Sustainable Development Goals Progress Chart 2020
Technical Note

Contents

I.   Introduction

This document serves as a technical note detailing methodologies applied in the *Sustainable Development Goals Progress Chart 2020*[1]. The progress chart is one of the global Sustainable Development Goals (SDGs) 2020 monitoring outputs, which also include *The Sustainable Development Goals Report 2020*[2].

The Sustainable Development Goals Progress Chart 2020 presents a snapshot of global and regional progress towards the SDGs by the end of 2019 through a traffic-light dashboard. It covers selected targets under the 17 Goals. The progress chart shows that, for most Goals, the pace of progress has been insufficient and substantial acceleration is needed.

The progress chart presents two types of information:

- **A trend assessment** using stoplight colours to measure progress made towards the target from a baseline year to the most recent data point;

- **A level assessment** using a gauge meter to measure the current level of development with respect to the distance from its target based on the latest data.

The chart selected 36 indicators which covered the essential targets under each Goal and is based on information available as of May 2020. A baseline year of around 2015 is used for the trend assessment for most indicators. If there are no sufficient empirical data around that time, a baseline year of around 2010 is used. The latest available data for most indicators are from 2018 to 2019; for a few indicators, the data go back to 2015 and 2016. Most of the data used in the progress chart were compiled prior to the COVID-19 pandemic, and therefore do not reflect its impact.

In order to harmonize and improve the existing methodologies, a proposed methodology has been developed by a Task Team on SDG Progress Chart, which consists of experts from around 15 regional and international agencies. If the methodology deviates from the proposed methodology due to the specialty of the indicator, the detailed explanation is specified in this technical note.

For the selection of indicators included in the progress chart, Statistics Division of UNDESA worked in close consultation with the Task Team. For most goals, a limited set of indicators (often 2-4 indicators per goal) have been selected. As much as possible, those indicators included are tier I indicators with more than 50 per cent country coverage and 50 per cent population coverage for all regions; and with relatively recently available data.

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[1] *Sustainable Development Goals Progress Chart 2020*, available at: https://unstats.un.org/sdgs/report/2020/progress-chart-2020.pdf

[2] *Th*e *Sustainable Development Goals Report 2020*, available at: https://unstats.un.org/sdgs/report/2020/

II. The Proposed Methodology by the Task Team on SDG Progress Chart

1. Methodology for assessing current level of the SDG indicators

Level Assessment: Measure the current level based on the latest available data (usually in 2018 or 2019) with respect to the distance from its target. Five categories below are usually considered:

i. Target met or almost met
ii. Close to target
iii. Moderate distance to target
iv. Far from target
v. Very far from target

2. Methodology for assessing trend of an SDG indicator

Trends Assessment: Measure the progress from a baseline year of around 2015 or around 2010 (if there is no sufficient data in 2015) to the most recent year. Trends are represented by four different traffic light colours as explained below:

Colour	Trends
	Substantial progress/ on track
	Fair progress but acceleration needed
	Limited or no progress
	Deterioration

Note: If the current level is in **category i** (i.e. target met or almost met), no trend analysis is needed and 'Substantial progress/ on track' is assigned as the Trend assessment.

The standard methodologies for the trend assessment have two conditions: indicators **without** explicit numerical target, indicators **with** explicit numerical target.

a) Measuring the trend for indicators <u>without</u> an explicit numerical target

For indicators that do not have an explicit numerical target set in the SDG agenda, the actual Compound Annual Growth Rate ($CAGR_a$) is used to assess the trends:

$$CAGR_a = \left(\frac{x_t}{x_{t_0}}\right)^{\frac{1}{t-t_0}} - 1$$

Where x_t is the numerical value of the SDG indicator in year t; t is the year when the latest data is available, and t_0 is the baseline year (the default baseline year is 2015 with a few exceptions).

