.0	147.3	6.3	3.8
Turkmenistan	12.8	14.1	300.2	980.0	17.3	21.8
Uzbekistan	25.3	18.4	204.3	355.2	16.9	16.9
East Asia						
China, People's Rep. of	28.6	32.8	490.6	2,025.3	12.2	11.9
Hong Kong, China	3.8	1.4	841.0	503.7	10.4	3.6
Korea, Rep. of	22.7	29.0	3,511.6	7,400.2	20.3	16.7
Mongolia	5.5	5.0	76.3	175.3	5.6	6.0
Taipei, China	24.6	23.0	3,613.2	4,725.2	...	...
South Asia						
Bangladesh	13.7	18.7	67.0	181.9	7.0	12.2
Bhutan	7.6	7.9	92.3	213.8	3.2	6.0
India	13.3	12.7	103.8	227.2	10.5	12.1
Maldives	5.3	3.0	225.8	275.4	21.8	9.7
Nepal	8.1	5.5	38.4	38.8	6.0	6.4
Sri Lanka	20.1	18.0	318.0	583.2	16.2	17.5
Southeast Asia						
Brunei Darussalam	14.1	12.5	4,574.0	3,832.1	5.3	5.2
Cambodia	11.5	16.9	49.0	171.6	7.0	10.7
Indonesia	26.7	24.6	543.7	898.1	13.0	13.3
Lao PDR	8.1	10.9	50.9	152.2	1.6	1.8
Malaysia	27.0	23.9	1,817.9	2,490.9	22.5	16.8
Myanmar	8.5	22.1	23.3	243.1	8.6	10.6
Philippines	23.7	22.5	381.9	587.8	10.0	8.3
Singapore	20.4	18.9	6,949.3	9,292.0	21.0	13.2
Thailand	28.6	28.3	994.8	1,628.0	13.6	13.9
Viet Nam	13.4	20.3	95.2	335.2	9.2	14.0
The Pacific						
Cook Islands	3.5	3.1	444.6	406.4	...	...
Fiji	12.8	12.1	439.1	500.0	8.3	8.5
Kiribati	5.0	5.1	90.5	83.1	...	...
Marshall Islands	1.9	1.7	48.2	60.7	...	...
Micronesia, Fed. States of	1.8	0.4 (2014)	...	...	...	...
Nauru	15.1	23.7	859.2	2,569.8	...	...
Palau	3.2	1.4	325.1	160.3	...	...
Papua New Guinea	5.8	5.7	70.2	111.3	1.1	1.1
Samoa	13.5	7.0	345.4	232.0	...	...
Solomon Islands	4.9	7.2	52.5	104.7	8.7	6.6
Timor-Leste	2.0	0.2	16.8	8.7	3.1	6.7
Tonga	7.1	6.3	234.8	234.6	...	...
Tuvalu	0.8	1.0	25.4	37.9	...	...
Vanuatu	4.1	4.0	117.3	113.5	...	...
Developed Member Economies						
Australia	9.4	6.1	4,642.7	3,797.6	11.8	7.7
Japan	17.5	18.8	7,082.9	8,382.3	14.3	16.0
New Zealand	14.0	10.5	4,109.8	3,803.2	14.1	9.9

... = data not available at cutoff date, GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

a United Nations Statistics Division data used for indicators 9.2.1.a and 9.2.1.b were computed from the GDP, manufacturing value added, and population data published by the United Nations Industrial Development Organization (UNIDO) in the International Yearbook of Industrial Statistics. (<http://www.unido.org/publications/flagship-publications/international-yearbook-of-industrial-statistics.html>).

Sources: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016); World Bank. World Development Indicators. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators> (accessed 26 April 2016).

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

Table 4.7: **Selected Indicators for SDG 9 - Research and Development**

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

Regional Member	9.5.1 Research and Expenditure as a Proportion of GDP (%)		9.5.2 Researchers (Full-Time Equivalent) (per million inhabitants)	
	2000	2014	Initial Year	Latest Year
Developing Member Economies				
Central and West Asia				
Afghanistan	...	...	...	...
Armenia	0.18	0.24 ^a	...	...
Azerbaijan	0.34	0.21	...	...
Georgia	0.22	0.10 ^b	562 (2013)	585 ^b (2014)
Kazakhstan	0.18	0.17 (2013)	405 (2007)	734 (2013)
Kyrgyz Republic	0.16	0.13	...	...
Pakistan	0.13	0.29 ^c (2013)	83 (2005)	167 ^c (2013)
Tajikistan	0.09 (2001)	0.12 (2013)	...	...
Turkmenistan	...	...	...	...
Uzbekistan	...	0.20	...	534 ^d (2011)
East Asia				
China, People's Rep. of	0.90	2.05	547 (2000)	1,113 (2014)
Hong Kong, China	0.46	0.73 (2013)	1,139 (2000)	3,136 (2013)
Korea, Rep. of	2.18	4.29	2,345 (2000)	6,899 (2014)
Mongolia	0.19	0.23 ^a	...	...
Taipei, China	...	...	...	...
South Asia				
Bangladesh	...	...	...	...
Bhutan	...	...	...	...
India	0.74	0.82 (2011)	110 (2000)	157 (2010)
Maldives	...	...	...	...
Nepal	0.05 (2008)	0.30 (2010)	61 (2002)	...
Sri Lanka	0.14	0.10 (2013)	135 (2000)	111 (2013)
Southeast Asia				
Brunei Darussalam	0.02 (2002)	0.04 (2004)	288 (2002)	286 (2004)
Cambodia	0.05 (2002)	...	18 (2002)	...
Indonesia	0.07 ^e	0.08 (2013)	213 (2000)	90 (2009)
Lao PDR	0.04 (2002)	...	16 (2002)	...
Malaysia	0.47	1.26	274 (2000)	2,052 (2014)
Myanmar	0.11	0.16 (2002)	12 (2001)	17 (2002)
Philippines	0.14 (2002)	0.14 (2013)	71 (2003)	221 (2013)
Singapore	1.82	2.19	4,245 (2000)	6,665 (2013)
Thailand	0.24	0.48	279 (2001)	974 (2014)
Viet Nam	0.18 (2002)	0.19 (2011)	114 (2002)	...
The Pacific				
Cook Islands	...	...	...	...
Fiji	...	...	...	...
Kiribati	...	...	...	...
Marshall Islands	...	...	...	...
Micronesia, Fed. States of	...	...	...	...
Nauru	...	...	...	...
Palau	...	...	...	...
Papua New Guinea	...	...	...	...
Samoa	...	...	...	...
Solomon Islands	...	...	...	...
Timor-Leste	...	...	...	...
Tonga	...	...	...	...
Tuvalu	...	...	...	...
Vanuatu	...	...	...	...
Developed Member Economies				
Australia	1.58	2.20 ^f (2013)	3,454 (2000)	4,531 (2010)
Japan	3.00	3.58	5,151 (2000)	5,386 (2014)
New Zealand	1.10 (2001)	1.17 (2013)	2,644 (2001)	4,009 (2013)

... = data not available at cutoff date, GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

a Partial data only.

b Higher education only.

c Excluding business enterprise and private nonprofit.

d Overestimated or based on overestimated data.

e Partial data taken from a regional publication.

f National estimation or based on national estimation.

Source: United Nations Educational, Scientific and Cultural Organization Institute for Statistics. Data Centre. <http://www.uis.unesco.org/DataCentre/Pages/default.aspx> (accessed August 2016).

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

Table 4.8: **Selected Indicators for SDG 9 - Official International Support and Value Added of Medium and High-Tech Industry**

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

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

Regional Member	9.a.1 Total Official Flows for Infrastructure (constant 2014 \$ million)		9.b.1 Proportion of Medium and High-Tech Industry Value Added in Total Value Added ^c (%)	
	2000 ^a	2014 ^b	2000	2013
Developing Member Economies	11,916.9	21,144.3		
Central and West Asia	1,243.6	5,724.8		
Afghanistan	0.4	556.1	...	...
Armenia	136.6	207.1	0.1	0.0
Azerbaijan	23.3	504.4	0.2	0.1
Georgia	144.0	367.4	0.2	0.2
Kazakhstan	244.2	1,274.9	0.1	0.2
Kyrgyz Republic	98.4	144.5	0.1	0.0
Pakistan	526.5	2,180.9	0.3	0.3
Tajikistan	17.7	155.9	0.0	0.0
Turkmenistan	1.8	23.8	...	...
Uzbekistan	50.8	309.8	...	...
East Asia	2,592.5	2,340.5		
China, People's Rep. of	2,467.6	2,131.2	0.4	0.4
Hong Kong, China	...	...	0.4	0.3
Korea, Rep. of	...	...	0.6	0.6
Mongolia	124.9	209.3	0.0	0.1
Taipei, China	...	...	...	...
South Asia	4,273.6	6,272.9		
Bangladesh	701.9	1,041.1	0.2	0.1
Bhutan	34.0	71.3	...	...
India	3,313.7	4,352.7	0.4	0.4
Maldives	13.0	4.2	...	...
Nepal	124.9	220.7	0.1	0.1
Sri Lanka	86.1	582.9	0.1	0.1
Southeast Asia	3,517.3	6,318.8		
Brunei Darussalam	...	...	0.0	0.0
Cambodia	48.0	212.6	...	...
Indonesia	120.1	1,305.6	0.4	0.4
Lao PDR	79.9	71.4	...	...
Malaysia	575.8	10.7	0.5	0.4
Myanmar	0.0	104.9	...	...
Philippines	813.0	526.6	0.4	0.4
Singapore	...	...	0.8	0.8
Thailand	705.6	400.4	0.4	0.4
Viet Nam	1,175.0	3,686.6	0.2	0.3
The Pacific	290.1	487.4		
Cook Islands	1.1	13.5	...	...
Fiji	0.2	10.0	0.1	0.1
Kiribati	1.7	38.6	...	...
Marshall Islands	3.1	38.4	...	...
Micronesia, Fed. States of	4.8	6.2	...	...
Nauru	0.0 (2002)	1.5	...	...
Palau	0.2	3.6	...	...
Papua New Guinea	245.6	196.8	0.1	0.1
Samoa	3.2	26.7	...	...
Solomon Islands	10.4	30.2	...	...
Timor-Leste	2.9	52.9	...	...
Tonga	5.6	29.3	0.2	0.2
Tuvalu	0.1 (2002)	16.6	...	...
Vanuatu	11.2	23.0	...	...
Developed Member Economies	...	...
Australia	...	...	0.3	0.3
Japan	...	...	0.5	0.6
New Zealand	...	...	0.1	0.2

