Part 4

Methods Summary and Data Tables

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4.1 Interpreting the Index and Dashboards results

The _Sustainable Development Report 2020_ describes each country's progress towards achieving the SDGs and indicates areas requiring faster progress. A country's overall SDG Index score and its scores on individual SDGs can be interpreted as a percentage of optimal performance. The difference between the score and 100 is therefore the distance, in percentage points, that needs to be overcome to reach optimum performance. The same basket of indicators is used for all countries to generate comparable scores and rankings.

Substantial differences in rankings may be due to small differences in the aggregate SDG Index score. Differences of two or three places between countries should not be interpreted as "significant," whereas differences of 10 places or more can show a meaningful difference (JRC, 2019).

The SDG dashboards provide a visual representation of each country's performance on the 17 SDGs. The "traffic light" color scheme (green, yellow, orange, and red) illustrates how far a country is from achieving a particular goal. As in previous years, the dashboards and country profiles for OECD countries include additional metrics that are not available for non-OECD member countries.

The SDG trend dashboards indicate whether a country is on track to achieve a particular goal by 2030, based on its recent performance on given indicators. Indicator trends are aggregated at the goal level to give a trend indication of how the country is progressing towards that SDG.

This section describes how the SDG Index and dashboards are computed. A **detailed methodology paper** is accessible online (Lafortune et al., 2018).

The European Commission Joint Research Centre (JRC) conducted an independent statistical audit of the report's methodology and results in 2019. The audit reviewed the conceptual and statistical coherence of the index structure. The detailed statistical audit report is also available on our website (http://sustainabledevelopment.report).

4.2 Changes made to the 2020 edition, and main limitations

Changes made to the 2020 SDG Index and Dashboards

The 2020 SDG Index covers 166 countries, compared with 162 countries in 2019. The additional countries included this year are Barbados, Brunei Darussalam, Somalia, and South Sudan. The 2020 report also incorporates several new indicators. These are shown in table 6, which also identifies indicators that were replaced or modified due to changes in the methodology, and estimates produced by data providers. The data for this year's edition was extracted between February and April 2020.

For the first time, the 2020 edition of the report features time series data for several spillovers. This includes the following indicators:

- CO_2 emissions embodied in imports (tCO_2/capita)
- Scarce water consumption embodied in imports (m^3/capita),
- Fatal work-related accidents embodied in imports (per 100,000 population)

Limitations and data gaps

Due to changes in the indicators as well as some refinements in the methodology, SDG Index rankings and scores cannot be compared with those of previous editions. In spite of our best efforts to identify data for the SDGs, several indicator and data gaps persist (table 7).

Table 6

New indicators and modifications

SDG	Indicator	Change
3	Universal health coverage (UHC) index of service coverage (worst 0–100 best)	Modification: Changed data source to WHO (2020)
4	Participation rate in pre-primary organized learning (% of children aged 4 to 6)	Modification: Changed data source to UNESCO (2020)
6	Anthropogenic wastewater that receives treatment (%)	Modification: Underlying data source changed for a few countries. See https://epi.envirocenter.yale.edu/ for more information
6	Scarce water consumption embodied in imports (m³/capita)	New, replaces "Imported groundwater depletion"
7	Share of renewable energy in total primary energy supply (%)	Modification: Changed data source to OECD (2020)
12	Production-based SO_2 emissions (kg/capita)	Modification: To increase timeliness and country coverage, data source was changed to Lenzen, M. et al. (2020)
12	SO_2 emissions embodied in imports (kg/capita)	Modification: To increase timeliness and country coverage data source was changed to Lenzen, M. et al. (2020)
12	Non-recycled municipal solid waste (kg/capita/day)	Modification: Indicator now excludes composted waste in addition to recycled waste
13	CO_2 emissions embodied in imports (tCO$_2$/capita)	Modification: To increase timeliness and country coverage data source was changed to Lenzen, M. et al. (2020). Carbon accounting is no longer technology-adjusted
13	CO_2 emissions embodied in fossil fuel exports (kg/capita)	Modification: To avoid penalizing trade and transit countries, fuel exports are now capped at the country's level of production
14	Marine biodiversity threats embodied in imports (per million population)	New addition
15	Terrestrial and freshwater biodiversity threats embodied in imports (per million population)	New addition
16	Unsentenced detainees (% of prison population)	Modification: Data now calculated as 3-year averages because of volatility
17	Government spending on health and education (% of GDP)	Modification: Changed data source for OECD countries to be consistent with non-OECD countries
17	Corporate Tax Haven Score (best 0–100 worst)	New, replaces "Tax Haven Score (best 0–5 worst)"
17	Shifted profits of multinationals (US$ billion)	New addition

Source: Authors' analysis

Table 7

Major indicator and data gaps for the SDGs

SDG	Issue	Desired metrics
2	Agriculture and nutrition	Resource-use efficiency (nutrients, water, energy)
		Risky pesticides
		Food loss and food waste
		Greenhouse gas emissions from land use
3	Health	Affordability of healthcare
		Health-care system resilience and preparedness to face global health risks
4	Education	Internationally comparable primary and secondary education outcomes
		Early childhood development
5	Women empowerment	Gender pay gap and other empowerment measures
		Violence against women
6	Water	Quality of drinking water and surface waters
8	Decent work	Decent work
		Labor rights protections
10	Inequality	Wealth inequality
		Vertical mobility
12	Sustainable consumption and production	Environmental impact of material flows
		Recycling and re-use (circular economy)
		Chemicals
		Waste shipments
13	Climate change	Leading indicators for decarbonization
		Greenhouse gas emissions from land use
14	Marine ecosystems	Maximum sustainable yields for fisheries
		Impact of high-sea and cross-border fishing
		Protected areas by level of protection
15	Terrestrial ecosystems	Leading indicators for ecosystem health
		Trade in endangered species
		Protected areas by level of protection
16	Peace and justice	Access to justice
		Violence against children
		Protection of the rights of civil society organizations
17	Means of implementation	Non-concessional development finance
		Climate finance
		Unfair tax competition
		Development impact of trade practices

Source: Authors' analysis

As underscored in previous editions of this report, governments and the international community must increase investments in SDG data and monitoring systems to close these gaps.

To ensure maximum data comparability, we only use data from internationally comparable sources. The providers of this data may adjust national data to ensure international comparability. As a result, some data points presented in this report may differ from data available from national statistical offices or other national sources. Moreover, the length of the validation processes followed by international organizations can lead to significant delays in publishing some data. National statistical offices may therefore have more recent data for some indicators than presented in this report.

Looking forward

In future editions we will include additional and improved SDG metrics as they become available, and we will aim for greater comparability over time. In particular, a major priority in future editions will be to present trend data on additional spillover metrics; such as SO_2 emissions, nitrogen emissions, and biodiversity threats embodied in imports.

To better inform regional and national discussions on the implementation of the SDGs, we support the creation of SDG indices and dashboards for regions (e.g., the Africa SDG Index and Dashboards Report) and at sub-national levels (e.g., the US Cities Sustainable Development Report). SDSN is also working with partners to produce more regional and sub-national editions that can promote evidence-based policymaking, mobilize regional and local communities, and identify persisting data gaps for monitoring the SDGs.

4.3 Methodology (summary)

The SDR2020 provides a comprehensive assessment of distance to targets based on the most up to date data available covering all 193 United Nations Member States. This year's report includes a total of 115 indicators with 85 global indicators and 30 indicators added specifically for OECD countries, including several new indicators to fill data gaps.

The following sections provide an overview of the methodology for indicator selection, normalization, aggregation and for generating indications on trends. Additional information including raw data, additional data tables and sensitivity tests are available online.

A. Data selection

Where possible, the SDR2020 uses official SDG indicators endorsed by the UN Statistical Commission. Where insufficient data is available for an official indicator and to close data gaps, we include other metrics from official and unofficial providers. Five criteria for indicator selection were used to determine suitable metrics for inclusion in the report:

1. **Global relevance and applicability to a broad range of country settings:** The indicators are relevant to monitoring achievement of the SDGs and applicable to the entire continent. They are internationally comparable and allow for direct comparison of performance across countries. In particular, they allow for the definition of quantitative performance thresholds that signify SDG achievement.

2. **Statistical adequacy:** The indicators selected represent valid and reliable measures.

3. **Timeliness:** The indicators selected are up to date and published on a reasonably prompt schedule.

4. **Data quality:** The data series used represent the best available measure for a specific issue and derive from official national or international sources (e.g., national statistical offices or international organizations) or other reputable sources, such as peer-reviewed

publications. No imputations of self-reported national estimates are included.

5. **Coverage:** Data must be available for at least 80% of the United Nations Member States with a national population of more than 1 million people.

Data sources

The data included in the SDR2020 come from a mix of official and non-official data sources. Most of the data come from international organizations (World Bank, OECD, WHO, FAO, ILO, UNICEF, and others) which have extensive and rigorous data-validation processes. Other data sources include household surveys (Gallup World Poll), civil society organizations and networks (Oxfam, Tax Justice Network, and others) and peer-reviewed journals. The full list of indicators and data sources is presented in table 9.

B. Missing data and imputations

The purpose of the SDR2020 is to guide countries' discussions of their current SDG priorities based on available and robust data. To minimize biases from missing data, the SDG Index only includes countries that have data for at least 80% of the variables included in the global SDG Index. The list of countries not included in the SDG Index due to insufficient data availability is presented in table 10. We include all United Nations Member States in the SDG dashboards and country profiles, which illustrates gaps in available SDG data for some countries.

Considering that many SDG priorities lack widely accepted statistical models for imputing country-level data, we generally did not impute or model any missing data. We made exceptions for the variables listed in table 8, often because they would otherwise have not been included due to missing data.

To reduce missing-data biases in the computation of the SDG Index, we impute the regional mean goal scores to those goal scores that are missing or are missing data for more than 75% of the indicators under that goal. This applies primarily to Goal 10 (Reduced Inequalities) and

Goal 14 (Life Below Water). Imputed goal scores are used solely for the computation of the index, and they are not reported in the SDG dashboards or country profiles. Similarly, we impute regional scores for each indicator under Goal 4 to those countries missing data for that indicator. This is done exceptionally to reduce missing bias from the many data gaps in the education data. In the case of Goal 14 (Life Below Water), we hope to identify more metrics in the future to gauge the impact of landlocked countries on oceans. Imputed values are clearly marked in the online datasets and in the country profiles.

C. Method for constructing the SDG Index

The procedure for calculating the SDG Index comprised three steps: (i) censor extreme values from the distribution of each indicator; (ii) rescale the data to ensure comparability across indicators; (iii) aggregate the indicators within and across SDGs.

Normalization

To make the data comparable across indicators, each variable was rescaled from 0 to 100, with 0 denoting worst performance and 100 describing the optimum. Rescaling is usually very sensitive to the choice of limits and extreme values (outliers) at both tails of the distribution. The latter may become unintended thresholds and introduce spurious variability in the data. Consequently, the choice of upper and lower bounds can affect the relative ranking of countries in the index.

The upper bound for each indicator was determined using a five-step decision tree:

1. **Use absolute quantitative thresholds in SDGs and targets:** e.g., zero poverty, universal school completion, universal access to water and sanitation, full gender equality. Some SDG targets propose relative changes (such as Target 3.4: "reduce by one third premature mortality from non-communicable diseases … ") that cannot be translated into a global baseline today. Such targets are addressed in step 5 (page 69).

2. **Where no explicit SDG target is available, apply the principle of "leave no one behind" in setting the upper bound to universal access or zero deprivation for the following types of indicators:**

    a. Measures of extreme poverty (e.g., wasting), consistent with the SDG ambition to end extreme poverty in all its forms.

    b. Public service coverage (e.g., access to contraception).

    c. Access to basic infrastructure (e.g., mobile phone coverage, wastewater treatment).