1) Categorize trend into one of four colour assessments below if the indicator should **increase** over time (such as increasing coverage of health care and essential services):

Values of actual growth rate	Assessment category
$CAGR_a > 0.01$	Substantial progress/ on track
$0.005 < CAGR_a \leq 0.01$	Fair progress but acceleration needed
$-0.01 \leq CAGR_a < 0.005$	Limited or no progress
$CAGR_a < -0.01$	Deterioration

2) Categorize trend into one of four colour assessments below if the indicator should decrease over time (such as reducing poverty, hunger or diseases):

Values of actual growth rate	Assessment category
$CAGR_a < -0.01$	Substantial progress/ on track
$-0.01 \leq CAGR_a < -0.005$	Fair progress but acceleration needed
$-0.005 < CAGR_a \leq 0.01$	Limited or no progress
$CAGR_a > 0.01$	Deterioration

b) Measuring the trend for indicators <u>with</u> an explicit numerical target

For indicators that have an explicit numerical target set in the SDG agenda, the ratio (CR) of the actual growth rate ($CAGR_a$) to the required growth rate ($CAGR_r$) to reach the target in the mature year is used to assess the trends.

Calculate required growth rate ($CAGR_r$) with a mature year of 2030:

$$CAGR_r = \left(\frac{x^*}{x_{t_0}}\right)^{\frac{1}{2030-t_0}} - 1$$

Comparing the actual vs. the required growth means simply calculating the ratio of the two:

$$CR = \frac{CAGR_a}{CAGR_r}$$

Categorize trend into one of four colour assessments based on the result of CR. The thresholds are shown below:

CR value	Assessment category
$CR \geq 0.95$	Substantial progress/ on track
$0.50 \leq CR < 0.95$	Fair progress but acceleration needed
$-0.1 \leq CR < 0.50$	Limited or no progress
$CR < -0.1$	Deterioration

III.   Detailed Methodologies

Indicator 1.1.1: Proportion of population below the international poverty line

Current level

Description of the methodology applied for measuring current level:

> The current level assessment is based on 2018 data, nowcast data used for the world level and empirical data used for regional estimates. For sub-Saharan Africa, data for level assessment refer to the year 2015.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x ≤ 3 per cent x: Proportion of population below the international poverty line
Close to target	3 per cent < x ≤ 6 per cent
Moderate distance to target	6 per cent < x ≤ 15 per cent
Far from target	15 per cent < x ≤ 25 per cent
Very far from target	x > 25 per cent

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

> Trend assessment for is based on data for 2015–2018. The CR methodology (CR = actual compound annual growth rate (CAGR) upon required CAGR to meet target by 2030) recommended by UNSD was used to assess the trend from 2015 to 2018. The target set is 3 per cent by 2030.

The thresholds applied for measuring trend:

	Trend	Thresholds applied in methodology used
Green	Substantial progress/ on track	CR ≥ 0.95
Yellow	Fair progress but acceleration needed	0.5 ≤ CR < 0.95
Orange	Limited or no progress	-0.1 ≤ CR < 0.5
Red	Deterioration	CR < -0.1

Use of a nowcasting or forecasting technique

The nowcasting or forecasting technique which was applied in the contribution for the progress chart is briefly described below:

> For the world only, the 2018 value of 8.4 per cent is a nowcast. This nowcast was used for level and trend at the world level only. Nowcasts were not used for any regions.

Indicator 1.3.1: Proportion of population covered by social protection systems

Current level

Description of the methodology applied for measuring current level:

> Current level assessment is based on 2016 data.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x > 80 per cent x: Proportion of population covered by social protection
Close to target	60 per cent <x ≤ 80 per cent
Moderate distance to target	40 per cent <x ≤ 60 per cent
Far from target	20 per cent < x ≤ 40 per cent
Very far from target	x ≤ 20 per cent

There is no trend assessment for this indicator because the data are available for 2016 only.