... = data not available at cutoff date, - = magnitude equals zero, 0.0 = magnitude is less than half of unit employed, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

a Commitments.

b Gross disbursements.

c Estimates are modeled by the United Nations Statistics Division.

Source: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed July 2016).

Table 4.9: **Selected Indicators for SDG 10 - Household Income and Consumption Growth**
By 2030, progressively achieve and sustain income growth of the bottom 40 percent of the population at a rate higher than the national average

Regional Member	10.1.1.a Growth Rates of Household Expenditure or Income per Capita among the Bottom 40% of the Population ^a (%)	10.1.1.b Growth Rates of Household Expenditure or Income per Capita ^a (%)
Developing Member Economies		
Central and West Asia		
Afghanistan	...	...
Armenia	-1.5 (2008–2013)	-1.1 (2008–2013)
Azerbaijan	...	...
Georgia	2.9 (2008–2013)	2.6 (2008–2013)
Kazakhstan	8.9 (2009–2013)	7.6 (2009–2013)
Kyrgyz Republic	-0.1 (2008–2012)	-2.4 (2008–2012)
Pakistan	3.8 (2004–2010)	2.7 (2004–2010)
Tajikistan	...	...
Turkmenistan	...	...
Uzbekistan	...	...
East Asia		
China, People's Rep. of	7.2 (2005–2010)	7.9 (2005–2010)
Hong Kong, China	...	...
Korea, Rep. of	...	...
Mongolia	...	...
Taipei, China	...	...
South Asia		
Bangladesh	1.7 (2005–2010)	1.4 (2005–2010)
Bhutan	6.5 (2007–2012)	6.5 (2007–2012)
India	3.2 (2004–2011)	3.7 (2004–2011)
Maldives	...	...
Nepal	7.5 (2003–2010)	4.1 (2003–2010)
Sri Lanka	2.2 (2006–2012)	1.7 (2006–2012)
Southeast Asia		
Brunei Darussalam	...	...
Cambodia	8.5 (2007–2012)	4.1 (2007–2012)
Indonesia	3.8 (2011–2014)	3.4 (2011–2014)
Lao PDR	1.2 (2007–2012)	2.0 (2007–2012)
Malaysia	...	...
Myanmar	...	...
Philippines	1.1 (2006–2012)	0.4 (2006–2012)
Singapore	...	...
Thailand	4.8 (2008–2012)	3.9 (2008–2012)
Viet Nam	6.2 (2004–2010)	7.8 (2004–2010)
The Pacific		
Cook Islands	...	...
Fiji	...	...
Kiribati	...	...
Marshall Islands	...	...
Micronesia, Fed. States of	...	...
Nauru	...	...
Palau	...	...
Papua New Guinea	...	...
Samoa	...	...
Solomon Islands	...	...
Timor-Leste	...	...
Tonga	...	...
Tuvalu	...	...
Vanuatu	...	...
Developed Member Economies		
Australia	4.4 (2003–2010)	4.7 (2003–2010)
Japan	...	...
New Zealand	...	...

... = data not available at cutoff date, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

a Based on real mean per capita consumption or income measured at purchasing power parity (PPP) using PovcalNet (<http://iresearch.worldbank.org/PovcalNet>). Data for Bangladesh, Cambodia, and the Lao PDR are expressed in 2005 PPP terms, while the data for the rest of the reporting member economies are expressed in 2011 PPP terms. Data reported are based on consumption, except for Australia, which collects income data.

Source: World Bank. Global Database of Shared Prosperity. <http://www.worldbank.org/en/topic/poverty/brief/global-database-of-shared-prosperity> (accessed 26 August 2016).

Peace

To foster peaceful, just, and inclusive societies which are free from fear and violence. There can be no sustainable development without peace and no peace without sustainable development.



Snapshots

- Globally, approximately 5.3 people per 100,000 population are victims of intentional homicide. The intentional homicide rate of 2.5 for every 100,000 people in Asia and the Pacific is one of the lowest around the world.
- The proportion of births registered with a civil authority are 100% among developed economies and nearly 100% in most economies of Central and West Asia. High proportions exceeding 90% are also noted in South Asia's Bhutan and the Maldives. In Southeast Asia, more than two-thirds of the births are registered with a civil authority, while in the Pacific, Kiribati, the Marshall Islands, and Tonga have birth registration rates that exceed 90%.

Armed conflict and violence could have a long-lasting disruptive impact on the lives of people. For instance, current estimates suggest that roughly 50 million people are displaced by violence and armed conflict around the world (UNHCR 2014). The Sustainable Development Agenda recognizes that peace is an important pillar of sustainable development. Hence, SDG 16 aims to promote peace and arrest endless cycles of violence by strengthening institutions' capacity to uphold political stability and the rule of law. This section examines several indicators that underpin SDG 16 where data are available for ADB member economies.

SDG 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

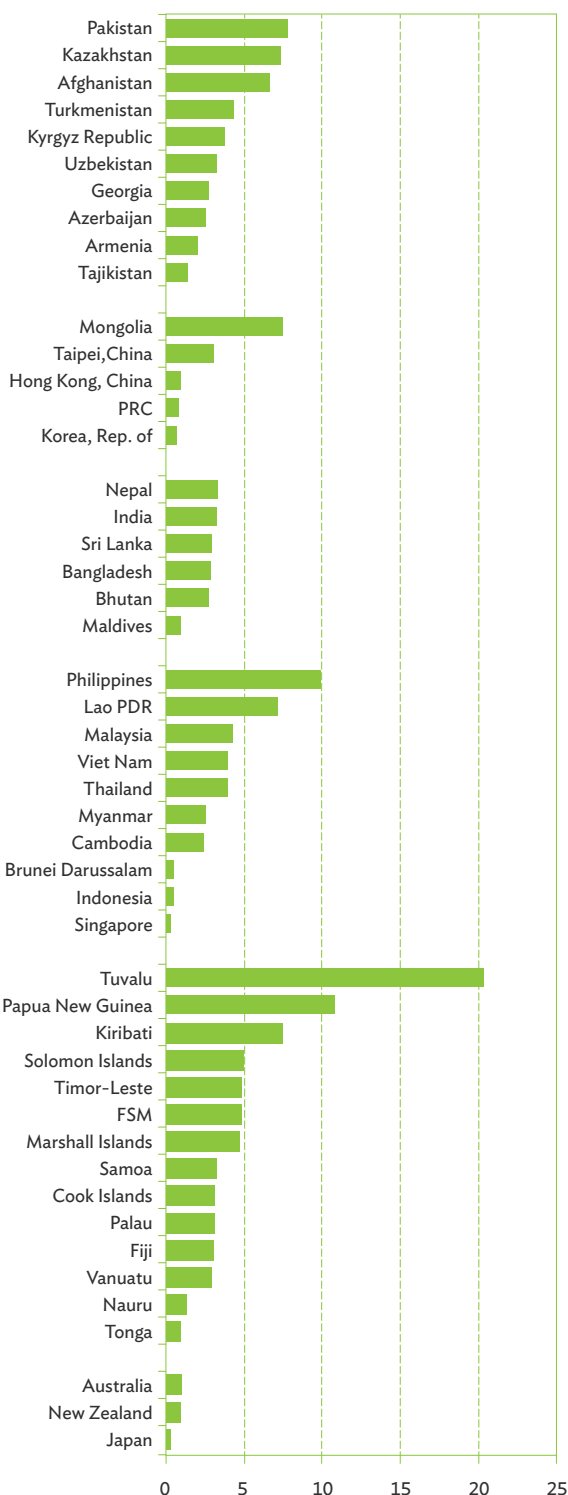
Number of victims of intentional homicide per 100,000 population. Globally, approximately 5.3 people per 100,000 population are victims of intentional homicide. The intentional homicide rate of 2.5 for every 100,000 people in Asia and the Pacific

is one of the lowest around the world.² In South Asia, the incidence of victims of intentional homicide is lower than five per 100,000 people in all economies. Some of the economies with the lowest incidence (less than one per 100,000 population) of victims of intentional homicide are also in the region including Brunei Darussalam; the People's Republic of China (PRC); Hong Kong, China; Indonesia; Japan; the Republic of Korea; the Maldives; New Zealand; and Singapore. Some of the highest incidences, however, are also in the region. These include Tuvalu (20.3), Papua New Guinea (10.8), the Philippines (9.9), Pakistan (7.8), Mongolia (7.5), Kiribati (7.5), Kazakhstan (7.4), the Lao People's Democratic Republic (Lao PDR) (7.1), and Afghanistan (6.6).