3. **Where science-based targets exist that must be achieved by 2030 or later, use these to set a 100% upper bound** (e.g., 100% sustainable management of fisheries, or greenhouse gas emissions from electricity to reach net-zero by 2070 at the latest to limit warming to below 2°C).

4. **Where several countries already exceed an SDG target, use the average of the top 5 performers** (e.g., child mortality).

5. **For all other indicators, use the average of the top performers.** For global indicators, the upper bound was set by taking the average value of the top 5 global performers. For OECD indicators, the average of the top 3 performers was used.

These principles interpret the SDGs as "stretch targets" and focus attention on the indicators on which a country is lagging behind. Each indicator distribution was censored, so that all values exceeding the upper bound scored 100 and values below the lower bound scored 0.

In some cases, the upper bound exceeded the thresholds to be met by 2030 in order to achieve the SDGs. For example, the SDGs call for reducing child mortality to no more than 25 deaths per 1000 live births, but many countries have already exceeded this threshold (i.e., have mortality rates lower than 25 in 1000). By defining the upper bound as the "best" outcome (e.g., 0 mortality per 1000 live births) – rather than the SDG achievement threshold – the SDG Index rewards improvements across the full distribution. This is particularly important for countries that have already achieved some SDG thresholds, but still lag behind others on this metric.

Some countries already exceed the upper bound of certain indicators today, and more will do so in the coming years as the world progresses towards the SDGs.

To remove the effect of extreme values, which can skew the results of a composite index, the JRC (OECD and JRC, 2008) recommends censoring data at the bottom 2.5th percentile as the minimum value for the normalization – as long as that value does not include observations that are still part of the ordinary distribution. However, sometimes the 2.5th percentile may contain outliers and values that are part of a normally distributed set of data. When clear outliers were identified, an intermediate value between the weakest outlier and the most extreme "normal" value in the distribution was selected as the lower bound and we censored data at this level.

After establishing the upper and lower bounds, variables were transformed linearly to a scale of 0 to 100 using the following rescaling formula for the range [0; 100]:

$$x' = \frac{x - min(x)}{max(x) - min(x)} * 100 \quad (Eq.S1)$$

where x is raw data value; *max/min* denote the bounds for best and worst performance, respectively; and x' is the normalized value after rescaling.

The rescaling equation ensured that all rescaled variables were expressed as ascending variables (i.e., higher values denoted better performance). In this way, the rescaled data became easy to interpret and compare across all indicators: a country that scores 50 on a variable is halfway towards achieving the optimum value; a country with a score of 75 has covered three-quarters of the distance from worst to best.

Table 8

Imputations

SDG	Indicator	Imputation
1	Poverty headcount ratio at $1.90/day (%)	Data was not reported for those countries where no survey data was available.
1	Poverty headcount ratio at $3.20/day (%)	Data was not reported for those countries where no survey data was available.
2	Prevalence of undernourishment (%)	FAO et al. (2015) report 14.7 million undernourished people in developed regions, which corresponds to an average prevalence of 1.17% in the developed regions. We assumed a 1.2% prevalence rate for each high-income country with missing data.
2	Prevalence of stunting in children under 5 years of age (%)	UNICEF et al. (2016) report an average prevalence of stunting in high-income countries of 2.58%. We assumed this value for high-income countries with missing data.
2	Prevalence of wasting in children under 5 years of age (%)	UNICEF et al. (2016) report an average prevalence of wasting in high-income countries of 0.75%. We assumed this value for high-income countries with missing data.
4	Net primary enrollment rate (%)	For OECD countries, we imputed values from OECD enrollment data. For Japan and Lebanon, the datapoint in the 2019 SDR was reported for this year.
4	Lower secondary completion rate (%)	For OECD countries, we imputed values from OECD enrollment data. For Bulgaria, Japan, Lebanon, and Namibia, the datapoint in the 2019 SDR was reported for this year.
5	Demand for family planning satisfied by modern methods (% of females aged 15 to 49 who are married or in unions)	We impute modeled estimates from UNDESA Population Division for countries missing administrative data.
8	Victims of modern slavery (per 1,000 population)	We assume missing data points for those countries in which the Walk Free Foundation's methodology has less confidence due to survey unavailability.
9	The Times Higher Education Universities Ranking: Average score of top 3 universities (worst 0–100 best)	We impute values from the Global Innovation Index's indicator on university scores in the QS University Rankings for countries with missing data. We assumed a value of 0 for countries with no universities in the rankings.
9	Expenditure on research and development (% of GDP)	We assumed zero R&D expenditure for low-income countries that did not report any data for this variable.
10	Gini coefficient adjusted for top income	We impute the World Bank Gini coefficients for those countries missing data on the adjusted Gini coefficient from Brookings.
13	CO_2 emissions embodied in fossil fuel exports (kg/capita)	We assumed a value of 0 for countries with unreported export data and no production across all three fossil-fuel types (coal, gas, oil).
15	Permanent deforestation (% of forest area, 5-year average)	We did not report data for countries with insignificant forest area as per the Environmental Performance Index (2018). Countries with forest area but no data on drivers of permanent deforestation (shifting agriculture, urbanization, and land use for commodity production) were assigned a value of 0.
16	Homicides (per 100,000 population)	Countries with missing values in the most current extraction from the UNODC were assigned the values that were available for the 2019 Sustainable Development Report.
16	Children involved in child labor (% of population aged 5 to 14)	The best performing upper-middle-income countries have a child labor rate of 1% (UNICEF, 2015). We assumed 0% child labor for high-income OECD members for which no data was reported.

Table 8

(continued)

SDG	Indicator	Imputation
16	Exports of major conventional weapons (TIV constant million USD per 100,000 population)	We assumed a value of 0 for countries with unreported export data and from which there are no major companies that produce weapons.
17	Government spending on health and education (% of GDP)	When data are missing from WHO or UNESCO, values were imputed from the OECD System of National Accounts data. Alternatively, when OECD SNA data wasn't available, values for health spending were imputed from the OECD Health expenditure and financing database while values for education spending were imputed from the Education at a glance: Educational finance indicators database.
17	Other countries: Government revenue excluding grants (% of GDP)	IMF data (taxes, social contributions, and other revenue, excluding grants) is imputed when countries are missing data in the World Bank database. The IMF data used is from the central government (incl. social security funds) sector. If that is not available, we use data for the budgetary central government sector
17	Corporate Tax Haven Score (best 0–100 worst)	A value of 0 was imputed to all countries not included in the index. Missing data was assigned to those countries not included in the index and indicated in the OECD Automatic Exchange of Information Implementation Report 2018 (Nauru, Qatar and Bahrain). According to the report, these countries have no system for direct taxation in place and do not have reciprocal information-exchanges.

Weighting and aggregation

The results of several rounds of expert consultations on earlier drafts of the SDG Index made clear that there is no consensus across different epistemic communities on assigning higher weights to some SDGs over others. As a normative assumption, we therefore opted for a fixed, equal weight to be given to every SDG to reflect policymakers' commitments to treating all SDGs equally and as an "integrated and indivisible" set of goals (United Nations, 2015, para. 5). This implies that to improve their SDG Index score, countries need to place attention on all goals, with a particular focus on goals that they are furthest from achieving and where incremental progress might therefore be expected to be fastest.

To compute the SDG Index, we first estimate scores for each goal using the arithmetic mean of indicators for that goal. These goal scores are then averaged across all 17 SDGs to obtain the SDG Index score. Various sensitivity tests have been available online, including comparisons of arithmetic mean versus geometric mean and Monte-Carlo simulations at the Index and Goal level. Monte-Carlo simulations call for prudence in interpreting small differences in the Index scores and rankings between countries, as those may be sensitive to the weighting scheme.

D. Method for constructing the dashboards

We have introduced additional quantitative **thresholds** for each indicator, to group countries in a "traffic light" table. Aggregating across all indicators for each goal yields an overall score for each SDG and for each country. Table 11 presents these thresholds for each indicator.

Thresholds

To assess a country's progress on a particular indicator, we considered four bands. The green band is bounded by the maximum rating that can be achieved for each variable (i.e., the upper bound) and the threshold for achieving the SDG. Three color bands, moving from yellow to orange and then red, denote increasing distance from SDG achievement. The red band is bound at the bottom by the value of the 2.5th percentile of the distribution. Upper and lower bounds are the same as for the SDG Index.

Additional thresholds were established based on statistical techniques and in consultation with experts. The country assessments were subject to a public consultation as well as direct consultations with members of the Sustainable Development Solutions Network. All thresholds were specified in absolute terms and apply to all countries.

Weighting and aggregation

The purpose of the global SDG dashboards is to highlight those SDGs that require particular attention in each country, and therefore should be prioritized for early action. For the design of the dashboards, the same issues related to weighting and aggregation of indicators apply, as discussed above for the SDG Index.

Averaging across all indicators for an SDG might hide areas of policy concern when a country performs well on most indicators but faces serious shortfalls on one or two metrics within the same SDG. This applies particularly to high-income and upper-middle-income countries that have made significant progress on many SDG dimensions but may face serious shortfalls on individual variables.

As a result, the global SDG dashboards aggregate indicator ratings for each SDG by estimating the average of the two variables on which a country performed worst. To this end, the indicator values were first rescaled from 0 to 3, where 0 corresponds to the lower bound, 1 to the value of the threshold between red and orange ("red threshold"), 2 to the value of the threshold between yellow and green ("green threshold"), and 3 to the upper bound. For all indicators, the yellow–orange threshold was set as the value halfway between the red and green thresholds (1.5). Each interval between 0 and 3 is continuous.

We then took the average of the two rescaled variables on which the country performed worst to identify its rating for that goal. We applied an additional rule that, in order to score green for the goal, both indicators had to be green – otherwise the goal would be rated yellow. Similarly, a red score was applied only if both worst-performing indicators scored red. If a country has only one data point under an SDG, then the color rating for that indicator determines its overall rating for the goal. If a country has data available on fewer than 50% of the indicators under a goal, its dashboard color for that goal will be gray.
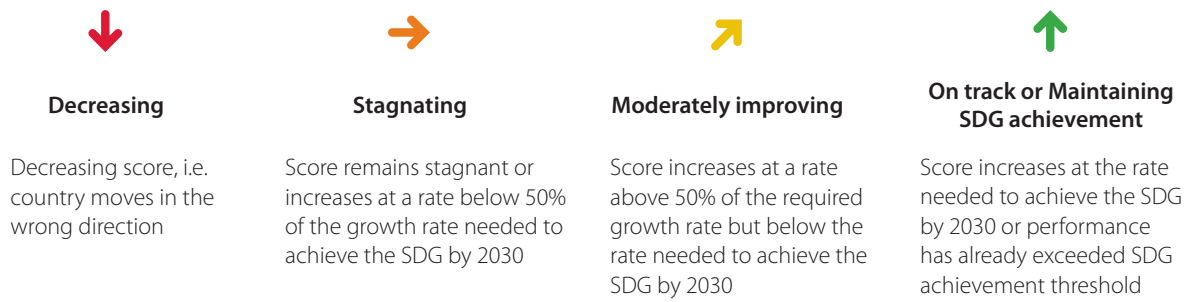
E. SDG trends

Using historic data, we estimate how fast a country has been progressing towards an SDG and determine whether – if extrapolated into the future – this pace will be sufficient to achieve the SDG by 2030. For each indicator, SDG achievement is defined by the green threshold set for the SDG dashboards. The difference in percentage points between the green threshold and the normalized country score denotes the gap that must be closed to meet that goal. To estimate trends at the indicator level, we calculated the linear annual growth rates (i.e., annual percentage improvement) needed to achieve the target by 2030 (i.e., 2010–2030), which we compared to the average annual growth rate over the most recent period, for example, from 2015–2018. Progress towards achievement on a particular indicator is described using a four-arrow system (figure 30). Figure 31 illustrates the methodology graphically.