Indicator 2.1.2: Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)

Current level

Description of the methodology applied for measuring current level:

Current level assessment is based on 2017 data and is measured using "distance to target" method. The target is set at 5 per cent, as it is the level of Western Europe, the most food secure region (in terms of M49 classification) observed.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	$x \leq 0.05$ x: proportion of the population under moderate or severe food insecurity
Close to target	$0.05 < x \leq 0.10$
Moderate distance to target	$0.10 < x \leq 0.25$
Far from target	$0.25 < x \leq 0.30$
Very far from target	$x > 0.30$

Trend

The CR methodology (CR = actual compound annual growth rate (CAGR) upon required CAGR to meet target by 2030) recommended by UNSD was used to assess the trend from 2015 to 2017.

Additionally, for SDG indicator 2.1.2, there is a methodology in place to estimate margins of error, which allows to also detect whether the difference between two estimates is statistically significant. The colour of the progress should consider also this information. If CR is in the range of orange, but margins of error suggest that the change in time is statistically significant, the

conclusion should be "Deterioration" rather than "Limited or no progress". For instance, in the Sub-Saharan region, as the deterioration observed in the indicator estimates between 2015 and 2017 is in fact statistically significant at the 90 per cent confidence level. Therefore, it is assigned to the red rather than orange category.

Thresholds applied for measuring trend:

	Trend	Thresholds applied in methodology used
Green	Substantial progress/ on track	CR ≥ 0.95 or Target met
Yellow	Fair progress but acceleration needed	0.50 ≤ CR < 0.95
Orange	Limited or no progress	-0.1 ≤ CR < 0.50
Red	Deterioration	CR<-0.1

Indicator 2.2.1: Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age

Current level

Description of the methodology applied for measuring current level:

The levels are based on thresholds established through the WHO-UNICEF Technical Advisory Group on Nutrition Monitoring (TEAM).[1] The thresholds were developed in relation to standard deviations (SD) of the normative WHO Child Growth Standards. The international definition of 'normal' (two SD from the WHO standards median) defines the first threshold, which includes 2.3 per cent of the area under the normalized distribution. Multipliers of this "very low" level (rounded to 2.5 and then further to 3.0 per cent) set the basis to establish subsequent thresholds.

[1]de Onis, Mercedes et al. (2018) Prevalence thresholds for wasting, overweight and stunting in children under 5 years. Public Health Nutrition 22(1):1-5 · October 2018.

Current level assessment is based on 2019 data.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used

Target met or almost met	x < 3 per cent x: prevalence of stunting among children under 5 years of age
Close to target	3 per cent ≤ x ≤ 10 per cent
Moderate distance to target	10 per cent ≤ x < 20 per cent
Far from target	20 per cent ≤ x < 30 per cent
Very far from target	x ≤ 30 per cent

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

> The methodology is based on annual rate of reduction which is defined as recent average annual rate of reduction (AARR) calculated based on a log-linear regression using the 2019 and the 2012 estimates i.e. an exponential growth formula. The criteria and further details can be found here. The required AARR is calculated based on that criteria that reach 40 per cent reduction upon 2012 by 2025.

If the baseline year being used for measuring trend is NOT the year 2015, please state it in the box below and share the reasoning for the alternative baseline year:

> The baseline year used was 2012 to align with the World Health Assembly resolution: WHA65.6, which specified six global nutrition targets for 2025, which was further extended to 2030 and referenced in the SDG target. The SDG Target 2.2 states: By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons. The target is to achieve a 40% reduction in the number of children under five who are stunted by 2025.

Thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	AARR ≥ required AARR
Yellow	Fair progress but acceleration needed	AARR < required AARR, or AARR ≥ 0.5
Orange	Limited or no progress	AARR < required AARR, or AARR > - 0.5 and AARR < 0.5
Red	Deterioration	AARR ≤ - 0.5

Indicator 3.1.2: Proportion of births attended by skilled health personnel

Current level

Description of the methodology applied for measuring current level:

> The current level assessment is based on 2019 data.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x ≥ 95 per cent x: proportion of births attended by skilled health personnel
Close to target	75 per cent ≤ x < 95 per cent
Moderate distance to target	50 per cent ≤ x < 75 per cent
Far from target	25 per cent ≤ x < 50 per cent
Very far from target	x < 25 per cent

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

> The CR methodology (CR = actual compound annual growth rate (CAGR) upon required CAGR to meet target by 2030) recommended by UNSD was used to assess the trend from 2010 to 2019. The target set is 95 per cent of births attended by skilled health personnel by 2030.

The thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CR ≥ 0.95 or target met

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Yellow	Fair progress but acceleration needed	$0.5 \leq CR < 0.95$
Orange	Limited or no progress	$-0.1 \leq CR < 0.5$
Red	Deterioration	$CR < -0.1$

Indicator 3.2.1: Under-five mortality rate

Current level

Description of the methodology applied for measuring current level:

The current level assessment is based on 2018 estimated regional under-five mortality rate.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	$x \leq 25$ x: deaths per 1,000 live births
Close to target	$25 < x \leq 35$
Moderate distance to target	$35 < x \leq 45$
Far from target	$45 < x \leq 55$
Very far from target	$x > 55$

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

The trend in U5MR is measured with the logarithmic annual rate of reduction (ARR). The formula for calculating ARR is as follows:

$ARR_{t1\text{-}t2} = (\ln(U5MR_{t2}/U5MR_{t1})/(t_1\text{-}t_2))*100$

Where t_1=2010 and t_2=2018 for progress from 2010 to 2018.

Target 3.2.1 has a numerical target of 25 or fewer deaths per 1,000 live births by 2030. In this case, the required ARR can be calculated with t_1=2018, t_2=2030 and $U5MR_{t2}$=25.

The ratio of the observed ARR to the required ARR (CR) determines the assessment of trend.
CR = $ARR_{2000-2018}$/Required $ARR_{2018-2030}$

The trend is moving in the desired direction and the target is already met for the regions of Eastern and Southeastern Asia; Latin America and the Caribbean; and Europe, Northern America, Australia & New Zealand. Therefore, trend was considered "substantial progress/on track" (green) for these three regions.

Where the baseline year being used for measuring trend is NOT the year 2015, comment is offered below:

The baseline year for measuring trend in the under-five mortality rate is 2010. There are very few empirical data on the under-five mortality rate since 2015, thus more recent estimates may be an extrapolation based on the combination of the country-level and global trends. Likewise, the 2015-2018 period is likely an insufficient amount of time over which to assess the trend in a demographic indicator like the under-five mortality rate.

The thresholds applied for measuring the trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CR ≥ 0.95 or target met
Yellow	Fair progress but acceleration needed	0.5 ≤ CR < 0.95
Orange	Limited or no progress	-0.1 ≤ CR < 0.5
Red	Deterioration	CR < -0.1

Use of a nowcasting or forecasting technique

The nowcasting or forecasting technique which was applied in the contribution for the progress chart is briefly described below:

At the country level, a smooth trend line is estimated from empirical data on under-five mortality, and the trend is extrapolated from the most recent empirical data point to a target year—2018 in this round.

Indicator 3.3.3: Malaria incidence per 1,000 population

Current level

Description of the methodology applied for measuring current level:

The current level assessment is based on the level of malaria incidence rate and from 2018 data

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
very low malaria incidence rate	$x < 0.1$ x: incidence per 1,000 population
low malaria incidence rate	$0.1 \leq x < 10$
moderate malaria incidence rate	$10 \leq x < 50$
high malaria incidence rate	$50 \leq x < 100$
very high malaria incidence rate	$100 \leq x$

Trend

The CR methodology (CR = actual compound annual growth rate (CAGR) upon required CAGR to meet target by 2030) recommended by UNSD was used to assess the trend from 2015 to 2018. The target set is a 90 per cent reduction upon the 2015 level.

The thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	$CR \geq 0.95$ or target met
Yellow	Fair progress but acceleration needed	$0.5 \leq CR < 0.95$
Orange	Limited or no progress	$-0.1 \leq CR < 0.5$
Red	Deterioration	$CR < -0.1$

Indicator 3.b.1: Proportion of the 1-year-oldscovered by diphtheria-tetanus-pertussis vaccine included in their national programme

Current level

Description of the methodology applied for measuring current level:

Current level assessment is based on 2018 data.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x ≥ 95 per cent x: proportion of 1-year-olds covered by diphtheria-tetanus-pertussis vaccine
Close to target	95 per cent > x ≥ 90 per cent
Moderate distance to target	90 per cent > x ≥ 80 per cent
Far from target	80 per cent > x ≥ 70 per cent
Very far from target	70 per cent > x

Trend

The CR methodology (CR = actual compound annual growth rate (CAGR) upon required CAGR to meet target by 2030) recommended by UNSD was used to assess the trend from 2015 to 2018. The target set is a 90 per cent reduction upon the 2015 level.

The thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CR ≥ 0.95 or target met
Yellow	Fair progress but acceleration needed	0.5 ≤ CR < 0.95
Orange	Limited or no progress	-0.1 ≤ CR < 0.5
Red	Deterioration	CR < -0.1

Indicator 4.1.2: Primary education completion rate

Note: Primary education completion rate is used for all assessments

Current level

Description of the methodology applied for measuring the current level:

Completion rates are estimates from the Global Education Monitoring Report (https://en.unesco.org/gem-report/).

For the region of Europe, Northern America, Australia and New Zealand, values for Europe and Northern America are reported.

All data are for the primary education completion rate.

Current Level assessment for the world is based on 2018 data, assessment for each regions are based on national data from 2014 to 2018

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x > 97 x: primary education completion rates
Close to target	94 < x ≤ 97
Moderate distance to target	85 < x ≤ 94
Far from target	75 < x ≤ 85
Very far from target	x ≤ 75

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

The CR methodology (CR = actual compound annual growth rate (CAGR) upon required CAGR to meet target by 2030) recommended by UNSD was used to assess the trend from 2015 to 2018.

Regional values for 2015 are based on national data from 2011 to 2015.

Regional values for 2018 are based on national data from 2014 to 2018.

The thresholds applied for measuring the trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CR ≥ 0.95

Yellow	Fair progress but acceleration needed	0.50 ≤ CR < 0.95
Orange	Limited or no progress	-0.1 ≤ CR < 0.5
Red	Deterioration	CR < -0.1

Indicator 5.3.1: Proportion of women aged 20-24 years who were married or in a union before age 18

Current level

Description of the methodology applied for measuring current level:

Current level assessment is based on 2019 data.

Data for indicator 5.3.1 submitted in the 2019 round of SDG reporting are drawn from UNICEF global databases, 2020. Data sources include Multiple Indicator Cluster Surveys (MICS), Demographic and Health Surveys (DHS) and other nationally representative sources. For more details, see the indicator metadata available here:
https://unstats.un.org/sdgs/metadata/files/Metadata-05-03-01.pdf

Thresholds applied for measuring level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x ≤ 1 per cent x: proportion of women who were married or in a union before age 18
Close to target	1 per cent < x ≤ 15 per cent
Moderate distance to target	15 per cent < x ≤ 30 per cent
Far from target	30 per cent < x ≤ 45 per cent
Very far from target	x > 45 per cent

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

The observed average annual rate of reduction (AARR) in the prevalence of child marriage is calculated for the last 10-year period using a natural log function:

$$AARR = \ln\left(\frac{p_0}{p_1}\right)/t$$

Where:
p_1=latest prevalence estimate
p_0= starting prevalence estimate
t= number of years elapsed between p_0 and p_1 (10 years)

The observed AARR is compared to the AARR which would be required to eliminate child marriage by 2030. For statistical purposes, elimination is defined as a prevalence of 1 per cent or lower.

The AARR is conducted based on the data from 2009 to 2019

Where the baseline year being used for measuring trend is NOT the year 2015, comment is offered below:

Baseline year used is 2009.

Levels of child marriage typically shift over generations, and are not often subject to rapid change. Assessing trends over a period of less than ten years is not likely to yield meaningful results.