Proportion of children under 5 years of age whose birth have been registered with a civil authority. According to the metadata of UNSD's SDG Indicators Global Database, birth registration is a primary step toward securing a person's recognition before the law. Absence of such formal documentation may limit a

² The regional aggregate is population-weighted average estimated using number of victims of intentional homicide per 100,000 population. The data for population are from the United Nations Office of Drugs and Crime and United Nations Department of Economics and Social Affairs Population Division's World Population Prospects: The 2015 Revision.

Figure 5.1: Number of Victims of Intentional Homicide per 100,000 Population, Latest Year



FSM = Federated States of Micronesia, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Source: Table 5.1.

[Click here for figure data](#)

person's access to health care, education, or labor market services and, consequently, undermine the inclusiveness of institutions. In recognition of this important role, one of the targets under SDG 16 is to provide a legal identity for all, including birth registration.

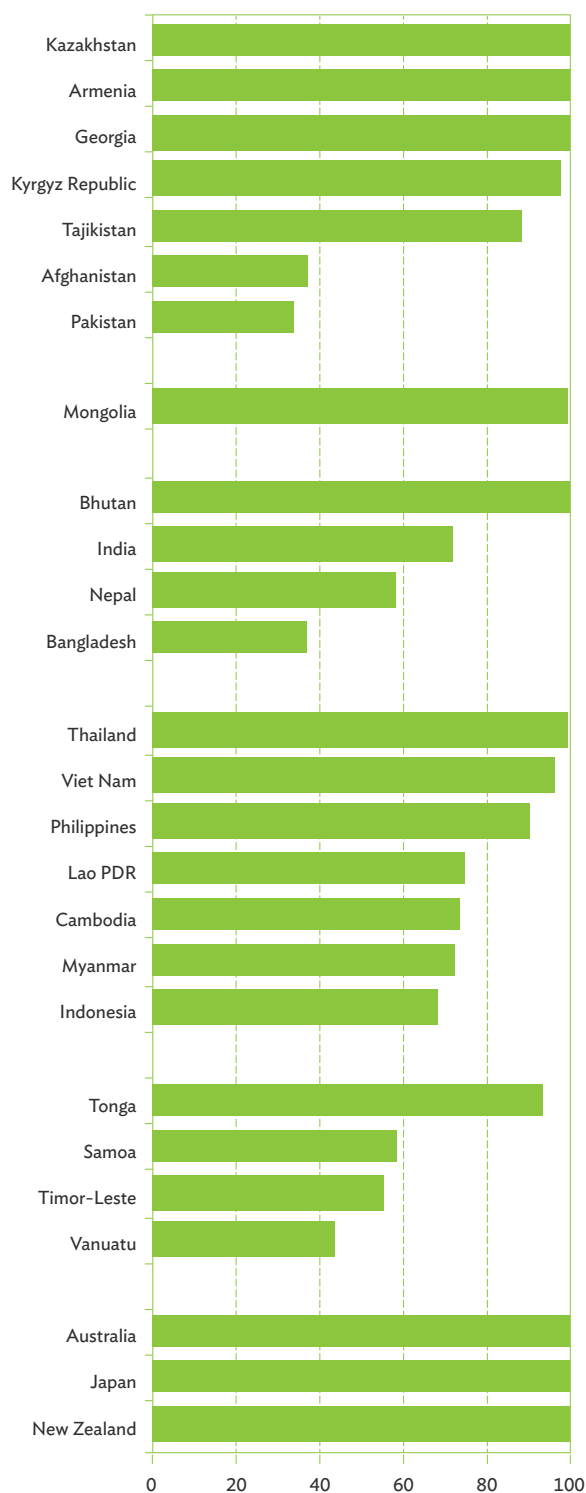
Figure 5.2 presents the estimates of the proportion of children under 5 years of age whose births have been registered with a civil authority for economies with data for 2010 or later years. Birth registration rates are nearly 100% among developed economies, and nearly 100% in Central and West Asian economies (except Afghanistan). Among South Asian economies, the Maldives and Bhutan have birth registration rates that exceed 90%. In Southeast Asia, the Philippines, Thailand, and Viet Nam have birth registration rates that also exceed 90%. A high birth registration rate is also recorded in Timor-Leste of the Pacific. Table 5.1 presents estimates for earlier years.

Proportion of population subjected to physical, psychological, or sexual violence in the previous 12 months. Figure 5.3 shows the incidence of sexual violence per 100,000 population based on latest data for each economy in Asia and the Pacific. The Maldives (163.2), Australia (87.5), and New Zealand (83.2) have the highest incidence. Economies with the lowest incidence (less than 2 per 100,000 population) are Myanmar (0.7), the Kyrgyz Republic (1.3), Thailand (1.8), and the Philippines (1.9).

Equity and Other Issues

Armed conflict and violence lead to a multitude of domestic problems. For instance, in a number of conflict-ridden countries, it is almost impossible to reduce extreme poverty significantly without arresting the endless cycles of armed violence and insecurity. However, these are not purely domestic issues as they transcend the borders of conflict-affected countries. Hence, it is important for conflict-unaffected countries to actively participate in addressing the root causes of violence and insecurity. Additionally, they should also actively facilitate multilateral action to ensure that the world's most marginalized segments have equal access to justice and security.

Figure 5.2: Proportion of Children under 5 Years of Age Whose Births Have Been Registered with a Civil Authority, Latest Year (%)



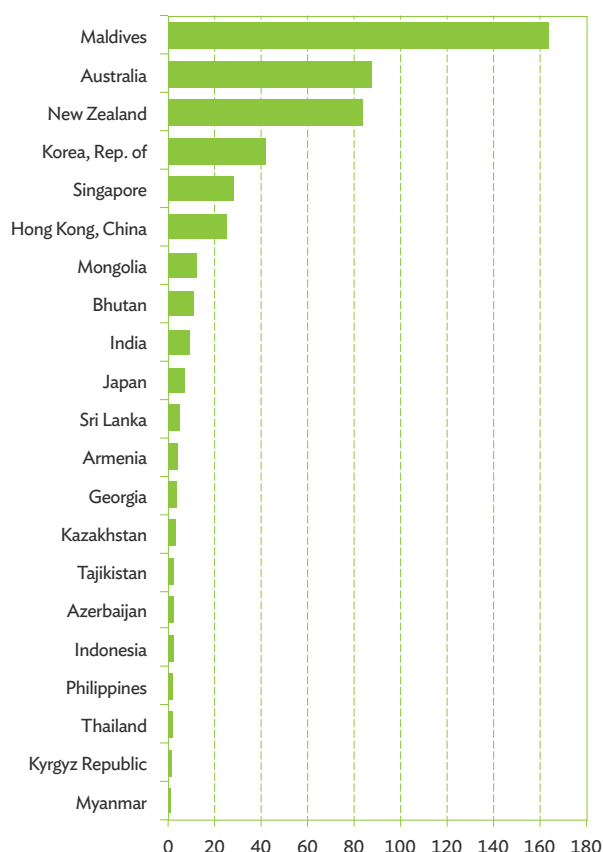
Lao PDR = Lao People's Democratic Republic.

Note: Only economies with recent estimates (2010 and later) are included.

Source: Table 5.1.

[Click here for figure data](#)

Figure 5.3: Incidence of Sexual Violence (based on number of police-recorded offences) at the National Level, Latest Year (per 100,000 population)



Notes: Only economies with recent estimates (2010 and later) are included. "Sexual violence" means rape and sexual assault, including sexual offences against children. Data supplied by countries may not exactly reflect the definition provided by United Nations Office of Drugs and Crime (UNODC).

Source: UNODC, Homicide Database. <https://data.unodc.org/> (accessed 11 October 2016).

[Click here for figure data](#)

Data Gaps

Data needed to monitor the progress with respect to SDG 16 are very sparse and are not collected regularly. While national governments and specialized intergovernmental institutions have important roles in addressing such data gaps, nongovernment institutions such as civil society organizations and research institutes could play a key role in providing supplementary data (SDSN 2016).