Specifically, each indicator trend was re-normalized on a scale of 0 to 4, similar to the dashboard methodology. Decreasing indicators were assigned a value of 0–1, where 0 is the highest rate of score decrease and 1 corresponds to no change whatsoever in the score over time. Indicator trends that are "stagnating" were assigned a value of 1–2, where 2 corresponds to 50% of the growth rate needed to meet the target by 2030. Indicators that are "moderately improving" were assigned a value of 2–3, where 3 is the exact growth rate needed to achieve the target by 2030. Those indicators that are "on track" were assigned values of 3–4, where 4 corresponds to the greatest improvement over the period. Indicators that are "maintaining SDG achievement" were assigned a score of exactly 3. The individual bands are linear, but the continuous 0-to-4 scale is not linear as a whole.

Overall goal trends were calculated as the arithmetic average of the rescaled values for all trend indicators under each goal. An average of 0–1 corresponds to a "decreasing" goal trend, 1–2 to a "stagnating" trend, 2–3 to "moderate improvement," and 3–4 to "on track or maintaining achievement." The trend for an SDG was calculated as the arithmetic average of all trend indicators for that goal.

4. Methods Summary and Data Tables

Figure 30

The Four-arrow system for denoting SDG trends

Decreasing	**Stagnating**	**Moderately improving**	**On track or Maintaining SDG achievement**
Decreasing score, i.e. country moves in the wrong direction	Score remains stagnant or increases at a rate below 50% of the growth rate needed to achieve the SDG by 2030	Score increases at a rate above 50% of the required growth rate but below the rate needed to achieve the SDG by 2030	Score increases at the rate needed to achieve the SDG by 2030 or performance has already exceeded SDG achievement threshold

Figure 31

Graphic representation of the SDG trends methodology

Goal achievement
Green threshold

Performance in 2015

Extrapolated linear
annual growth rate
2015–2030

2015   2019   2030
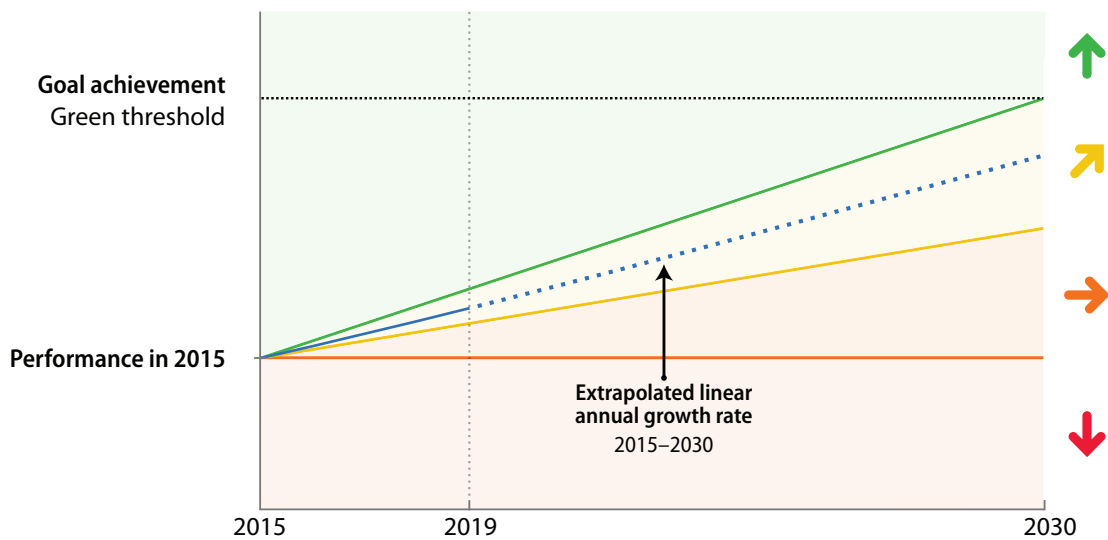
Source: Authors' analysis

Table 12 also provides the complete list of indicators used to compute SDG Trends. Trend indicators were selected from the indicators included in the SDG dashboards based on the availability of trend data. When the value for one year was not available, we used the closest available value with a maximum one-year difference for calculating the trend indications. The table also indicates the period over which the trend was calculated. For several indicators, trends were calculated using data in 2015 as the start year. These indicators demonstrate how the situation in the country has changed since adoption of the SDGs. These indicators are particularly insightful for understanding how policy implementation efforts have corresponded to changing outcomes, and are marked with an asterisk in table 12. Other SDG trends are calculated based on data points that preceded the adoption of SDGs, because data is reported with long lags at the international level due to lengthy validation processes.

Small decreases in countries that are top performers are treated differently from small decreases in countries that are average or low performers. For top performers only, very small decreases are now treated as "stagnating" trends. They are reported as such at the indicator level

and treated as such when calculating the overall goal trend. However, countries that used to be above the green threshold and that decrease to a score lower than the green threshold obtain a "decreasing" trend.

Several other calculation methods were considered. For instance, we tested the sensitivity of the results when using technical optimums (100 score) as "goal achievement" and calculated distance to these optimums. This approach yielded harsher results and is not consistent with our conceptual assumption that lower green thresholds correspond to goal achievement. We also considered using compound annual growth rates (CAGR) instead of linear growth rates. The two approaches yield rather similar results however, and we could not identify a strong argument for using the more sophisticated CAGR method. Finally, while the dashboards are based only on the two worst indicators, trends are generated using all indicators under the goal. This is because the dashboards aim to highlight goals where action is urgently required due to poor performance on some of the underlying indicators, whereas the trends aim to reflect the evolution of overall performance on the goal over time, including all indicators.

4.4 Data tables

Table 9

Indicators included in the Sustainable Development Report 2020

Legend

[a]   denotes OECD-only indicators

[b]   denotes indicators not used in OECD dashboard but that are used in the calculation of OECD countries' index scores.

SDG	Notes	Indicator	Reference Year	Source	Description
1		Poverty headcount ratio at $1.90/day (%)	2020	World Data Lab (2020)	Estimated percentage of the population that is living under the poverty threshold of US$1.90 a day. Estimated using historical estimates of the income distribution, projections of population changes by age and educational attainment, and GDP projections.
1		Poverty headcount ratio at $3.20/day (%)	2020	World Data Lab (2020)	Estimated percentage of the population that is living under the poverty threshold of US$3.20 a day. Estimated using historical estimates of the income distribution, projections of population changes by age and educational attainment, and GDP projections.
1	[a]	Poverty rate after taxes and transfers (%)	2017	OECD (2020)	Relative poverty is measured as the share of the population whose incomes fall below half the median disposable income for the entire population. The income threshold for relative poverty changes over time with changes in median disposable income.
2		Prevalence of undernourishment (%)	2017	FAO (2020)	The percentage of the population whose food intake is insufficient to meet dietary energy requirements for a minimum of one year. Dietary energy requirements are defined as the amount of dietary energy required by an individual to maintain body functions, health and normal activity. FAO et al. (2015) report 14.7 million undernourished people in developed regions, which corresponds to an average prevalence of 1.17% in the developed regions. We assumed a 1.2% prevalence rate for each high-income country (World Bank, 2019) with missing data.
2		Prevalence of stunting in children under 5 years of age (%)	2016	UNICEF et al. (2020)	The percentage of children up to the age of 5 years that are stunted, measured as the percentage that fall below minus two standard deviations from the median height for their age, according to the WHO Child Growth Standards. UNICEF et al. (2016) report an average prevalence of wasting in high-income countries of 2.58%. We assumed this value for high-income countries with missing data.
2		Prevalence of wasting in children under 5 years of age (%)	2016	UNICEF et al. (2020)	The percentage of children up to the age of 5 years whose weight falls below minus two standard deviations from the median weight for their age, according to the WHO Child Growth Standards. UNICEF et al. (2016) report an average prevalence of wasting in high-income countries of 0.75%. We assumed this value for high-income countries with missing data.
2		Prevalence of obesity, BMI ≥ 30 (% of adult population)	2016	WHO (2020)	The percentage of the adult population that has a body mass index (BMI) of 30kg/m² or higher, based on measured height and weight.
2		Human Trophic Level (best 2-3 worst)	2017	Bonhommeau et al. (2013)	Trophic levels are a measure of the energy intensity of diet composition and reflect the relative amounts of plants as opposed to animals eaten in a given country. A higher trophic level represents a greater level of consumption of energy-intensive animals.
2		Cereal yield (tonnes per hectare of harvested land)	2017	FAO (2020)	Cereal yield, measured as tonnes per hectare of harvested land. Production data on cereals relate to crops harvested for dry grain only and excludes crops harvested for hay or green for food, feed, or silage and those used for grazing.
2		Sustainable Nitrogen Management Index (best 0-1.41 worst)	2015	Zhang and Davidson (2019)	The Sustainable Nitrogen Management Index (SNMI) is a one-dimensional ranking score that combines two efficiency measures in crop production: Nitrogen use efficiency (NUE) and land use efficiency (crop yield).
2	[a]	Yield gap closure (% of potential yield)	2015	Global Yield Gap Atlas (2015)	A country's yield expressed as a percentage of its potential yield in the three annual crops using the most land area, weighted for the relative importance of each crop in terms of surface area.

Table 9

(continued)

SDG	Notes	Indicator	Reference Year	Source	Description
3		Maternal mortality rate (per 100,000 live births)	2017	WHO et al. (2020)	The estimated number of women, between the age of 15-49, who die from pregnancy-related causes while pregnant or within 42 days of termination of pregnancy, per 100,000 live births.
3		Neonatal mortality rate (per 1,000 live births)	2018	UNICEF et al. (2020)	The number of newborn infants (neonates) who die before reaching 28 days of age, per 1,000 live births.
3		Mortality rate, under-5 (per 1,000 live births)	2018	UNICEF et al. (2020)	The probability that a newborn baby will die before reaching age five, if subject to age-specific mortality rates of the specified year, per 1,000 live births.
3		Incidence of tuberculosis (per 100,000 population)	2018	WHO (2020)	The estimated rate of new and relapse cases of tuberculosis in a given year, expressed per 100,000 people. All forms of tuberculosis are included, including cases of people living with HIV.
3		New HIV infections (per 1,000 uninfected population)	2018	UNAIDS (2020)	Number of people newly infected with HIV per 1,000 uninfected population.
3		Age-standardized death rate due to cardiovascular disease, cancer, diabetes, or chronic respiratory disease in adults aged 30–70 years (%)	2016	WHO (2018)	The probability of dying between the ages of 30 and 70 years from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases, defined as the percent of 30-year-old-people who would die before their 70th birthday from these diseases, assuming current mortality rates at every age and that individuals would not die from any other cause of death (e.g. injuries or HIV/AIDS).
3		Age-standardized death rate attributable to household air pollution and ambient air pollution (per 100,000 population)	2016	WHO (2020)	Mortality rate that is attributable to the joint effects of fuels used for cooking indoors and ambient outdoor air pollution.
3		Traffic deaths (per 100,000 population)	2016	WHO (2020)	Estimated number of fatal road traffic injuries per 100,000 people.
3		Life expectancy at birth (years)	2016	WHO (2020)	The average number of years that a newborn could expect to live, if he or she were to pass through life exposed to the sex- and age-specific death rates prevailing at the time of his or her birth, for a specific year, in a given country, territory, or geographic area.
3		Adolescent fertility rate (births per 1,000 adolescent females aged 15 to 19)	2017	UNDESA (2020)	The number of births per 1,000 women between the age of 15 to 19.
3		Births attended by skilled health personnel (%)	2016	UNICEF (2020)	The percentage of births attended by personnel trained to give the necessary supervision, care, and advice to women during pregnancy, labor, and the postpartum period, to conduct deliveries on their own, and to care for newborns.
3		Percentage of surviving infants who received 2 WHO-recommended vaccines (%)	2018	WHO and UNICEF (2020)	Estimated national routine immunization coverage of infants, expressed as the percentage of surviving infants children under the age of 12 months who received two WHO-recommended vaccines (3rd dose of DTP and 1st dose of measles). Calculated as the minimum value between the percentage of infants who have received the 3rd dose of DTP and the percentage who have received the 1st dose of measles.
3		Universal health coverage (UHC) index of service coverage (worst 0–100 best)	2017	WHO (2019)	Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population). The indicator is an index reported on a unitless scale of 0 to 100, which is computed as the geometric mean of 14 tracer indicators of health service coverage.
3		Subjective well-being (average ladder score, worst 0–10 best)	2019	Gallup (2020)	Subjective self-evaluation of life, where respondents are asked to evaluate where they feel they stand on a ladder where 0 represents the worst possible life and 10 the best possible life.
3	[a]	Gap in life expectancy at birth among regions (years)	2016	OECD (2020)	Difference between maximum and minimum regional life expectancy at birth among regions.