The thresholds applied for measuring the trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	AARR ≥ required AARR, or prevalence < 1 per cent
Yellow	Fair progress but acceleration needed	AARR < required AARR, and AARR ≥ 0.5
Orange	Limited or no progress	AARR < required AARR, and 0.5 >AARR> - 0.5 or difference is within confidence intervals
Red	Deterioration	AARR ≤ - 0.5

Indicator 5.5.1 (a): Proportion of seats held by women in national parliaments

Current level

Description of the methodology applied for measuring current level:

Current level assessment is based on 2020 data.

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Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	40 per cent ≤ x < 60 per cent x: Proportion of seats held by women in national parliaments
Close to target	30 per cent ≤ x < 40 per cent
Moderate distance to target	20 per cent ≤ x < 30 per cent
Far from target	10 per cent ≤ x < 20 per cent
Very far from target	x < 10 per cent

Trend

The CR methodology (CR = actual compound annual growth rate (CAGR) upon required CAGR to meet target by 2030) recommended by UNSD was used. The target set is 40 per cent but not above 60 per cent

Please note, for the region sub-Saharan Africa, Eastern and South-Eastern Asia, and Pacific Island Countries, the trend color have been modified as 'Fair progress but acceleration needed' to reflect their progress based on the actual data points from 2015 to 2018

The thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CR ≥ 0.95 or target met
Yellow	Fair progress but acceleration needed	0.5 ≤ CR < 0.95
Orange	Limited or no progress	-0.1 ≤ CR < 0.5
Red	Deterioration	CR < -0.1

Indicator 6.1.1: Proportion of population using safely managed drinking water services

Current level

Description of the methodology applied for measuring current level:

Current level assessment is based on 2017 data.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x > 99 per cent x: proportion of population using safely managed drinking water services
Close to target	75 per cent < x ≤ 99 per cent
Moderate distance to target	50 per cent < x ≤ 75 per cent
Far from target	25 per cent < x ≤ 50 per cent
Very far from target	x ≤ 25 per cent

Trend

The CR methodology (CR = actual compound annual growth rate (CAGR) upon required CAGR to meet target by 2030) recommended by UNSD was used. The target is set as 99 per cent of population using safely managed drinking water services. The CAGR is conducted based on the data from 2010 to 2017

Where the baseline year being used for measuring trend is NOT the year 2015, comment is offered below:

The baseline year for measuring trend is 2010.

The thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CR ≥ 0.95 or target met
Yellow	Fair progress but acceleration needed	0.5 ≤ CR < 0.95
Orange	Limited or no progress	-0.1 ≤ CR < 0.5
Red	Deterioration	CR < -0.1

Indicator 6.2.1 (a): Proportion of population using safely managed sanitation services

Current level

Description of the methodology applied for measuring current level:

Current level assessment is based on 2017 data.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x > 99 per cent x: proportion of population using safely managed sanitation services
Close to target	75 per cent < x ≤ 99 per cent
Moderate distance to target	50 per cent < x ≤ 75 per cent
Far from target	25 per cent < x ≤ 50 per cent
Very far from target	x ≤ 25 per cent

Trend

The CR methodology (CR = actual compound annual growth rate (CAGR) upon required CAGR to meet target by 2030) recommended by UNSD was used. The target is set as 99 per cent of population using safely managed sanitation services. The CAGR is conducted based on the data from 2010 to 2017

Where the baseline year being used for measuring trend is NOT the year 2015, comment is offered below:

The baseline year for measuring trend is 2010.

The thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CR ≥ 0.95 or target met

Yellow	Fair progress but acceleration needed	$0.5 \leq CR < 0.95$
Orange	Limited or no progress	$-0.1 \leq CR < 0.5$
Red	Deterioration	$CR < -0.1$

Indicator 7.1.1: Proportion of population with access to electricity

Current level

Description of the methodology applied for measuring current level:

Current level assessment is based on 2018 data.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x > 99 per cent x: Proportion of population with access to electricity
Close to target	96 per cent < x ≤ 99 per cent
Moderate distance to target	85 per cent < x ≤ 96 per cent
Far from target	80 per cent < x ≤ 85 per cent
Very far from target	x ≤ 80 per cent