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

Table 5.1: **Selected Indicators for SDG 16 - Crime and Birth Registration**
Significantly reduce all forms of violence and related death rates everywhere
By 2030, provide legal identity for all, including birth registration

Regional Member	16.1.1 Number of Victims of Intentional Homicide (per 100,000 population)		16.9.1 Proportion of Children under 5 Years of Age Whose Births Have Been Registered with a Civil Authority (%)	
	2000	2012	2006	2014
Developing Member Economies				
Central and West Asia				
Afghanistan	4.1 (2009)	6.6	6.0 (2003)	37.4 (2011)
Armenia	2.7 (2004)	2.0 (2013)	96.0 (2005)	99.6 (2010)
Azerbaijan	2.8	2.5 (2014)	93.6	...
Georgia	5.0	2.7 (2014)	92.0 (2005)	99.6 (2013)
Kazakhstan	15.5	7.4 (2013)	99.0	99.7 (2011)
Kyrgyz Republic	8.7	3.7 (2014)	95.7	97.7
Pakistan	6.4	7.8	26.6 (2007)	33.6 (2013)
Tajikistan	3.1 (2006)	1.4 (2013)	88.0 (2005)	88.4 (2012)
Turkmenistan	...	4.3	95.5	...
Uzbekistan	...	3.2	99.9	...
East Asia				
China, People's Rep. of	2.0 (2002)	0.8	...	...
Hong Kong, China	0.6	0.9 (2013)	...	...
Korea, Rep. of	0.9 (2011)	0.7 (2014)	...	...
Mongolia	13.9 (2003)	7.5 (2014)	98.0 (2005)	99.3 (2013)
Taipei, China	5.1	3.0 (2011)	...	...
South Asia				
Bangladesh	2.5	2.8 (2014)	10.0	37.0 (2013)
Bhutan	2.0 (2008)	2.7 (2014)	...	99.9 (2010)
India	4.5	3.2 (2014)	41.1	71.9
Maldives	0.1 (2007)	0.9 (2013)	73.0 (2000)	92.5 (2009)
Nepal	2.7	3.3	35.0	58.1
Sri Lanka	6.8 (2003)	2.9 (2013)	97.2	...
Southeast Asia				
Brunei Darussalam	0.9 (2003)	0.5 (2013)	...	...
Cambodia	3.3 (2001)	2.4	66.4 (2005)	73.3
Indonesia	1.0	0.5 (2014)	55.0 (2002)	68.5 (2013)
Lao PDR	...	7.1	72.0	74.8 (2012)
Malaysia	2.2 (2001)	4.3	...	...
Myanmar	2.1 (2001)	2.5	64.9 (2003)	72.4 (2010)
Philippines ^a	7.4	9.9 (2014)	83.0 (2000)	90.2 (2010)
Singapore	0.9	0.3 (2014)	...	...
Thailand	8.2	3.9 (2014)	99.5	99.4 (2012)
Viet Nam	1.2 (2001)	4.0	92.7 (2005)	96.1
The Pacific				
Cook Islands	...	3.1	...	...
Fiji	2.6 (2007)	3.0	...	...
Kiribati	7.1 (2008)	7.5	92.0 (2008)	93.5 (2009)
Marshall Islands	...	4.7	...	95.9 (2007)
Micronesia, Fed. States of	...	4.8	...	...
Nauru	...	1.3	82.6 (2007)	...
Palau	...	3.1	...	...
Papua New Guinea	8.7	10.8	...	...
Samoa	8.7 (2009)	3.2 (2013)	47.7 (2009)	58.6
Solomon Islands	4.4 (2004)	4.9	80.0 (2007)	...
Timor-Leste	2.4 (2004)	4.9	53.0 (2003)	55.2 (2010)
Tonga	1.0	1.0	...	93.4 (2012)
Tuvalu	– (2002)	20.3	49.9 (2007)	...
Vanuatu	...	2.9	43.0 (2007)	43.4 (2013)
Developed Member Economies				
Australia	1.9	1.0 (2014)	100.0 (2012)	100.0 (2015)
Japan	0.6 (2003)	0.3 (2014)	100.0 (2012)	100.0 (2015)
New Zealand	1.3	0.9 (2014)	100.0 (2012)	100.0 (2015)

... = data not available at cutoff date, – = magnitude equals zero, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

a In 2009, the Philippine National Police implemented a new crime reporting system wherein crime data for 2009 were set as the baseline for future research, study, and comparison. Thus, crime statistics in 2009 cannot be compared with those data obtained in the previous years (2008 and earlier) since the parameters were no longer the same.

Sources: For Indicator 16.1.1: For initial year and economies not available in United Nations (UN) SDG Indicators Global Database, data from United Nations Office of Drugs and Crime. Homicide Database. <https://data.unodc.org/> (accessed 19 August 2016); for latest year, data from United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016). For Indicator 16.9.1: For initial year and economies not available in UN SDG Indicators Global Database, World Bank. World Development Indicators. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators> (accessed 19 August 2016); for latest year, data from United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016).

Partnership

To mobilize the means required to implement this agenda through a revitalized Global Partnership for Sustainable Development, based on a spirit of strengthened global solidarity, focused in particular on the needs of the poorest and most vulnerable and with the participation of all countries, all stakeholders, and all people.



Snapshots

- The majority of the member economies experienced higher volumes of remittances in proportion to total GDP over the past 15 years, while 27 economies had an increase that exceeds 0.05 percentage points per year.
- Debt service as a proportion of exports of goods and services declined between 2000 and 2015 in 23 economies including India, Kazakhstan, the Kyrgyz Republic, and Papua New Guinea.
- Within Asia and the Pacific, the highest net official development assistance in 2014 were provided to Afghanistan, Viet Nam, Pakistan, India, and Bangladesh.
- In 19 out of 35 economies for which data are available in Asia and the Pacific, national statistical plans are fully funded and under implementation.

Attaining the SDGs by 2030 requires a strong commitment to global partnership and cooperation among all players. For low-income economies, official development assistance (ODA) will continue to be a major resource given their limited capacities to raise public resources domestically. Furthermore, ODA could be catalytic in crowding in other sources and building capacities. This section presents available data on ODA and other indicators of SDG 17 for ADB regional member economies.

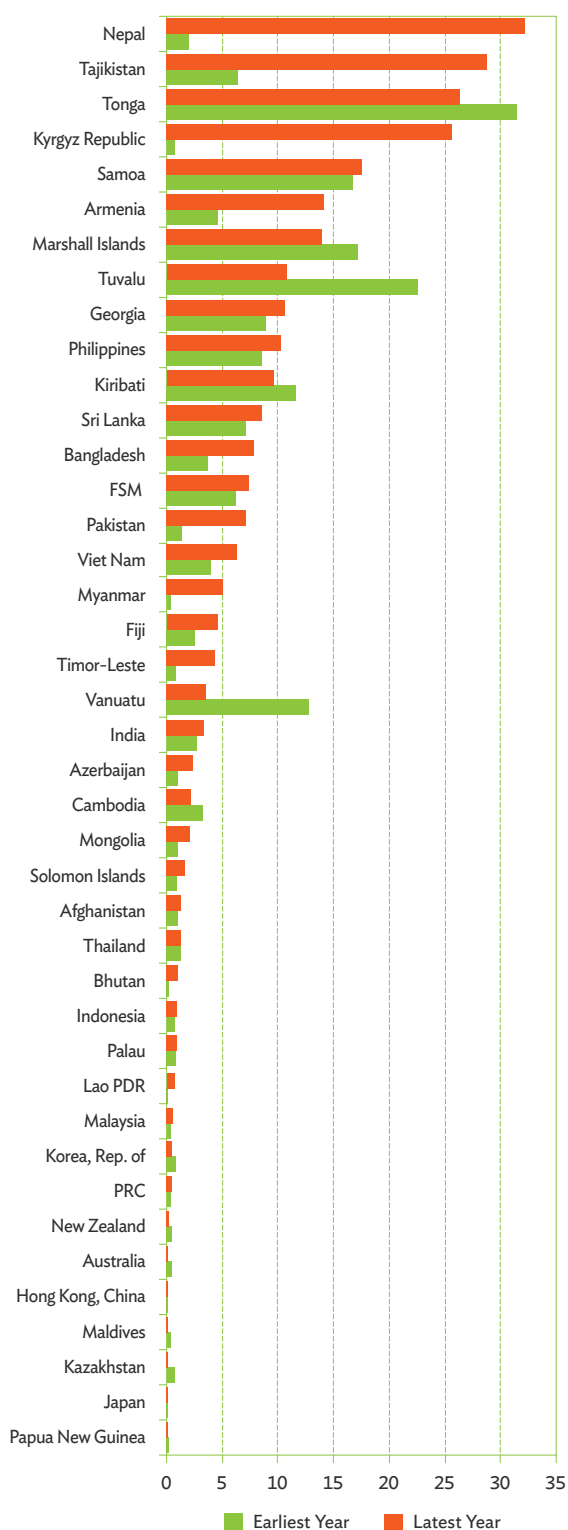
SDG 17: Strengthen the Means of Implementation and Revitalize the Global Partnership for Sustainable Development

Volume of remittances as a proportion of total GDP. Latest data available show that the volume of remittances as a proportion of total GDP is highest in Nepal (32.2%), Tajikistan (28.8%), Tonga (26.3%), the Kyrgyz Republic (25.7%), and Samoa (17.6%). The largest increase within the 15-year period (anytime between 2000 and 2015) was noted in

Nepal (2.0 percentage points per year), followed by Tajikistan (1.7 percentage points per year), and the Kyrgyz Republic (1.7 percentage points per year). On the other hand, the volume of remittances in proportion to GDP declined in Australia, Cambodia, Kazakhstan, Kiribati, the Republic of Korea, the Marshall Islands, New Zealand, Papua New Guinea, Thailand, Tonga, Tuvalu, and Vanuatu. Among the top 10 economies with data in 2014 or 2015, three economies registered a reduction in the volume of remittances: Tuvalu by 1.3 percentage points per year, the Marshall Islands by 0.36 percentage points per year, and Tonga by 0.4 percentage points per year.