4. Methods Summary and Data Tables

Table 9

(continued)

SDG	Notes	Indicator	Reference Year	Source	Description
3	[a]	Gap in self-reported health status by income (percentage points)	2018	OECD (2020)	Gap in percentage of people who perceive their health status as good or very good between the poorest 20% and the richest 20% of the population.
3	[a]	Daily smokers (% of population aged 15 and over)	2018	OECD (2020)	The percentage of the population aged 15 years and older who are reported to smoke daily.
4		Net primary enrollment rate (%)	2018	UNESCO (2020)	The percentage of children of the official school age population who are enrolled in primary education.
4		Lower secondary completion rate (%)	2018	UNESCO (2020)	Lower secondary education completion rate measured as the gross intake ratio to the last grade of lower secondary education (general and pre-vocational). It is calculated as the number of new entrants in the last grade of lower secondary education, regardless of age, divided by the population at the entrance age for the last grade of lower secondary education.
4		Literacy rate (% of population aged 15 to 24)	2018	UNESCO (2020)	The percentage of youth, aged 15 to 24, who can both read and write a short simple statement on everyday life with understanding.
4	[a]	Participation rate in pre-primary organized learning (% of children aged 4 to 6)	2018	UNESCO (2020)	Participation rate in organized learning one year before the official primary entry age.
4	[a]	Tertiary educational attainment (% of population aged 25 to 34)	2018	OECD (2020)	The percentage of the population, aged 25 to 34, who have completed tertiary education.
4	[a]	PISA score (worst 0–600 best)	2018	OECD (2018)	National scores in the Programme for International Student Assessment (PISA), an internationally standardized assessment that is administered to 15-year-olds in schools. It assesses how far students near the end of compulsory education have acquired some of the knowledge and skills that are essential for full participation in society. Country PISA scores for reading, mathematics, and science were averaged to obtain an overall PISA score.
4	[a]	Variation in science performance explained by socio-economic status (%)	2018	OECD (2018)	Percentage of variation in science performance explained by students' socio-economic status.
4	[a]	Underachievers in science (% of 15-year-olds)	2018	OECD (2018)	Percentage of students with a performance in science below level 2 (less than 409.54 score points).
4	[a]	Resilient students in science (% of 15-year-olds)	2018	OECD (2018)	Percentage of students who are in the bottom quarter of the PISA index of economic, social and cultural status (ESCS) in the country/economy of assessment and are in the top quarter of science performers among all countries/economies, after accounting for socio-economic status.
5		Demand for family planning satisfied by modern methods (% of females aged 15 to 49 who are married or in unions)	2018	UNDESA (2020)	The percentage of women of reproductive age, either married or in a union, whose demand for family planning has been met using modern methods of contraception.
5		Ratio of female-to-male mean years of education received (%)	2018	UNESCO (2020)	The mean years of education received by women aged 25 and older divided by the mean years of education received by men aged 25 and older.
5		Ratio of female-to-male labor force participation rate (%)	2019	ILO (2020)	Modeled estimate of the proportion of the female population aged 15 years and older that is economically active, divided by the same proportion for men.
5		Seats held by women in national parliament (%)	2020	IPU (2020)	The number of seats held by women in single or lower chambers of national parliaments, expressed as a percentage of all occupied seats. Seats refer to the number of parliamentary mandates, or the number of members of parliament.
5	[a]	Gender wage gap (% of male median wage)	2018	OECD (2020)	The difference between male and female median wages of full-time employees and those self-employed, divided by the male median wage.
5	[a]	Gender gap in time spent doing unpaid work (minutes/day)	2015	OECD (2020)	The difference in time spent in unpaid work between men and women in minutes per day. Unpaid work includes work, such as childcare, meal preparation, and cleaning.

Table 9

(continued)

SDG	Notes	Indicator	Reference Year	Source	Description
6		Population using at least basic drinking water services (%)	2017	JMP (2020)	The percentage of the population using at least a basic drinking water service, such as drinking water from an improved source, provided that the collection time is not more than 30 minutes for a round trip, including queuing.
6		Population using at least basic sanitation services (%)	2017	JMP (2020)	The percentage of the population using at least a basic sanitation service, such as an improved sanitation facility that is not shared with other households.
6		Freshwater withdrawal (% of available freshwater resources)	2015	FAO (2020)	The level of water stress: freshwater withdrawal as a proportion of available freshwater resources is the ratio between total freshwater withdrawn by all major sectors and total renewable freshwater resources, after taking into account environmental water requirements. Main sectors, as defined by ISIC standards, include agriculture, forestry and fishing, manufacturing, electricity industry, and services. This indicator is also known as water withdrawal intensity.
6		Anthropogenic wastewater that receives treatment (%)	2018	EPI (2018)	The percentage of collected, generated, or produced wastewater that is treated, normalized by the population connected to centralized wastewater treatment facilities. Scores were calculated by multiplying the wastewater treatment summary values, based on decadal averages, with the sewerage connection values to arrive at an overall total percentage of wastewater treated.
6		Scarce water consumption embodied in imports (m³/capita)	2013	Lenzen et al. (2013)	Water scarcity is measured as water consumption weighted by scarcity indices. In order to incorporate water scarcity into the virtual water flow calculus, a new satellite account was constructed where water use entries are weighted so that they reflect the scarcity of the water being used. The weight used is a measure of water withdrawals as a percentage of the existing local renewable freshwater resources. The Water Scarcity Index was used for converting total water use into scarce water use.
6	[a]	Population using safely managed water services (%)	2017	JMP (2020)	The percentage of the population using a safely managed drinking water service. A safely managed drinking water service is one where people use an "improved" source meeting three criteria: it is accessible on premises, water is available when needed, and the water supplied is free from contamination. Improved sources are those that have the potential to deliver safe water by nature of their design and construction.
6	[a]	Population using safely managed sanitation services (%)	2017	JMP (2020)	The percentage of the population using safely managed sanitation services. Safely managed sanitation services are "improved" sanitation facilities that are not shared with other households, and where the excreta produced should either be treated and disposed of in situ, stored temporarily and then emptied, transported and treated off-site, or transported through a sewer with wastewater and then treated off-site. Improved sanitation facilities are those designed to hygienically separate excreta from human contact.
7		Population with access to electricity (%)	2017	SE4All (2020)	The percentage of the population who has access to electricity.
7		Population with access to clean fuels and technology for cooking (%)	2016	SE4All (2020)	The percentage of the population primarily using clean cooking fuels and technologies for cooking. Under WHO guidelines, kerosene is excluded from clean cooking fuels.
7		CO_2 emissions from fuel combustion for electricity and heating per total electricity output (MtCO₂/TWh)	2017	IEA (2019)	A measure of the carbon intensity of energy production, calculated by dividing CO_2 emissions from the combustion of fuel by electricity output.
7	[a]	Share of renewable energy in total primary energy supply (%)	2018	OECD (2020)	The share of renewable energy in the total primary energy supply. Renewables include the primary energy equivalent of hydro (excluding pumped storage), geothermal, solar, wind, tide and wave sources. Energy derived from solid biofuels, biogasoline, biodiesels, other liquid biofuels, biogases and the renewable fraction of municipal waste are also included.
8		Adjusted GDP growth (%)	2018	World Bank (2020)	The growth rate of GDP adjusted to income levels (where rich countries are expected to grow less) and expressed relative to the US growth performance. GDP is the sum of gross value added by all resident producers in the economy, plus any product taxes and minus any subsidies not included in the value of the products.

4. Methods Summary and Data Tables

Table 9

(continued)

SDG	Notes	Indicator	Reference Year	Source	Description
8		Victims of modern slavery (per 1,000 population)	2018	Walk Free Foundation (2018)	Estimation of the number of people in modern slavery. Modern slavery is defined as people in forced labor or forced marriage. It is calculated based on standardized surveys and Multiple Systems Estimation (MSE).
8		Adults with an account at a bank or other financial institution or with a mobile-money-service provider (% of population aged 15 or over)	2017	Demirguc-Kunt et al. (2018)	The percentage of adults, 15 years and older, who report having an account (by themselves or with someone else) at a bank or another type of financial institution, or who have personally used a mobile money service within the past 12 months.
8	[b]	Unemployment rate (% of total labor force)	2019	ILO (2020)	Modeled estimate of the share of the labor force that is without work but is available and actively seeking employment. The indicator reflects the inability of an economy to generate employment for people who want to work but are not doing so.
8		Fatal work-related accidents embodied in imports (per 100,000 population)	2010	Alsamawi et al. (2017)	The number of fatal work-related accidents associated with imported goods. Calculated using extensions to a multiregional input-output table.
8	[a]	Employment-to-population ratio (%)	2019	OECD (2020)	The ratio of the employed to the working age population. Employed people are those aged 15 or older who were in paid employment or self-employed during a specified period. The working age population refers to people aged 15 to 64.
8	[a]	Youth not in employment, education or training (NEET) (% of population aged 15 to 29)	2018	OECD (2020)	The percentage of young people who are not in employment, education or training (NEET). Education includes part-time or full-time education, but exclude those in non-formal education and in educational activities of very short duration. Employment is defined according to the ILO Guidelines and covers all those who have been in paid work for at least one hour in the reference week or were temporarily absent from such work.
9		Population using the internet (%)	2018	ITU (2020)	The percentage of the population who used the Internet from any location in the last three months. Access could be via a fixed or mobile network.
9		Mobile broadband subscriptions (per 100 population)	2018	ITU (2020)	The number of mobile broadband subscriptions per 100 population. Mobile broadband subscriptions refer to subscriptions to mobile cellular networks with access to data communications (e.g. the Internet) at broadband speeds, irrespective of the device used to access the internet.
9		Logistics Performance Index: Quality of trade and transport-related infrastructure (worst 1–5 best)	2018	World Bank (2018)	Survey-based average assessment of the quality of trade and transport related infrastructure, e.g. ports, roads, railroads and information technology, on a scale from 1 (worst) to 5 (best).
9		The Times Higher Education Universities Ranking: Average score of top 3 universities (worst 0–100 best)	2020	Times Higher Education (2020)	The average score of the top three universities in each country that are listed in the global top 1,000 universities in the world. For countries with at least one university on the list, only the score of the ranked university was taken into account. When a university score was missing in the Times Higher Education World University Ranking, an indicator from the Global Innovation Index on the top 3 universities in Quacquarelli Symonds (QS) University Ranking was used as a source when available.
9		Scientific and technical journal articles (per 1,000 population)	2018	National Science Foundation (2020)	The number of scientific and technical journal articles published, that are covered by the Science Citation Index (SCI) or the Social Sciences Citation Index (SSCI). Articles are counted and assigned to a country based on the institutional address(es) listed in the article.
9		Expenditure on research and development (% of GDP)	2017	UNESCO (2020)	Gross domestic expenditure on scientific research and experimental development (R&D) expressed as a percentage of Gross Domestic Product (GDP). We assumed zero R&D expenditure for low-income countries that do not report any data.
9	[a]	Researchers (per 1,000 employed population)	2018	OECD (2020)	The number of researchers per thousand employed people. Researchers are professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems, as well as in the management of the projects concerned