Debt service as a proportion of exports of goods and services. Figure 6.2 shows the distribution of debt service relative to exports of goods and services. In the majority of the economies with available data, the numbers show that the proportion of debt service declined in the past 15 years. The annual reduction exceeded 0.5 percentage points in India, Kazakhstan, the Kyrgyz Republic, and Papua New Guinea. On the

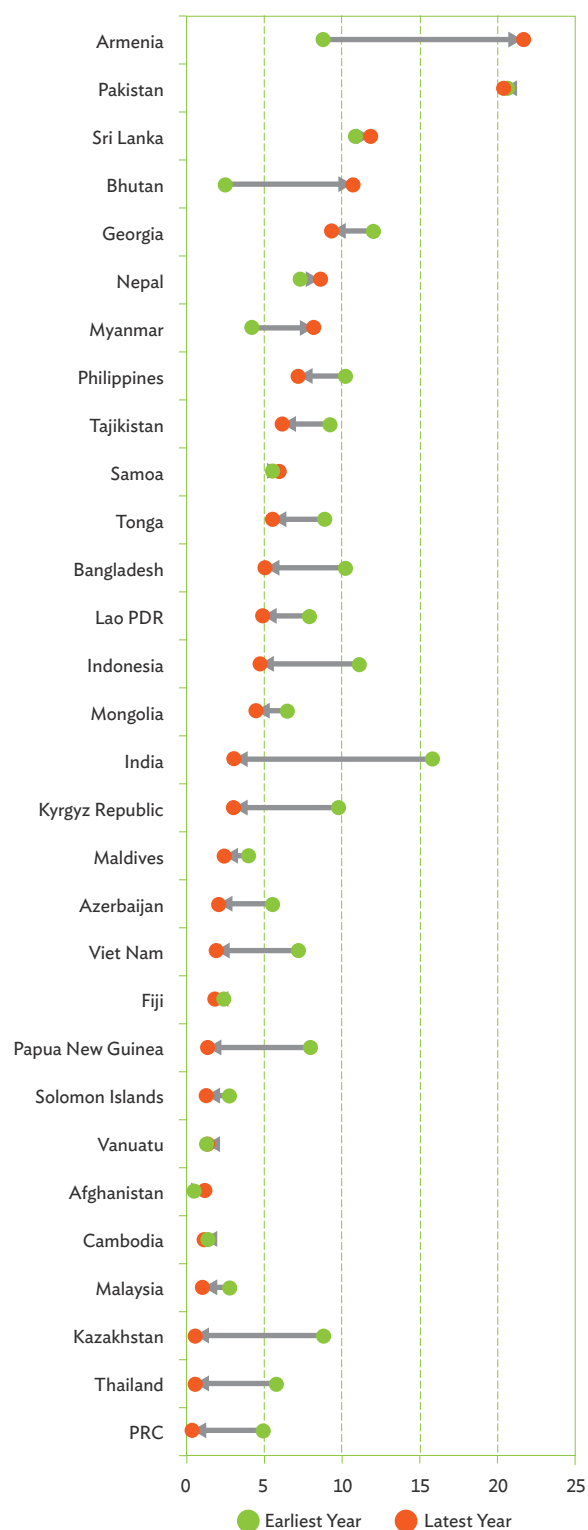
Figure 6.1: Volume of Remittances as a Proportion of Total Gross Domestic Product (%)



FSM = Federated States of Micronesia, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Source: Table 6.1.

[Click here for figure data](#)

Figure 6.2: Debt Service (% of exports of goods and services)



Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Source: Table 6.1.

[Click here for figure data](#)

other hand, it increased by more than 0.5 percentage points per year in Armenia and Bhutan. The five economies with highest proportion of debt service as a proportion of exports are Armenia (21.6%), Pakistan (20.3%), Sri Lanka (11.9%), Bhutan (10.7%), and Georgia (9.4%).

Net official development assistance. Within Asia and the Pacific, the highest net official development assistance in 2014 were provided to Afghanistan, Viet Nam, Pakistan, India and Bangladesh.³

Availability of National Statistical Plan. National statistical plans provide a strategy for an integrated development of a national statistical system. In about half of the 35 economies for which data are available from UNSD's SDG Indicators Global Database for 2015, national statistical plans were fully funded and under implementation. For a few economies, no such plan existed in 2015 while for others, national statistical plans have either expired or were awaiting adoption. Table 6.3 summarizes the availability of national statistical plans in economies of Asia and the Pacific based on latest data available.

Equity and Other Issues

While ODA flows from developed to developing countries comprised the majority of the development assistance flows during the MDG era, ODA flows between developing countries are likely to increase in the coming years. This type of ODA flow could play a key role in crafting better public policies for social inclusion that are contextualized to developing economies. Nevertheless, the sustainable development agenda still needs to be financed from a more innovative and diverse range of sources combining public, private, and joint financing that raise funds both internally and externally.

Data Gaps

Indicators for various targets under the theme of partnership are not available; when they are, they are sparse and not regularly updated. Difficulty in monitoring progress with respect to SDG 17 may also arise due to the lack of quantitative targets in some areas.

³ Details are provided in Regional Table 4.16.

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

Table 6.1: **Selected Indicators for SDG 17 - Development Financing**
Mobilize additional financial resources for developing countries from multiple sources

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

Regional Member	17.3.2 Volume of Remittances in US Dollars (as a proportion of total GDP)		17.4.1 Debt Service (As a proportion of exports of goods and services)	
	2000	Latest Year	2000	2013
Developing Member Economies				
Central and West Asia				
Afghanistan	1.0 (2008)	1.3 (2014)	0.5 (2005)	1.2
Armenia	4.6	14.1 (2015)	8.8	21.6
Azerbaijan	1.1	2.4 (2015)	5.5	2.1
Georgia	9.0	10.6 (2015)	12.1	9.4
Kazakhstan	0.7	0.1 (2014)	8.8	0.6
Kyrgyz Republic	0.7	25.7 (2015)	9.8	3.0
Pakistan	1.5	7.2 (2015)	20.8	20.3
Tajikistan	6.4 (2002)	28.8 (2015)	9.2 (2002)	6.2 (2012)
Turkmenistan	...	...	...	...
Uzbekistan	...	...	...	...
East Asia				
China, People's Rep. of	0.4	0.4 (2015)	4.9	0.3
Hong Kong, China	0.1	0.1 (2015)	...	...
Korea, Rep. of	0.9	0.5 (2015)	...	...
Mongolia	1.1	2.1 (2014)	6.5	4.5
Taipei, China	...	...	...	...
South Asia				
Bangladesh	3.7	7.9 (2015)	10.2	5.1
Bhutan	0.3 (2006)	1.0 (2015)	2.5 (2006)	10.7
India	2.7	3.4 (2014)	15.8	3.1
Maldives	0.4	0.1 (2015)	4.0	2.5
Nepal	2.0	32.2 (2015)	7.3	8.6
Sri Lanka	7.1	8.5 (2015)	10.9	11.9
Southeast Asia				
Brunei Darussalam	...	...	...	...
Cambodia	3.3	2.2 (2014)	1.4	1.1
Indonesia	0.7	1.0 (2014)	11.1	4.7
Lao PDR	0.0	0.8 (2015)	7.9	4.9
Malaysia	0.4	0.6 (2015)	2.8	1.1
Myanmar	0.4 (2012)	5.0 (2015)	4.2	8.2
Philippines	8.6	10.3 (2015)	10.2	7.2
Singapore	...	...	...	...
Thailand	1.3	1.3 (2015)	5.8	0.5
Viet Nam	4.0	6.3 (2011)	7.2	1.9
The Pacific				
Cook Islands	...	...	...	...
Fiji	2.6	4.6 (2014)	2.4	1.8
Kiribati	11.6 (2006)	9.6 (2014)	...	...
Marshall Islands	17.2 (2005)	14.0 (2014)	...	...
Micronesia, Fed. States of	6.3 (2009)	7.3 (2014)	...	...
Nauru	...	...	...	...
Palau	0.8 (2005)	0.9 (2014)	...	...
Papua New Guinea	0.2	0.1 (2014)	8.0	1.4 (2012)
Samoa	16.7	17.6 (2014)	5.5 (2004)	6.1
Solomon Islands	1.0	1.6 (2015)	2.8	1.3
Timor-Leste	0.8 (2006)	4.4 (2015)	...	...
Tonga	31.5 (2001)	26.3 (2014)	8.9 (2001)	5.6 (2012)
Tuvalu	22.6 (2005)	10.7 (2014)	...	...
Vanuatu	12.7	3.5 (2014)	1.4	1.2
Developed Member Economies				
Australia	0.5	0.2 (2015)	...	...
Japan	0.0	0.1 (2015)	...	...
New Zealand	0.5	0.2 (2015)	...	...

... = data not available at cutoff date, 0.0 = magnitude is less than half of unit employed, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

Sources: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016); World Bank. World Development Indicators. <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators> (accessed 3 September 2016).

Table 6.2: **Selected Indicators for SDG 17 - Access to Technology and Data Communications**
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

Regional Member	17.6.2 Fixed Internet Broadband Subscriptions per 1,000 Inhabitants ^a	
	Initial Year	2015
Developing Member Economies		
Central and West Asia		
Afghanistan	0.01 (2004)	0.05
Armenia	0.00 (2001)	95.78
Azerbaijan	0.12 (2002)	197.60
Georgia	0.09 (2001)	146.35
Kazakhstan	0.07 (2003)	130.49
Kyrgyz Republic	0.01 (2002)	37.06
Pakistan	0.09 (2005)	9.53
Tajikistan	0.00 (2003)	0.70
Turkmenistan	0.02 (2008)	0.56
Uzbekistan	0.11 (2003)	35.66
East Asia		
China, People's Rep. of	0.02 (2000)	185.61
Hong Kong, China	65.02 (2000)	319.36
Korea, Rep. of	84.17 (2000)	402.50
Mongolia	0.02 (2001)	71.17
Taipei, China	10.44 (2000)	242.60
South Asia		
Bangladesh	0.30 (2007)	24.10
Bhutan	2.98 (2008)	35.55
India	0.05 (2001)	13.35
Maldives	0.67 (2002)	64.74
Nepal	0.04 (2006)	10.64
Sri Lanka	0.02 (2001)	31.00
Southeast Asia		
Brunei Darussalam	5.59 (2001)	79.95
Cambodia	0.00 (2002)	5.33
Indonesia	0.02 (2000)	10.89
Lao PDR	0.00 (2003)	5.19
Malaysia	0.17 (2001)	89.50
Myanmar	0.00 (2005)	3.50
Philippines ^a	0.13 (2001)	33.99
Singapore	17.61 (2000)	264.50
Thailand	0.03 (2001)	92.42
Viet Nam	0.01 (2002)	81.38
The Pacific		
Cook Islands	- (2001)	130.90 (2013)
Fiji	8.51 (2005)	14.26
Kiribati	3.56 (2005)	1.11
Marshall Islands	24.39 (2013)	18.87
Micronesia, Fed. States of	0.06 (2003)	31.37
Nauru	...	94.76 (2010)
Palau	3.74 (2004)	57.49
Papua New Guinea	0.46 (2008)	1.97
Samoa	0.18 (2004)	11.00
Solomon Islands	0.44 (2004)	2.43
Timor-Leste	0.01 (2003)	0.88
Tonga	0.11 (2002)	18.89
Tuvalu	5.18 (2004)	100.85
Vanuatu	0.08 (2003)	16.28
Developed Member Economies		
Australia	6.30 (2001)	278.52
Japan	6.80 (2000)	304.87
New Zealand	1.21 (2000)	315.46

... = data not available at cutoff date, 0.0 = magnitude is less than half of unit employed, - = magnitude equals zero, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

a The original indicator refers to "Fixed Internet Broadband Subscriptions per 100 Inhabitants."

Sources: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 21 July 2016); International Telecommunication Union. World Telecommunication/ICT Indicators Database. <http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx> (accessed 6 June 2016).

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

Table 6.3: **Selected Indicators for SDG 17 - Availability of National Statistical Plan**

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

Regional Member	17.18.3 - Availability of National Statistical Plan
Developing Member Economies	
Central and West Asia	
Afghanistan	A (2015)
Armenia	A (2015)
Azerbaijan	A (2011)
Georgia	D (2015)
Kazakhstan	...
Kyrgyz Republic	D (2015)
Pakistan	B (2015)
Tajikistan	A (2015)
Turkmenistan	D (2015)
Uzbekistan	E (2015)
East Asia	
China, People's Rep. of	D (2012)
Hong Kong, China	...
Korea, Rep. of	...
Mongolia	A (2015)
Taipei, China	...
South Asia	
Bangladesh	A (2015)
Bhutan	D (2015)
India	A (2015)
Maldives	A (2015)
Nepal	A (2015)
Sri Lanka	A (2015)
Southeast Asia	
Brunei Darussalam	...
Cambodia	A (2015)
Indonesia	D (2015)
Lao PDR	A (2015)
Malaysia	...
Myanmar	E (2015)
Philippines ^a	A (2015)
Singapore	...
Thailand	A (2012)
Viet Nam	A (2015)
The Pacific	
Cook Islands	...
Fiji	E (2015)
Kiribati	A (2015)
Marshall Islands	D (2015)
Micronesia, Fed. States of	D (2015)
Nauru	...
Palau	...
Papua New Guinea	E (2015)
Samoa	A (2015)
Solomon Islands	E (2015)
Timor-Leste	A (2015)
Tonga	D (2015)
Tuvalu	E (2015)
Vanuatu	A (2015)
Developed Member Economies	
Australia	...
Japan	...
New Zealand	...

... = data not available at cutoff date, Lao PDR = Lao People's Democratic Republic, SDG = Sustainable Development Goal.

- A National statistical plan is fully funded and under implementation
- B National statistical plans are completed and awaiting adoption
- C National statistical plans are expired or without a plan and are currently designing or planning
- D National statistical plans are expired
- E National statistical plans does not exist

Sources: United Nations. Sustainable Development Goals Indicators Database. <http://unstats.un.org/sdgs/indicators/database/> (accessed 22 October 2016).



What Is Big Data?

Big data generally refer to the type of data arising from people's digital transactions with computers, social media, mobile phones, photos, satellite images, sensors, and other types of digital technology. There are three main sources of big data: human-sourced information, process-mediated data, and machine-generated data. The human-sourced information includes data coming from social networks, personal documents, search engines, videos, mobile data content, user-generated maps, and e-mail, among others. Process-mediated data are those coming from traditional business systems, e.g., produced by public agencies (including medical records); and those that are produced by business (commercial transactions, banking records, e-commerce, credit cards, and loyalty cards). Machine-generated data may include fixed sensors (home, weather, traffic, scientific, security, and surveillance) and mobile sensors (mobile phone location, data from computer systems like logs and weblogs). In all of these contexts, big data are characterized in terms of 5Vs: volume, velocity, variety, veracity, and variability.

Compilation of big data has been growing at a very fast pace; in fact, it is bounded by the storage capacities of various entities that collect the data. However, with the continuous development of new information technology and the dramatic increase of devices at the periphery of the network including embedded sensors, smartphones, and tablet computers, data extraction and storage capacity are becoming less of a constraint in the compilation of big data (Villars, Eastwood, and Olofson 2011). Similarly, big data analytics is flourishing. In fact, the existing literature offers a wide array of analytical tools such as regularized regression, model selection and validation, classification, and dimension reduction that can be used for examining big data (Wu and Kumar 2009).

The term “Big Data,” on the other hand, refers to a wider ecosystem that includes various actors who play different roles in the generation, storage, retrieval, analytics, and usage of big data. Although the private sector has been the major user of big data, big data are expected to play a more significant role in complementing the traditional data sources for official statistics in the coming years. Hence, it is important for all players to understand the potential benefits as well as the constraints in using these new data sources. The following section discusses this issue.

Big Data and Official Statistics

There are several specific examples that showcase how big data can be useful for compiling official statistics. For instance, Statistics Netherlands uses location data through mobile phones to generate proxy measures for daytime population and tourism statistics. In addition, they also use data from social media messages to develop a proxy indicator of consumer confidence. They also calculate inflation based on price information extracted from the web.⁴ Furthermore, Statistics Netherlands also uses traffic loop detection data in measuring the volume of vehicles and traffic density.⁵ On the other hand, the Australian Bureau of Statistics has been examining the possible applications of big data in the development of sampling frames or registers, full or partial data substitution, imputation of missing data items, and data validation (Tam and Clarke 2015). There are various activities using big data and official statistics in Asia and the Pacific as well. For instance, web scrapping data is used in the development of price statistics (including price indexes) in the People's Republic of China (PRC), Japan, and the Republic of Korea. On the other hand, crowd-sourced data are used in decisions on infrastructure investments in the Philippines and in managing urban growth in Sri Lanka. Call detail records (CDRs) from mobile phones are used in monitoring daily migration in the Republic of Korea. CDR data are

⁴ For details, please see Struijs, Braaksma, and Daas (2014).

⁵ For details, please see Daas et al. (2015).