Table 9

(continued)

SDG	Notes	Indicator	Reference Year	Source	Description
9	[a]	Triadic patent families filed (per million population)	2017	OECD (2020)	A triadic patent family is defined as a set of patents registered in various countries (i.e. patent offices) to protect the same invention. Triadic patent families are a set of patents filed at three of these major patent offices: the European Patent Office (EPO), the Japan Patent Office (JPO) and the United States Patent and Trademark Office (USPTO). The number of triadic patent families is "nowcast" for timeliness.
9	[a]	Gap in internet access by income (percentage points)	2019	OECD (2020)	The difference in the percentage of household Internet access between the top and bottom income quartiles.
9	[a]	Women in science and engineering (% of tertiary graduates in science and engineering)	2015	OECD (2020)	Percentage of women tertiary graduates in natural sciences and engineering out of total tertiary graduates in natural sciences and engineering.
10		Gini coefficient adjusted for top income	2017	Chandy and Seidel (2017)	The Gini coefficient adjusted for top revenues unaccounted for in household surveys. This indicator takes the average of the unadjusted Gini and the adjusted Gini.
10	[a]	Palma ratio	2017	OECD (2020)	The share of all income received by the 10% people with highest disposable income divided by the share of all income received by the 40% people with the lowest disposable income.
10	[a]	Elderly poverty rate (% of population aged 66 or over)	2017	OECD (2020)	The percentage of people of 66 years of age or more whose income falls below half the median household income of the total population.
11		Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM2.5) ($\mu g/m^3$)	2017	IHME (2017)	Air pollution measured as the population-weighted mean annual concentration of PM2.5 for the urban population in a country. PM2.5 is suspended particles measuring less than 2.5 microns in aerodynamic diameter, which are capable of penetrating deep into the respiratory tract and can cause severe health damage.
11		Access to improved water source, piped (% of urban population)	2017	WHO and UNICEF (2020)	The percentage of the urban population with access to improved drinking water piped on premises. An "improved" drinking-water source is one that, by the nature of its construction and when properly used, adequately protects the source from outside contamination, particularly fecal matter.
11		Satisfaction with public transport (%)	2019	Gallup (2020)	The percentage of the surveyed population that responded "satisfied" to the question "In the city or area where you live, are you satisfied or dissatisfied with the public transportation systems?".
11	[a]	Population with rent overburden (%)	2017	OECD (2011)	Percentage of the population living in households where the total housing costs represent more than 40 % of disposable income.
12	[b]	Municipal solid waste (kg/capita/day)	2016	World Bank (2018)	The amount of waste collected by or on behalf of municipal authorities and disposed of through the waste management system. Waste from agriculture and from industries are not included.
12		Electronic waste (kg/capita)	2016	UNU-IAS (2017)	Waste from electrical and electronic equipment, estimated based on figures for domestic production, imports and exports of electronic products, as well as product lifespan data.
12		Production-based SO_2 emissions (kg/capita)	2012	Lenzen et al. (2020)	SO_2 emissions associated with the production of goods and services, which are then either exported or consumed domestically.
12		SO_2 emissions embodied in imports (kg/capita)	2012	Lenzen et al. (2020)	Emissions of SO_2 embodied in imported goods and services. SO_2 emissions have severe health impacts and are a significant cause of premature mortality worldwide.
12		Production-based nitrogen emissions (kg/capita)	2010	Oita et al. (2016)	Reactive nitrogen emitted during the production of commodities, which are then either exported or consumed domestically. Reactive nitrogen corresponds to emissions of ammonia, nitrogen oxides and nitrous oxide to the atmosphere, and of reactive nitrogen potentially exportable to water bodies, all of which can be harmful to human health and the environment.
12		Nitrogen emissions embodied in imports (kg/capita)	2010	Oita et al. (2016)	Emissions of reactive nitrogen embodied in imported goods and services. Reactive nitrogen corresponds here to emissions of ammonia, nitrogen oxides and nitrous oxide to the atmosphere, and of reactive nitrogen potentially exportable to water bodies, all of which can be harmful to human health and the environment.
12	[a]	Non-recycled municipal solid waste (kg/capita/day)	2018	OECD (2020)	The amount of municipal solid waste (MSW), including household waste, that is neither recycled nor composted.

Table 9

(continued)

SDG	Notes	Indicator	Reference Year	Source	Description
13		Energy-related CO_2 emissions (tCO_2/capita)	2017	Gütschow et al. (2019)	Emissions of CO_2 that arise from the consumption of energy. This includes emissions due to the consumption of petroleum, natural gas, coal, and also from natural gas flaring.
13		CO_2 emissions embodied in imports (tCO_2/capita)	2015	Lenzen et al. (2020)	CO_2 emissions embodied in imported goods and services.
13		CO_2 emissions embodied in fossil fuel exports (kg/capita)	2019	UN Comtrade (2020); EIA (2020)	CO_2 emissions embodied in the exports of coal, gas, and oil. Calculated using a 5-year average of fossil fuel exports and converting exports into their equivalent CO_2 emissions. Exports for each fossil fuel are capped at the country's level of production.
13	[a]	Effective carbon rate (EUR/tCO_2)	2016	OECD (2016)	The price of carbon emissions resulting from taxes and emissions trading systems, excluding CO_2 emissions from biomass.
14		Mean area that is protected in marine sites important to biodiversity (%)	2018	Birdlife International et al. (2020)	The mean percentage area of marine Key Biodiversity Areas (sites that are important for the global persistence of marine biodiversity) that are protected.
14		Ocean Health Index: Clean Waters score (worst 0–100 best)	2019	Ocean Health Index (2019)	The clean waters subgoal of the Ocean Health Index measures to what degree marine waters under national jurisdictions have been contaminated by chemicals, excessive nutrients (eutrophication), human pathogens, and trash.
14		Fish caught from overexploited or collapsed stocks (% of total catch)	2014	Sea around Us (2018); EPI (2018)	The percentage of a country's total catch, within its exclusive economic zone (EEZ), that is comprised of species that are overexploited or collapsed, weighted by the quality of fish catch data.
14		Fish caught by trawling (%)	2014	Sea Around Us (2018)	The percentage of fish caught by trawling, a method of fishing in which industrial fishing vessels drag large nets (trawls) along the seabed.
14		Marine biodiversity threats embodied in imports (per million population)	2018	Lenzen et al. (2020)	Threats to marine species embodied in imports of goods and services.
15		Mean area that is protected in terrestrial sites important to biodiversity (%)	2018	Birdlife International et al. (2020)	The mean percentage area of terrestrial Key Biodiversity Areas (sites that are important for the global persistence of biodiversity) that are protected.
15		Mean area that is protected in freshwater sites important to biodiversity (%)	2018	Birdlife International et al. (2020)	The mean percentage area of freshwater Key Biodiversity Areas (sites that are important for the global persistence of biodiversity) that are protected.
15		Red List Index of species survival (worst 0–1 best)	2019	IUCN and Birdlife International (2020)	The change in aggregate extinction risk across groups of species. The index is based on genuine changes in the number of species in each category of extinction risk on The IUCN Red List of Threatened Species.
15		Permanent deforestation (% of forest area, 5-year average)	2018	Curtis et al. (2018)	The mean annual percentage of permanent deforestation over the period 2014 to 2018. Permanent deforestation refers to tree cover removal for urbanization, commodity production and certain types of small-scale agriculture. It does not include temporary forest loss due to the forestry sector or wildfires.
15		Terrestrial and freshwater biodiversity threats embodied in imports (per million population)	2018	Lenzen et al. (2020)	Threats to terrestrial and freshwater species embodied in imports of goods and services.
16		Homicides (per 100,000 population)	2017	UNODC (2020)	The number of intentional homicides per 100,000 people. Intentional homicides are estimates of unlawful homicides purposely inflicted as a result of domestic disputes, interpersonal violence, violent conflicts over land resources, intergang violence over turf or control, and predatory violence and killing by armed groups. Intentional homicide does not include all intentional killing, such as killing in armed conflict.
16		Unsentenced detainees (% of prison population)	2018	UNODC (2020)	Unsentenced prisoners as a percentage of overall prison population. Persons held unsentenced or pre-trial refers to persons held in prisons, penal institutions or correctional institutions who are untried, pre-trial or awaiting a first instance decision on their case from a competent authority regarding their conviction or acquittal.

Table 9

(continued)

SDG	Notes	Indicator	Reference Year	Source	Description
16		Percentage of population who feel safe walking alone at night in the city or area where they live (%)	2019	Gallup (2020)	The percentage of the surveyed population that responded "Yes" to the question "Do you feel safe walking alone at night in the city or area where you live?"
16		Property Rights (worst 1–7 best)	2019	World Economic Forum (2019)	Survey-based assessment of protection of property rights, on a scale from 1 (worst) to 7 (best). The indicator reports respondents' qualitative assessment based on answers to several questions on the protection of property rights and intellectual property rights protection.
16		Birth registrations with civil authority (% of children under age 5)	2018	UNICEF (2020)	The percentage of children under the age of five whose births are reported as being registered with the relevant national civil authorities.
16		Corruption Perception Index (worst 0–100 best)	2019	Transparency International (2020)	The perceived levels of public sector corruption, on a scale from 0 (highest level of perceived corruption) to 100 (lowest level of perceived corruption). The CPI aggregates data from a number of different sources that provide perceptions of business people and country experts.
16		Children involved in child labor (% of population aged 5 to 14)	2016	UNICEF (2017)	The percentage of children, between the age of 5-14 years old, involved in child labor at the time of the survey. A child is considered to be involved in child labor under the following conditions: (a) children 5-11 years old who, during the reference week, did at least one hour of economic activity or at least 28 hours of household chores, or (b) children 12-14 years old who, during the reference week, did at least 14 hours of economic activity or at least 28 hours of household chores. We assumed 0% child labor for high-income countries for which no data was reported.
16		Exports of major conventional weapons (TIV constant million USD per 100,000 population)	2019	Stockholm Peace Research Institute (2020)	Volume of major conventional weapons exported, expressed in constant 1990 US$ millions per 100,000 population. It is calculated based on the trend-indicator value, which is based on the known unit production cost of a core set of weapons, and does not reflect the financial value of the exports. Small arms, light weapons, ammunition and other support material are not included.
16		Press Freedom Index (best 0–100 worst)	2019	Reporters sans frontières (2019)	Degree of freedom available to journalists in 180 countries and regions, determined by pooling the responses of experts to a questionnaire devised by RSF.
16	[a]	Persons held in prison (per 100,000 population)	2017	UNODC (2020)	The prison population is composed of persons held in prisons, penal institutions, or correctional institutions.
17		Government spending on health and education (% of GDP)	2016	UNESCO (2020); WHO (2020)	The sum of public expenditure on health from domestic sources and general government expenditure on education (current, capital, and transfers) expressed as a percentage of GDP.
17		For high-income and all OECD DAC countries: International concessional public finance, including official development assistance (% of GNI)	2017	OECD (2020)	The amount of official development assistance (ODA) as a share of gross national income (GNI). It includes grants, "soft" loans (where the grant element is at least 25% of the total) and the provision of technical assistance, and excludes grants and loans for military purposes.
17		Other countries: Government revenue excluding grants (% of GDP)	2018	IMF (2020)	Government revenue measured as cash receipts from taxes, social contributions, and other revenues such as fines, fees, rent, and income from property or sales. Grants are also considered as revenue but are excluded here.
17		Corporate Tax Haven Score (best 0–100 worst)	2019	Tax Justice Network (2019)	The Corporate Tax Haven Score measures a jurisdiction's potential to poach the tax base of others, as enshrined in its laws, regulations and documented administrative practices. For countries with multiple jurisdictions, the value of the worst-performing jurisdiction was retained.
17	[a]	Financial Secrecy Score (best 0–100 worst)	2020	Tax Justice Network (2020)	The Index measures the contribution of each jurisdiction to financial secrecy, on a scale from 0 (best) to 100 (worst). It is calculated using qualitative data to prepare a secrecy score for each jurisdiction and quantitative data to create a global scale weighting for each jurisdiction according to its share of offshore financial services activity in the global total. For countries with multiple jurisdictions, the average score of the jurisdictions was used.
17	[a]	Shifted profits of multinationals (US$ billion)	2016	Zucman et al. (2019)	Estimation of how much profit is shifted into tax havens and how much non-haven countries lose in profits from such shifting. Based on macroeconomic data known as foreign affiliates statistics. Negative values indicate profit shifting.