Table 7.1: Data List of Big Data-Related Initiatives in Asia and the Pacific

Economy	Institute or Department	Big Data Project
Australia	UN - Global Pulse	Estimating migration flows using online search data
Bangladesh	World Bank Group	Predicting vulnerability to flooding and enhancing resilience using big data
China, People's Rep. of	National Bureau of Statistics	Using web scraping price data for price index of e-commerce
		Crop survey by farmland: using satellite and aerial remote sensing to help estimate agricultural statistics
		Comparison of data of interbank transactions with retail sales: credit card data for use in verifying retail sales
		Application of big data for highway and waterway transport statistics
		Online price changes of means of production
		Big data enterprise statistical indicator
	World Bank Group	Using big data analytics to discover patterns of medical insurance utilization for medical cost monitoring in the People's Republic of China
	UNDP and Baidu	Using big data to support e-waste management in the People's Republic of China
Japan	Ministry of Internal Affairs and Communications	Web scraping and scanner data for price statistics
Korea, Rep. of	Statistics Korea	Online price index
		Daily migration of population: using mobile call detail record data for daily migration data
India	World Bank Group	Tracking light from the sky version 2.0 or monitoring rural electrification from space
		Real-time forecasting of skills demand and supply: analytics of big data from Babajob in India
	UN - Global Pulse	Understanding immunization awareness and sentiment through analysis of social media and news content
Indonesia	World Bank Group	Big data for freight transport and logistics policy making
		Using mobile phone data for national, subnational, and geo-coded average prices
		Using big data to predict student achievement in low-income school settings
	UN - Global Pulse	Understanding public perceptions of immunization using social media
		Mining citizen feedback data for enhanced local government decision making
	ILO and UN Global Pulse Lab Jakarta	Using social media to track workplace discrimination against women in Indonesia
Pakistan	World Bank Group	Using high-resolution satellite imagery and detection algorithms to better track poverty in Pakistan
Philippines	World Bank Group	OpenRoads Philippines: improved real-time decision making of infrastructure investments for the Philippines by linking geospatial road network data with rich geo-tagged social data collected through mobile phones
Singapore	Department of Statistics	Integrated environment system (IES): using environmental sensing systems and data analytics for real-time environmental information
		Population estimates: using administrative data from many sources for population estimates
Sri Lanka	World Bank Group	Enabling up-to-date and accurate authoritative country mapping with crowdsourced geospatial data
	LIRNEasia	Potential of mobile network big data as a tool in Colombo's transportation and urban planning
Viet Nam	World Bank Group	Using big data to predict student achievement in low-income school settings

ILO = International Labour Organization, UN = United Nations, UNDP = United Nations Development Programme.

Sources: United Nations Global Working Group on Big Data Project Inventory; United Nations Economic and Social Commission for Asia and the Pacific.

also used in price monitoring and in freight and logistics decision-making in Indonesia. Satellite imagery and remote sensing images are used in crop estimates in the PRC, in poverty tracking in Pakistan, in monitoring rural electrification in India, and monitoring pollution levels in Singapore. Box 7.1 provides another example of how data from satellite images, particularly nighttime lights, can be used to develop proxy measures for different types of social and economic indicators. In summary, there are numerous ongoing initiatives that

explore the potential uses, limitations, and constraints in using big data in the generation of official statistics. To further advance these initiatives and explore the other frontiers of big data, the United Nations (UN) created a Global Working Group (GWG) on Big Data for Official Statistics in collaboration between the World Bank and the UN Statistics Division. Currently, the GWG maintains a detailed catalog of big data-related projects that are relevant for different types of official statistics through its GWG Big Data Inventory.

Box 7.1: Using Nighttime Lights to Measure Social and Economic Indicators

Data on nighttime lights is a good example of a novel source of information that is increasingly being used in ongoing studies that showcase the application of big data for monitoring the Sustainable Development Goals (SDGs).

Box Figure 7.1: Nighttime Lights of the World



Source: National Aeronautics and Space Administration.

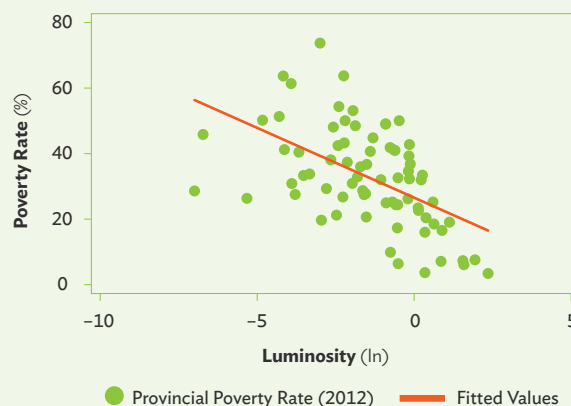
What Are Nighttime Lights?

The Defense Meteorological Satellite Program Operational Linescan System of the United States National Oceanic and Atmospheric Administration collects satellite images of nighttime lights of every corner of the world within the 65° south and north latitude between 8:30 p.m. and 10 p.m. local time. Each pixel of an image represents a square kilometer of ground area, while a digital number ranging from 0 to 63 is used to gauge the intensity of the lights. The raw data are reprocessed to remove the noise caused by cloud cover, snow, and ephemeral lights caused by fire. Compiled annual data are available through the National Geophysical Data Center's website from <http://ngdc.noaa.gov/eog/index.html>.

Deriving Proxy Measures of Socioeconomic Indicators Using Data on Nighttime Lights

In principle, nighttime light is an important input in many economic production and consumption activities such as transportation of goods and people, outdoor lighting, illumination of houses and buildings, and consumption of mass media (Pinkovskiy and Sala-i-Martin 2015). Hence, it is not surprising to note that several studies find that nighttime lights or luminosity data correlate well with measures of economic activity such as gross domestic product (GDP) as well as other non-GDP-based socioeconomic indicators of population size, employment, and poverty (e.g., Chen and Nordhaus 2010, 2011; Gosh et al. 2010; Pinkovskiy and Sala-i-Martin 2015).

Box Figure 7.2: Correlation between Provincial Poverty Rates and Nighttime Lights Index Values



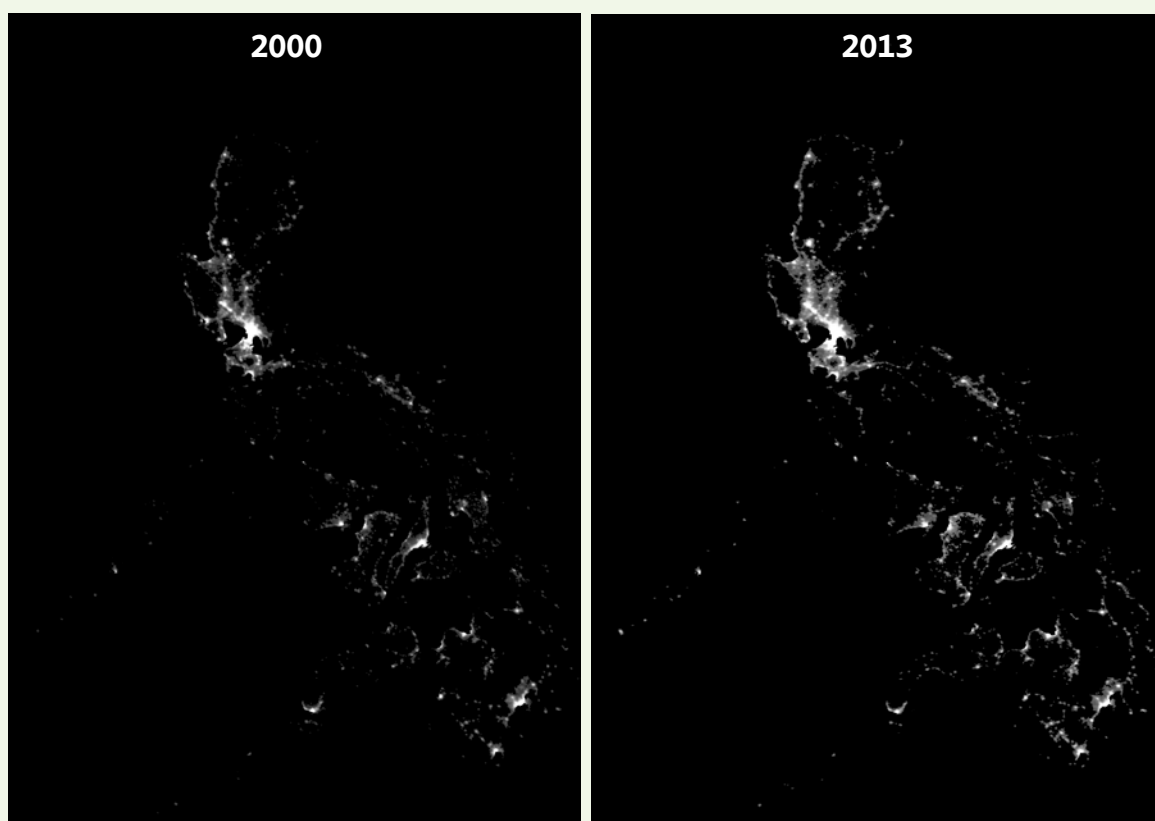
Source: ADB estimates based on poverty numbers compiled by the Philippine Statistics Authority and nighttime lights data.

continued.

Box 7.1: (continued)

Access to nighttime lights data allows countries with weak statistical systems to impute the indicators identified above at regular time intervals. In addition, data on nighttime lights are also potentially useful for spatial analysis, as they allow for estimation at disaggregated levels since each pixel represents a sufficiently small area. For example, Lo (2001) concluded that nighttime light data produced reasonably accurate estimates of urban population at the provincial, country, and city levels in the People's Republic of China. Nighttime luminosity data also serve as a validation tool when socioeconomic indicators that are supposed to correlate well with each other manifest inconsistent trends. For example, Pinkovskiy and Sala-i-Martin (2015) argue that nighttime luminosity data are an effective validation tool when survey-based estimates of income conflict with GDP-based measures. According to the authors, “the strength of the correlation between nighttime lights and measured income is directly related to the strength of the correlation between the given income measurement and the true income it is trying to measure.”

Box Figure 7.3: Images of Nighttime Lights in the Philippines, 2000 and 2013



Source: ADB calculations based on data downloaded from National Oceanic and Atmospheric Administration. Version 4 DMSP-OLS Nighttime Lights Time Series. <http://ngdc.noaa.gov/eog/dmsp/downloadV4composites.html> (accessed 18 January 2016).