Table 10

Countries not included in the 2020 SDG Index due to insufficient data availability

Country	Missing Values	Percentage of Missing Values
Andorra	37	46%
Antigua and Barbuda	24	29%
The Bahamas	20	24%
Dominica	39	46%
Eritrea	17	20%
Micronesia, Fed. Sts.	39	46%
Guinea-Bissau	17	20%
Equatorial Guinea	27	32%
Grenada	34	41%
Kiribati	37	44%
St. Kitts and Nevis	44	52%
Libya	18	21%
St. Lucia	25	30%
Liechtenstein	47	59%
Monaco	45	54%
Marshall Islands	45	54%
Nauru	49	58%
Palau	48	57%
Korea, Dem. Rep.	20	24%
Solomon Islands	24	29%
San Marino	45	54%
Seychelles	23	27%
Timor-Leste	21	25%
Tonga	28	33%
Tuvalu	47	56%
St. Vincent and the Grenadines	30	36%
Samoa	18	21%

Table 11

Indicator thresholds and justifications for the optimum values

SDG	Indicator	Optimum (value = 100)	Green	Yellow	Orange	Red	Lower Bound	Justification for Optimum
1	Poverty headcount ratio at $1.90/day (%)	0	≤2	2 < x ≤ 7.5	7.5 < x ≤ 13	>13	72.6	SDG Target
1	Poverty headcount ratio at $3.20/day (%)	0	≤2	2 < x ≤ 7.5	7.5 < x ≤ 13	>13	51.5	SDG Target
1	Poverty rate after taxes and transfers (%)	6.1	≤10	10 < x ≤ 12.5	12.5 < x ≤ 15	>15	17.7	Average of 3 best OECD performers
2	Prevalence of undernourishment (%)	0	≤7.5	7.5 < x ≤ 11.25	11.25 < x ≤ 15	>15	42.3	SDG Target
2	Prevalence of stunting in children under 5 years of age (%)	0	≤7.5	7.5 < x ≤ 11.25	11.25 < x ≤ 15	>15	50.2	SDG Target
2	Prevalence of wasting in children under 5 years of age (%)	0	≤5	5 < x ≤ 7.5	7.5 < x ≤ 10	>10	16.3	SDG Target
2	Prevalence of obesity, BMI ≥ 30 (% of adult population)	2.8	≤10	10 < x ≤ 17.5	17.5 < x ≤ 25	>25	35.1	Average of 5 best performers
2	Human Trophic Level (best 2–3 worst)	2.04	≤2.2	2.2 < x ≤ 2.3	2.3 < x ≤ 2.4	>2.4	2.47	Average of 5 best performers
2	Cereal yield (tonnes per hectare of harvested land)	7	≥2.5	2.5 > x ≥ 2	2 > x ≥ 1.5	>1.5	0.2	Average of 5 best performers minus outliers (1 & 1/2SD)
2	Sustainable Nitrogen Management Index (best 0–1.41 worst)	0	≤0.3	0.3 < x ≤ 0.5	0.5 < x ≤ 0.7	>0.7	1.2	Technical Optimum
2	Yield gap closure (% of potential yield)	77	≥75	75 > x ≥ 62.5	62.5 > x ≥ 50	>50	28	Average of 5 best performers
3	Maternal mortality rate (per 100,000 live births)	3.4	≤70	70 < x ≤ 105	105 < x ≤ 140	>140	814	Average of 5 best performers
3	Neonatal mortality rate (per 1,000 live births)	1.1	≤12	12 < x ≤ 15	15 < x ≤ 18	>18	39.7	Average of 5 best performers
3	Mortality rate, under-5 (per 1,000 live births)	2.6	≤25	25 < x ≤ 37.5	37.5 < x ≤ 50	>50	130.1	Average of 5 best performers
3	Incidence of tuberculosis (per 100,000 population)	0	≤10	10 < x ≤ 42.5	42.5 < x ≤ 75	>75	561	SDG Target
3	New HIV infections (per 1,000 uninfected population)	0	≤0.2	0.2 < x ≤ 0.6	0.6 < x ≤ 1	>1	5.5	SDG Target
3	Age-standardized death rate due to cardiovascular disease, cancer, diabetes, or chronic respiratory disease in adults aged 30–70 years (%)	9.3	≤15	15 < x ≤ 20	20 < x ≤ 25	>25	31	Average of 5 best performers
3	Age-standardized death rate attributable to household air pollution and ambient air pollution (per 100,000 population)	0	≤18	18 < x ≤ 84	84 < x ≤ 150	>150	368.8	SDG Target
3	Traffic deaths (per 100,000 population)	3.2	≤8.4	8.4 < x ≤ 12.6	12.6 < x ≤ 16.8	>16.8	33.7	Average of 5 best performers
3	Life expectancy at birth (years)	83	≥80	80 > x ≥ 75	75 > x ≥ 70	>70	54	Average of 5 best performers
3	Adolescent fertility rate (births per 1,000 adolescent females aged 15 to 19)	2.5	≤25	25 < x ≤ 37.5	37.5 < x ≤ 50	>50	139.6	Average of 5 best performers
3	Births attended by skilled health personnel (%)	100	≥98	98 > x ≥ 94	94 > x ≥ 90	>90	23.1	Leave no one behind
3	Percentage of surviving infants who received 2 WHO-recommended vaccines (%)	100	≥90	90 > x ≥ 85	85 > x ≥ 80	>80	41	Leave no one behind
3	Universal health coverage (UHC) index of service coverage (worst 0–100 best)	100	≥80	80 > x ≥ 70	70 > x ≥ 60	>60	38.2	Leave no one behind
3	Subjective well-being (average ladder score, worst 0–10 best)	7.6	≥6	6 > x ≥ 5.5	5.5 > x ≥ 5	>5	3.3	Average of 5 best performers
3	Gap in life expectancy at birth among regions (years)	0	≤3	3 < x ≤ 5	5 < x ≤ 7	>7	11	Leave no one behind

Table 11

(continued)

SDG	Indicator	Optimum (value = 100)	Green	Yellow	Orange	Red	Lower Bound	Justification for Optimum
3	Gap in self-reported health status by income (percentage points)	0	≤20	20 < x ≤ 30	30 < x ≤ 40	>40	45	Leave no one behind
3	Daily smokers (% of population aged 15 and over)	10.1	≤18	18 < x ≤ 25	25 < x ≤ 32	>32	35	Average of 3 best OECD performers
4	Net primary enrollment rate (%)	100	≥97	97 > x ≥ 88.5	88.5 > x ≥ 80	>80	53.8	SDG Target
4	Lower secondary completion rate (%)	100	≥90	90 > x ≥ 82.5	82.5 > x ≥ 75	>75	18	SDG Target
4	Literacy rate (% of population aged 15 to 24)	100	≥95	95 > x ≥ 90	90 > x ≥ 85	>85	45.2	Leave no one behind
4	Participation rate in pre-primary organized learning (% of children aged 4 to 6)	100	≥90	90 > x ≥ 80	80 > x ≥ 70	>70	35	SDG Target
4	Tertiary educational attainment (% of population aged 25 to 34)	52.2	≥40	40 > x ≥ 25	25 > x ≥ 10	>10	0	Average of 3 best OECD performers
4	PISA score (worst 0–600 best)	525.6	≥493	493 > x ≥ 446.5	446.5 > x ≥ 400	>400	350	Average of 3 best OECD performers
4	Variation in science performance explained by socio-economic status (%)	8.3	≤10.5	10.5 < x ≤ 15.25	15.25 < x ≤ 20	>20	21.4	Average of 3 best OECD performers
4	Underachievers in science (% of 15-year-olds)	10	≤15	15 < x ≤ 22.5	22.5 < x ≤ 30	>30	48	Average of 3 best OECD performers
4	Resilient students in science (% of 15-year-olds)	46.6	≥38	38 > x ≥ 29	29 > x ≥ 20	>20	12.8	Average of 3 best OECD performers
5	Demand for family planning satisfied by modern methods (% of females aged 15 to 49 who are married or in unions)	100	≥80	80 > x ≥ 70	70 > x ≥ 60	>60	17.5	Leave no one behind
5	Ratio of female-to-male mean years of education received (%)	100	≥98	98 > x ≥ 86.5	86.5 > x ≥ 75	>75	41.8	SDG Target
5	Ratio of female-to-male labor force participation rate (%)	100	≥70	70 > x ≥ 60	60 > x ≥ 50	>50	21.5	SDG Target
5	Seats held by women in national parliament (%)	50	≥40	40 > x ≥ 30	30 > x ≥ 20	>20	1.2	SDG Target
5	Gender wage gap (% of male median wage)	0	≤8	8 < x ≤ 14	14 < x ≤ 20	>20	36.7	Technical Optimum
5	Gender gap in time spent doing unpaid work (minutes/day)	0	≤90	90 < x ≤ 135	135 < x ≤ 180	>180	245	Technical Optimum
6	Population using at least basic drinking water services (%)	100	≥98	98 > x ≥ 89	89 > x ≥ 80	>80	40	Leave no one behind
6	Population using at least basic sanitation services (%)	100	≥95	95 > x ≥ 85	85 > x ≥ 75	>75	9.7	Leave no one behind
6	Freshwater withdrawal (% of available freshwater resources)	12.5	≤25	25 < x ≤ 50	50 < x ≤ 75	>75	100	Technical Optimum
6	Anthropogenic wastewater that receives treatment (%)	100	≥50	50 > x ≥ 32.5	32.5 > x ≥ 15	>15	0	Technical Optimum
6	Scarce water consumption embodied in imports (m³/capita)	0	≤25	25 < x ≤ 37.5	37.5 < x ≤ 50	>50	100	Average of 5 best performers
6	Population using safely managed water services (%)	100	≥95	95 > x ≥ 87.5	87.5 > x ≥ 80	>80	10.5	Leave no one behind
6	Population using safely managed sanitation services (%)	100	≥90	90 > x ≥ 77.5	77.5 > x ≥ 65	>65	14.1	Leave no one behind
7	Population with access to electricity (%)	100	≥98	98 > x ≥ 89	89 > x ≥ 80	>80	9.1	Leave no one behind
7	Population with access to clean fuels and technology for cooking (%)	100	≥85	85 > x ≥ 67.5	67.5 > x ≥ 50	>50	2	Average of 3 best OECD performers
7	CO_2 emissions from fuel combustion for electricity and heating per total electricity output ($MtCO_2$/TWh)	0	≤1	1 < x ≤ 1.25	1.25 < x ≤ 1.5	>1.5	5.9	Technical Optimum
7	Share of renewable energy in total primary energy supply (%)	51	≥20	20 > x ≥ 15	15 > x ≥ 10	>10	3	Average of 3 best OECD performers

Table 11

(continued)

SDG	Indicator	Optimum (value = 100)	Green	Yellow	Orange	Red	Lower Bound	Justification for Optimum
8	Adjusted GDP growth (%)	5	≥0	0 > x ≥ -1.5	-1.5 > x ≥ -3	>-3	-14.7	Average of 5 best performers
8	Victims of modern slavery (per 1,000 population)	0	≤4	4 < x ≤ 7	7 < x ≤ 10	>10	22	Leave no one behind
8	Adults with an account at a bank or other financial institution or with a mobile-money-service provider (% of population aged 15 or over)	100	≥80	80 > x ≥ 65	65 > x ≥ 50	>50	8	Technical Optimum
8	Unemployment rate (% of total labor force)	0.5	≤5	5 < x ≤ 7.5	7.5 < x ≤ 10	>10	25.9	Average of 5 best performers
8	Fatal work-related accidents embodied in imports (per 100,000 population)	0	≤1	1 < x ≤ 1.75	1.75 < x ≤ 2.5	>2.5	6	Technical Optimum
8	Employment-to-population ratio (%)	77.8	≥60	60 > x ≥ 55	55 > x ≥ 50	>50	50	Average of 3 best OECD performers
8	Youth not in employment, education or training (NEET) (% of population aged 15 to 29)	8.1	≤10	10 < x ≤ 12.5	12.5 < x ≤ 15	>15	28.2	Average of 3 best OECD performers
9	Population using the internet (%)	100	≥80	80 > x ≥ 65	65 > x ≥ 50	>50	2.2	Leave no one behind
9	Mobile broadband subscriptions (per 100 population)	100	≥75	75 > x ≥ 57.5	57.5 > x ≥ 40	>40	1.4	Leave no one behind
9	Logistics Performance Index: Quality of trade and transport-related infrastructure (worst 1–5 best)	3.8	≥3	3 > x ≥ 2.5	2.5 > x ≥ 2	>2	1.6	Average of 5 best performers
9	The Times Higher Education Universities Ranking: Average score of top 3 universities (worst 0–100 best)	50	≥30	30 > x ≥ 15	15 > x ≥ 0	>0	0	Average of 5 best performers
9	Scientific and technical journal articles (per 1,000 population)	1.2	≥0.7	0.7 > x ≥ 0.375	0.375 > x ≥ 0.05	>0.05	0	Average of 5 best performers
9	Expenditure on research and development (% of GDP)	3.7	≥1.5	1.5 > x ≥ 1.25	1.25 > x ≥ 1	>1	0	Average of 5 best performers
9	Researchers (per 1,000 employed population)	15.6	≥8	8 > x ≥ 7.5	7.5 > x ≥ 7	>7	0.8	Average of 3 best OECD performers
9	Triadic patent families filed (per million population)	115.7	≥20	20 > x ≥ 15	15 > x ≥ 10	>10	0.1	Average of 3 best OECD performers
9	Gap in internet access by income (percentage points)	0	≤7	7 < x ≤ 26	26 < x ≤ 45	>45	63.6	Leave no one behind
9	Women in science and engineering (% of tertiary graduates in science and engineering)	38.1	≥33	33 > x ≥ 29	29 > x ≥ 25	>25	16.2	Average of 3 best OECD performers
10	Gini coefficient adjusted for top income	27.5	≤30	30 < x ≤ 35	35 < x ≤ 40	>40	63	Average of 5 best performers
10	Palma ratio	0.9	≤1	1 < x ≤ 1.15	1.15 < x ≤ 1.3	>1.3	2.5	Average of 3 best OECD performers
10	Elderly poverty rate (% of population aged 66 or over)	3.2	≤5	5 < x ≤ 15	15 < x ≤ 25	>25	45.7	Average of 3 best OECD performers
11	Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM2.5) (μg/m^3)	6.3	≤10	10 < x ≤ 17.5	17.5 < x ≤ 25	>25	87	Average of 5 best performers
11	Access to improved water source, piped (% of urban population)	100	≥98	98 > x ≥ 86.5	86.5 > x ≥ 75	>75	6.1	Leave no one behind
11	Satisfaction with public transport (%)	82.6	≥72	72 > x ≥ 57.5	57.5 > x ≥ 43	>43	21	Average of 5 best performers
11	Population with rent overburden (%)	4.6	≤7	7 < x ≤ 12	12 < x ≤ 17	>17	25.6	Average of 3 best OECD performers
12	Municipal solid waste (kg/capita/day)	0.1	≤1	1 < x ≤ 1.5	1.5 < x ≤ 2	>2	3.7	Average of 5 best performers

Table 11

(continued)

SDG	Indicator	Optimum (value = 100)	Green	Yellow	Orange	Red	Lower Bound	Justification for Optimum
12	Electronic waste (kg/capita)	0.2	≤5	5 < x ≤ 7.5	7.5 < x ≤ 10	>10	23.5	Average of 5 best performers
12	Production-based SO₂ emissions (kg/capita)	0	≤30	30 < x ≤ 65	65 < x ≤ 100	>100	525	Average of 5 best performers
12	SO₂ emissions embodied in imports (kg/capita)	0	≤5	5 < x ≤ 7.5	7.5 < x ≤ 10	>10	30	Technical Optimum
12	Production-based nitrogen emissions (kg/capita)	2	≤20	20 < x ≤ 35	35 < x ≤ 50	>50	100	Average of 5 best performers
12	Nitrogen emissions embodied in imports (kg/capita)	0	≤5	5 < x ≤ 10	10 < x ≤ 15	>15	45	Technical Optimum
12	Non-recycled municipal solid waste (kg/capita/day)	0.6	≤0.8	0.8 < x ≤ 0.9	0.9 < x ≤ 1	>1	1.5	Average of 3 best OECD performers
13	Energy-related CO₂ emissions (tCO₂/capita)	0	≤2	2 < x ≤ 3	3 < x ≤ 4	>4	23.7	Technical Optimum
13	CO₂ emissions embodied in imports (tCO₂/capita)	0	≤0.5	0.5 < x ≤ 0.75	0.75 < x ≤ 1	>1	3.2	Technical Optimum
13	CO₂ emissions embodied in fossil fuel exports (kg/capita)	0	≤100	100 < x ≤ 4050	4,050 < x ≤ 8,000	>8,000	44,000	Technical Optimum
13	Effective carbon rate (EUR/tCO₂)	100	≥70	70 > x ≥ 50	50 > x ≥ 30	>30	-0.1	Technical Optimum
14	Mean area that is protected in marine sites important to biodiversity (%)	100	≥50	50 > x ≥ 30	30 > x ≥ 10	>10	0	Technical Optimum
14	Ocean Health Index: Clean Waters score (worst 0–100 best)	100	≥70	70 > x ≥ 65	65 > x ≥ 60	>60	28.6	Technical Optimum
14	Fish caught from overexploited or collapsed stocks (% of total catch)	0	≤25	25 < x ≤ 37.5	37.5 < x ≤ 50	>50	90.7	Technical Optimum
14	Fish caught by trawling (%)	1	≤7	7 < x ≤ 33.5	33.5 < x ≤ 60	>60	90	Average of 5 best performers
14	Marine biodiversity threats embodied in imports (per million population)	0	≤0.2	0.2 < x ≤ 0.6	0.6 < x ≤ 1	>1	2	Technical Optimum
15	Mean area that is protected in terrestrial sites important to biodiversity (%)	100	≥50	50 > x ≥ 30	30 > x ≥ 10	>10	4.6	Technical Optimum
15	Mean area that is protected in freshwater sites important to biodiversity (%)	100	≥50	50 > x ≥ 30	30 > x ≥ 10	>10	0	Technical Optimum
15	Red List Index of species survival (worst 0–1 best)	1	≥0.9	0.9 > x ≥ 0.85	0.85 > x ≥ 0.8	>0.8	0.6	Technical Optimum
15	Permanent deforestation (% of forest area, 5-year average)	0	≤0.05	0.05 < x ≤ 0.275	0.275 < x ≤ 0.5	>0.5	1.5	SDG Target
15	Terrestrial and freshwater biodiversity threats embodied in imports (per million population)	0	≤1	1 < x ≤ 2	2 < x ≤ 3	>3	10	Technical Optimum
16	Homicides (per 100,000 population)	0.3	≤1.5	1.5 < x ≤ 2.75	2.75 < x ≤ 4	>4	38	Average of 5 best performers
16	Unsentenced detainees (% of prison population)	7	≤30	30 < x ≤ 40	40 < x ≤ 50	>50	75	Average of 5 best performers
16	Percentage of population who feel safe walking alone at night in the city or area where they live (%)	90	≥70	70 > x ≥ 60	60 > x ≥ 50	>50	33	Average of 5 best performers
16	Property Rights (worst 1–7 best)	6.3	≥4.5	4.5 > x ≥ 3.75	3.75 > x ≥ 3	>3	2.5	Average of 5 best performers
16	Birth registrations with civil authority (% of children under age 5)	100	≥98	98 > x ≥ 86.5	86.5 > x ≥ 75	>75	11	Leave no one behind
16	Corruption Perception Index (worst 0–100 best)	88.6	≥60	60 > x ≥ 50	50 > x ≥ 40	>40	13	Average of 5 best performers
16	Children involved in child labor (% of population aged 5 to 14)	0	≤2	2 < x ≤ 6	6 < x ≤ 10	>10	39.3	Leave no one behind
16	Exports of major conventional weapons (TIV constant million USD per 100,000 population)	0	≤1	1 < x ≤ 1.75	1.75 < x ≤ 2.5	>2.5	3.4	Technical Optimum
16	Press Freedom Index (best 0–100 worst)	10	≤30	30 < x ≤ 40	40 < x ≤ 50	>50	80	Average of 5 best performers

Table 11

(continued)

SDG	Indicator	Optimum (value = 100)	Green	Yellow	Orange	Red	Lower Bound	Justification for Optimum
16	Persons held in prison (per 100,000 population)	25	≤100	100 < x ≤ 175	175 < x ≤ 250	>250	475	Average of 5 best performers
17	Government spending on health and education (% of GDP)	15	≥10	10 > x ≥ 7.5	7.5 > x ≥ 5	>5	0	Average of 5 best performers
17	For high-income and all OECD DAC countries: International concessional public finance, including official development assistance (% of GNI)	1	≥0.7	0.7 > x ≥ 0.525	0.525 > x ≥ 0.35	>0.35	0.1	Average of 5 best performers
17	Other countries: Government revenue excluding grants (% of GDP)	40	≥30	30 > x ≥ 23	23 > x ≥ 16	>16	10	Average of 5 best performers
17	Corporate Tax Haven Score (best 0–100 worst)	40	≤60	60 < x ≤ 65	65 < x ≤ 70	>70	100	Average of best performers (EU Report)
17	Financial Secrecy Score (best 0–100 worst)	42.7	≤45	45 < x ≤ 50	50 < x ≤ 55	>55	76.5	Average of 5 best performers
17	Shifted profits of multinationals (US$ billion)	0	≥0	0 > x ≥ -15	-15 > x ≥ -30	>-30	-70	Technical Optimum

4. Methods Summary and Data Tables

Table 12

Indicators used for SDG Trends and period for trend estimation

(* The trend estimations since the adoption of the SDGs are marked below)