In an ongoing study, staff of the Economic Research and Regional Cooperation Department of the Asian Development Bank are exploring the feasibility of using nighttime lights data to measure the impact of infrastructure projects. To accomplish this, the authors are analyzing the increase in the illumination values within a 5-, 10-, and 15-kilometer radius surrounding the areas of a randomly selected set of road projects, before, during, and after project implementation. Preliminary results suggest that the increase in the luminosity of areas with road projects was significantly higher than the observed increase in the illumination values of a preselected control group consisting of “similar” areas that did not have a road project during the same reference time period. Measures of GDP, poverty, and unemployment can then be estimated before and after project implementation by using the correlation between these measures and the illumination values.

continued.

Box 7.1: (continued)

Despite the advantages of using nighttime light data to derive proxy measures of conventional socioeconomic indicators, this approach is not without limitations. For example, since old satellites are replaced by new ones, there might be inconsistent readings from year to year. In addition, since the distribution of illumination values is right-censored, it is not possible to estimate economic growth or temporal changes in other socioeconomic measures for an area that has already reached the maximum digital number value of 63. Nevertheless, examining the relationship between nighttime lights and socioeconomic indicators serves as a good building block for policy in terms of using novel data sources to complement traditional sources that are used to compile official statistics.

Sources:

- X. Chen and W. Nordhaus. 2010. The Value of Luminosity Data as a Proxy for Economic Statistics. *NBER Working Paper* 16317. Cambridge MA: National Bureau of Economic Research (NBER).
- . 2011. Using Luminosity Data as a Proxy for Economic Statistics. *Proceedings of the National Academy of Sciences of the United States of America* 108(21): 8589–8594.
- T. Ghosh, R. L. Powell, C. D. Elvidge, K. E. Baugh, P. C. Sutton, and S. Anderson. 2010. Shedding Light on the Global Distribution of Economic Activity. *The Open Geography Journal* 3: 148–161.
- C. P. Lo. 2001. Modeling the Population of China Using DMSP Operational Linescan System Nighttime Data. *Photogrammetric Engineering & Remote Sensing* 67: 1037–1047.
- M. Pinkovskiy and X. Sala-i-Martin. 2015. Lights, Camera, ... Income!: Estimating Poverty Using National Accounts, Survey Means, and Lights. *NBER Working Paper* 19831. Cambridge MA: National Bureau of Economic Research (NBER).

Although most of the studies that examine the viability of using big data to enhance official statistics compilation provide encouraging results, there are various issues that need to be considered before a decision to fully scale up such initiatives can be made. First, there should be a careful consideration of cost implications and sustainability of statistical outputs. Second, self-selection bias and representativeness are issues that need to be tackled when using several types of big data such as crowd-sourced and web scraped data since many people are still not connected to the internet. Third, there is also a need to work for codification and production of a metadata system to support the use of big data in official statistics (Ploug 2013). On this front, the UN Statistics Division is leading the development of classification and standards toward the formal definition of concepts related to big data for international comparability. In addition, there are several research areas that need to be examined further. In particular, big data analytics require new statistical methods that can allow inferences that are not heavily dependent on the conventional notion of statistical significance. Big data analytics should also

provide analytical tools that tackle inherent features of big data such as heterogeneity, noise accumulation, spurious correlation, and incidental endogeneity.

In addition to these challenges, there is also a need to address institutional barriers to the use of big data for compilation of official statistics. For instance, specific guidelines on sharing of private sector data holdings need to be carefully developed and examined in close consultation with the public sector, particularly the national statistics offices. Furthermore, there is a need to develop the capacity of national statistics offices in the use of big data and continuous development of new methods that will facilitate the efficient integration of big data into the national statistical systems.

Big Data and Sustainable Development Goals

The previous section has touched on the various applications of big data for official statistics in general. This section summarizes how we can leverage big data for monitoring the SDGs in particular.

It focuses on three themes in which big data can play an important role in addressing the data gaps in the SDGs: disaggregation, timeliness, and development of proxy indicators.

As pointed out earlier, the “*leave no one behind*” principle that the SDGs espouse requires the statistical indicators to be broken down or disaggregated by subpopulation groups. However, the existing data collection mechanism even for Tier 1 indicators do not usually allow such disaggregation. Hence, there is a need to explore how new data sources could complement conventional data collection strategies in methodologically robust ways to facilitate disaggregation. Big data can potentially provide a more granular social and geospatial breakdown and reduce the cost of collecting such data. For instance, CDR and process-mediated data can complement official statistics in providing a finer disaggregation of poverty indicators. With an appropriate data mining algorithm, gender and time–location indicators can be generated from these databases and can be used subsequently as auxiliary information in the estimation of poverty incidence and other indicators at various disaggregation levels. Similarly, mobile technology can also be used to oversample marginalized groups that are harder to reach through conventional data collection methods.

Complementing the conventional data sources used to compile the SDG indicators with big data can also potentially improve the timeliness of the release of the statistics. Even with Tier 1 indicators, regular updating has been a challenge due to the frequency of surveys and censuses. Several types of big data like those generated from traditional business systems can complement official statistics as indicators of themes under prosperity. Model-based estimation with big data as exogenous factors can be used in updating indicators between business survey and/or census years. Similar modeling approaches can be

used in the establishment of early warning systems to monitor progress toward the achievement of SDG targets on a more regular basis (e.g., annually). As an example, Google Trends data are used in predicting influenza prevalence (Yang, Santillana, and Kou 2015). A similar method may also be useful in predicting HIV or tuberculosis prevalence rates to complement the scarce data available among the countries in the region.

Big data are expected to play a key role in developing proxy measures for SDG indicators classified as Tier 3. For instance, the use of fixed censor data (weather) may be explored for the development of some indicators for SDG 13 (climate action) in combination with global weather indicators such as El Niño Southern Oscillation data. Similarly, mobile censor data can be mined for latent indicators that can be used to monitor SDG 12 (responsible consumption and production). In particular, data from different sources can be combined in the generation of indexes wherein the process associated with the targets can be viewed to be the latent factors from various indicators available. These latent factors can be extracted through principal components analysis or sparse principal components analysis.

Summary

This section has identified several applications of big data in compiling official statistics and SDG indicators. Overall, the results are encouraging and highlight that big data’s applications are wide-ranging. Nevertheless, there are some important lessons that are worth pointing out. “Big Data” is not a panacea to all data gaps that exist in official statistics and SDG indicators. In fact, big data are not always the right data because, in some cases, they can even introduce additional sources of bias and spurious correlations that could yield misleading conclusions. Secondly, sophisticated technology and data mining algorithms are not sufficient to fully understand

the results from analysis of big data. It requires an effective combination of sectoral expertise and distinct hardware and software capabilities.

As the development community increasingly recognizes the advantages of using big data to enhance the relevance and timeliness of official statistics, it should also make a conscious effort to address issues surrounding data quality and methodology, development of skills needed to work with big data, technological requirements, and the legal framework for sharing and principles of use of big data. To accomplish this, the development community needs to continue tracking relevant initiatives using big data so that we can have a more nuanced understanding on the scalability of such initiatives. Furthermore, the development community needs to work closely with various stakeholders including the private sector and government, particularly the national statistics bureaus.

References

- Asian Development Bank. 2015. *Key Indicators for Asia and the Pacific 2015*. Manila.
- P. Daas, M. Puts, B. Buelens, and P. van den Hurk. 2015. Big Data as a Source of Official Statistics *Journal of Official Statistics* 31(2): 249–262.
- T. Hak, S. Janouskova, and B. Moldan. 2016. Sustainable Development Goals: A Need for Relevant Indicators. *Ecological Indicators* 60: 565–573.
- N. Ploug. 2013. New Forms of Data for Official Statistics. In *Proceedings of the 59th World Statistics Congress of the International Statistical Institute*, 25–30 August, Hong Kong, China. The Hague, Netherlands: International Statistical Institute.
- J. Sachs. 2012. From Millennium Development Goals to Sustainable Development Goals. *The Lancet* 379: 2206–2211.
- P. Struijs, B. Braaksma, and P. Daas. 2014. Official Statistics and Big Data. *Big Data and Society*, April–June 2014: 1–6.
- Sustainable Development Solutions Network (SDSN). 2016. Measuring Peaceful, Just and Inclusive Societies: SDG16 Data Initiative.
- S. Tam and F. Clarke. 2015. Big Data, Official Statistics and Some Initiatives by the Australian Bureau of Statistics. *International Statistical Review* 83(3): 436–448.
- United Nations Development Programme (UNDP). 2013. *Strategy Paper: Sustainable and Inclusive Urbanization in Asia Pacific*. New York.
- United Nations High Commissioner for Refugees (UNHCR). 2014. *Global Trends 2013*. Geneva.
- R. Villars, M. Eastwood, and C. Olofson. 2011. *Big Data: What It Is and Why You Should Care*. IDC White Paper. Framingham, MA: International Data Corporation.
- World Health Organization (WHO). 2015. *Health in 2015: From MDGs to SDGs*. Geneva.
- X. Wu and V. Kumar. 2009. *Top 10 Data Mining Algorithms*. New York: Chapman and Hall/CRC Press.
- S. Yang, M. Santillana, and S. Kou. 2015. Accurate Estimation of Influenza Epidemics Using Google Search Data via ARGO. *Proceedings of the National Academy of Sciences* 112: 14473–14478.