SDG	Indicator	Period Covered
1	Poverty headcount ratio at $1.90/day (%)	2015–2019*
1	Poverty headcount ratio at $3.20/day (%)	2015–2019*
1	Poverty rate after taxes and transfers (%)	2013–2016
2	Prevalence of undernourishment (%)	2014–2017
2	Prevalence of stunting in children under 5 years of age (%)	2014–2017
2	Prevalence of wasting in children under 5 years of age (%)	2014–2017
2	Prevalence of obesity, BMI ≥ 30 (% of adult population)	2013–2016
2	Human Trophic Level (best 2–3 worst)	2014–2017
2	Cereal yield (tonnes per hectare of harvested land)	2014–2017
2	Sustainable Nitrogen Management Index (best 0–1.41 worst)	2012–2015
3	Maternal mortality rate (per 100,000 live births)	2014–2017
3	Neonatal mortality rate (per 1,000 live births)	2015–2018*
3	Mortality rate, under-5 (per 1,000 live births)	2015–2018*
3	Incidence of tuberculosis (per 100,000 population)	2015–2018*
3	New HIV infections (per 1,000 uninfected population)	2015–2018*
3	Age-standardized death rate due to cardiovascular disease, cancer, diabetes, or chronic respiratory disease in adults aged 30–70 years (%)	2010–2016
3	Traffic deaths (per 100,000 population)	2013–2016
3	Life expectancy at birth (years)	2013–2016
3	Adolescent fertility rate (births per 1,000 adolescent females aged 15 to 19)	2014–2017
3	Births attended by skilled health personnel (%)	2012–2016
3	Percentage of surviving infants who received 2 WHO-recommended vaccines (%)	2015–2018*
3	Universal health coverage (UHC) index of service coverage (worst 0–100 best)	2010–2017
3	Subjective well-being (average ladder score, worst 0–10 best)	2015–2019*
3	Gap in self-reported health status by income (percentage points)	2014–2017
3	Daily smokers (% of population aged 15 and over)	2014–2017
4	Net primary enrollment rate (%)	2014–2017
4	Lower secondary completion rate (%)	2015–2018*
4	Participation rate in pre-primary organized learning (% of children aged 4 to 6)	2014–2017
4	Tertiary educational attainment (% of population aged 25 to 34)	2015–2018*
4	PISA score (worst 0–600 best)	2015–2018*
4	Variation in science performance explained by socio-economic status (%)	2015–2018*
4	Underachievers in science (% of 15-year-olds)	2015–2018*
4	Resilient students in science (% of 15-year-olds)	2015–2018*
5	Ratio of female-to-male mean years of education received (%)	2015–2018*
5	Ratio of female-to-male labor force participation rate (%)	2015–2019*
5	Seats held by women in national parliament (%)	2015–2019*
5	Gender wage gap (% of male median wage)	2014–2017
6	Population using at least basic drinking water services (%)	2014–2017
6	Population using at least basic sanitation services (%)	2014–2017
6	Scarce water consumption embodied in imports (m³/capita)	2010–2013
6	Population using safely managed water services (%)	2014–2017
6	Population using safely managed sanitation services (%)	2014–2017

Table 12

(continued)

SDG	Indicator	Period Covered
7	Population with access to electricity (%)	2014–2017
7	Population with access to clean fuels and technology for cooking (%)	2013–2016
7	CO_2 emissions from fuel combustion for electricity and heating per total electricity output (MtCO$_2$/TWh)	2014–2017
7	Share of renewable energy in total primary energy supply (%)	2014–2017
8	Adults with an account at a bank or other financial institution or with a mobile-money-service provider (% of population aged 15 or over)	2014–2017
8	Unemployment rate (% of total labor force)	2015–2019*
8	Fatal work-related accidents embodied in imports (per 100,000 population)	2007–2010
8	Employment-to-population ratio (%)	2015–2019*
8	Youth not in employment, education or training (NEET) (% of population aged 15 to 29)	2015–2018*
9	Population using the internet (%)	2014–2017
9	Mobile broadband subscriptions (per 100 population)	2015–2018*
9	Logistics Performance Index: Quality of trade and transport-related infrastructure (worst 1–5 best)	2014–2018
9	Scientific and technical journal articles (per 1,000 population)	2015–2018*
9	Expenditure on research and development (% of GDP)	2014–2017
9	Researchers (per 1,000 employed population)	2014–2017
9	Triadic patent families filed (per million population)	2014–2017
9	Gap in internet access by income (percentage points)	2015–2018*
10	Gini coefficient adjusted for top income	2012–2015
10	Palma ratio	2013–2016
10	Elderly poverty rate (% of population aged 66 or over)	2013–2016
11	Annual mean concentration of particulate matter of less than 2.5 microns in diameter (PM2.5) (µg/m^3)	2014–2017
11	Access to improved water source, piped (% of urban population)	2014–2017
11	Satisfaction with public transport (%)	2015–2019*
11	Population with rent overburden (%)	2014–2017
13	Energy-related CO_2 emissions (tCO$_2$/capita)	2014–2017
13	CO_2 emissions embodied in imports (tCO$_2$/capita)	2012–2015
14	Mean area that is protected in marine sites important to biodiversity (%)	2015–2018*
14	Ocean Health Index: Clean Waters score (worst 0–100 best)	2015–2019*
14	Fish caught from overexploited or collapsed stocks (% of total catch)	2010–2014
14	Fish caught by trawling (%)	2010–2014
15	Mean area that is protected in terrestrial sites important to biodiversity (%)	2015–2018*
15	Mean area that is protected in freshwater sites important to biodiversity (%)	2015–2018*
15	Red List Index of species survival (worst 0–1 best)	2015–2019*
16	Homicides (per 100,000 population)	2014–2017
16	Unsentenced detainees (% of prison population)	2015–2018*
16	Percentage of population who feel safe walking alone at night in the city or area where they live (%)	2015–2019*
16	Corruption Perception Index (worst 0–100 best)	2015–2019*
16	Press Freedom Index (best 0–100 worst)	2015–2019*
16	Persons held in prison (per 100,000 population)	2014–2017
17	Government spending on health and education (% of GDP)	2013–2016
17	For high-income and all OECD DAC countries: International concessional public finance, including official development assistance (% of GNI)	2014–2017
17	Other countries: Government revenue excluding grants (% of GDP)	2014–2017

Table 13

Spillover Index Score and Rank (compared with SDG Index Rank)

The Spillover Index measures transboundary impacts generated by one country on others, which may in turn undermine the other countries' capacities to achieve the SDGs. The Spillover Index covers financial spillovers (e.g., financial secrecy, profit shifting), environmental and social impacts embodied into trade and consumption (e.g., imported CO_2 emissions, imported biodiversity threats, accidents at work embodied into trade), and security/development cooperation (ODA, weapons exports). ODA is an example of a positive spillover. Scores should be interpreted in the same way as the SDG Index score: from 0 (poor performance, i.e., significant negative spillovers) to 100 (good performance, i.e., no significant negative spillovers). To allow for international comparisons, most spillover indicators are expressed in per-capita terms.

Country	Spillover Index Score	Spillover Index Rank	SDG Index Rank
Afghanistan	99.3	24	139
Albania	94.3	82	68
Algeria	97.4	58	56
Angola	96.7	65	149
Argentina	94.0	86	51
Armenia	96.7	66	75
Australia	61.6	145	37
Austria	56.3	154	7
Azerbaijan	97.6	55	54
Bahrain	82.0	115	82
Bangladesh	99.4	23	109
Barbados	78.6	121	87
Belarus	96.3	69	18
Belgium	59.9	149	11
Belize	93.4	92	102
Benin	99.5	20	145
Bhutan	93.7	90	80
Bolivia	97.9	51	79
Bosnia and Herzegovina	95.8	73	50
Botswana	78.5	122	121
Brazil	97.3	60	53
Brunei Darussalam	67.6	136	88
Bulgaria	85.4	112	39
Burkina Faso	99.3	25	137
Burundi	99.8	7	143
Cabo Verde	95.3	76	92
Cambodia	98.8	34	106
Cameroon	99.5	19	133
Canada	60.6	147	21
Central African Republic	99.6	12	166
Chad	99.8	6	164
Chile	92.6	97	28
China	94.2	84	48
Colombia	94.7	79	67

Table 13

(continued)

Country	Spillover Index Score	Spillover Index Rank	SDG Index Rank
Comoros	100.0	1	146
Congo, Rep.	97.7	54	135
Costa Rica	89.6	106	35
Côte d'Ivoire	99.5	18	128
Croatia	83.1	113	19
Cuba	97.1	61	55
Cyprus	59.9	150	34
Czech Republic	69.7	129	8
Dem. Rep. Congo	99.4	22	158
Denmark	66.4	141	2
Djibouti	98.2	43	138
Dominican Republic	95.9	72	73
Ecuador	96.8	63	46
Egypt, Arab Rep.	98.5	37	83
El Salvador	92.6	98	77
Estonia	69.4	130	10
Eswatini	82.9	114	144
Ethiopia	99.7	9	136
Fiji	92.4	99	74
Finland	66.6	140	3
France	51.1	158	4
Gabon	93.0	95	111
The Gambia	97.9	52	129
Georgia	90.8	102	58
Germany	57.0	153	5
Ghana	97.4	59	100
Greece	69.4	131	43
Guatemala	97.0	62	120
Guinea	99.5	17	150
Guyana	22.2	165	124
Haiti	99.6	13	154
Honduras	96.0	71	105
Hungary	77.1	124	29
Iceland	60.3	148	26
India	98.8	36	117
Indonesia	97.6	56	101
Iran, Islamic Rep.	95.5	74	59
Iraq	98.3	40	113
Ireland	57.8	152	14
Israel	66.7	138	40
Italy	69.0	132	30
Jamaica	92.9	96	84

4. Methods Summary and Data Tables

Table 13

(continued)

Country	Spillover Index Score	Spillover Index Rank	SDG Index Rank
Japan	66.1	143	17
Jordan	89.2	107	89
Kazakhstan	94.0	87	65
Kenya	94.5	81	123
Korea, Rep.	68.6	135	20
Kuwait	36.6	162	112
Kyrgyz Republic	96.1	70	52
Lao PDR	99.2	27	116
Latvia	70.4	127	24
Lebanon	78.8	120	95
Lesotho	94.5	80	141
Liberia	98.0	49	162
Lithuania	65.6	144	36
Luxembourg	33.5	164	44
Madagascar	99.5	21	161
Malawi	98.9	32	152
Malaysia	86.3	111	60
Maldives	87.8	108	91
Mali	99.5	16	156
Malta	56.3	155	32
Mauritania	98.0	50	130
Mauritius	42.6	160	108
Mexico	94.9	78	69
Moldova	99.8	8	42
Mongolia	95.0	77	107
Montenegro	68.9	133	72
Morocco	98.1	47	64
Mozambique	99.5	15	140
Myanmar	100.0	2	104
Namibia	86.3	110	119
Nepal	99.1	29	96
Netherlands	44.9	159	9
New Zealand	70.1	128	16
Nicaragua	97.9	53	85
Niger	99.6	11	157
Nigeria	99.2	28	160
North Macedonia	93.8	88	62
Norway	54.1	156	6
Oman	79.8	119	76
Pakistan	99.6	10	134
Panama	81.9	116	81
Papua New Guinea	98.2	44	155
Paraguay	93.7	91	90
Peru	96.7	64	61
Philippines	98.1	45	99

Table 13

(continued)

Country	Spillover Index Score	Spillover Index Rank	SDG Index Rank
Poland	81.8	117	23
Portugal	66.7	139	25
Qatar	68.7	134	103
Romania	91.6	101	38
Russian Federation	78.3	123	57
Rwanda	98.8	35	132
São Tomé and Príncipe	95.4	75	115
Saudi Arabia	73.8	125	97
Senegal	99.0	31	127
Serbia	80.9	118	33
Sierra Leone	99.6	14	153
Singapore	12.4	166	93
Slovak Republic	72.7	126	27
Slovenia	66.4	142	12
Somalia	100.0	4	163
South Africa	92.0	100	110
South Sudan	99.9	5	165
Spain	61.3	146	22
Sri Lanka	96.5	67	94
Sudan	100.0	3	159
Suriname	90.6	103	86
Sweden	67.4	137	1
Switzerland	35.8	163	15
Syrian Arab Republic	98.4	38	126
Tajikistan	97.5	57	78
Tanzania	98.3	41	131
Thailand	93.8	89	41
Togo	99.3	26	147
Trinidad and Tobago	86.8	109	98
Tunisia	94.2	85	63
Turkey	93.3	94	70
Turkmenistan	90.4	104	114
Uganda	99.1	30	142
Ukraine	93.3	93	47
United Arab Emirates	37.4	161	71
United Kingdom	52.1	157	13
United States	59.2	151	31
Uruguay	90.0	105	45
Uzbekistan	98.1	48	66
Vanuatu	94.3	83	122
Venezuela, RB	96.4	68	118
Vietnam	98.3	39	49
Yemen, Rep.	98.9	33	151
Zambia	98.1	46	148
Zimbabwe	98.2	42	125

Source: Authors' analysis

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