Trend

The CR methodology (CR = actual compound annual growth rate (CAGR) upon required CAGR to meet target by 2030) recommended by UNSD was used. The target is set as 100 per cent of population with access to electricity. The CAGR is conducted based on the data from 2015 to 2018

The thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	$CR \geq 0.95$ or target met

Yellow	Fair progress but acceleration needed	0.5 ≤ CR < 0.95
Orange	Limited or no progress	-0.1 ≤ CR < 0.5
Red	Deterioration	CR < -0.1

Indicator 7.3.1: Energy intensity measured in terms of primary energy and GDP

Current level

Description of the methodology applied for measuring current level:

> Assessment of current level is not provided in terms of distance to the target. Rather, assessment of current level is made in terms of energy intensity. Because the target is set for the world only, the level assessment for regions is relative to the world energy intensity while the world is medium intensity by the definition.
>
> Current level assessment is based on 2017 data.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Low intensity	x < 4.0 x: megajoules per US dollar in 2017
Medium-low intensity	4.5 ≥ x > 4.0
Medium intensity	5.5≥ x > 4.5
Medium-high intensity	6.0 ≥ x > 5.5
High intensity	x > 6.0 megajoules per US dollar in 2017

Trend

> A slight alternative to the standard CR methodology suggested by UNSD is applied. CR = actual compound annual growth rate (CAGR) upon a required CAGR of -2.6 per cent is applied. The same thresholds as used in the standard CR methodology suggested by UNSD are used. The CAGR is conducted based on the data from 2010 to 2017

Where the baseline year being used for measuring trend is NOT the year 2015, comment is offered below:

| The baseline year for measuring trend is 2010. |

The thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CR ≥ 0.95 or target met
Yellow	Fair progress but acceleration needed	0.5 ≤ CR < 0.95
Orange	Limited or no progress	-0.1 ≤ CR < 0.5
Red	Deterioration	CR < -0.1

Use of a nowcasting or forecasting technique

The nowcasting or forecasting technique which was applied in the contribution for the progress chart is briefly described below:

| For the world only, for years 2017 to 2030, projections are used. |

Indicator 8.1.1: Annual growth rate of real GDP per capita

Current level

Description of the methodology applied for measuring the current level:

There is no numerical target for sustain per capita economic growth as reflected by the annual growth rate of real GDP per capita. As real GDP per capita represents a flow of economic activity per head of the population, the assessment of progress cannot be determined by the change in the percentage changes of real GDP per capita, recorded for example, in 2015 and in 2018. The cumulated growth of real GDP per capita over more than one period needs to be used for assessing progress.
The current level of sustained per capita economic growth was therefore assessed as follows: According to the UN/DESA World Economic Forecasting Model[3], world real GDP per capita is projected to increase at an average annual growth rate of 2.0 per cent per year from 2015 to 2030. It is therefore assumed that the numerical target for sustain per capita economic growth is 2 per cent and the average annual real GDP per capita growth rate from 2015 to 2018 is compared with the assumed target of 2 per cent to assess progress.

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[3] https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/WESP2020_FullReport.pdf

It is assumed that the **current level of the SDG indicator by region is achieved** when the average annual real GDP per capita growth rate from 2015 to 2018 of a particular region is more than 2 per cent.

When the average annual real GDP per capita growth rate from 2015 to 2018 is between 1.5 and 2 per cent, it is considered that progress towards **close to the target** is achieved.

When the average annual real GDP per capita growth rate from 2015 to 2018 is between 1.0 and 1.5 per cent, it is considered that there is still a **moderate distance from the target**.

When the average annual real GDP per capita growth rate from 2015 to 2018 is between 0.5 and 1.0 per cent, it is considered that growth is **far from the target**.

When the average annual real GDP per capita growth rate from 2015 to 2018 is less than 0.5 per cent, it is considered that growth is **very far from the target**.

Thresholds applied for measuring level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	X > 2 per cent X: average annual real GDP per capita growth from 2015 to 2018
Close to target	1.5 per cent < x ≤ 2 per cent
Moderate distance to target	1.0 per cent < x ≤ 1.5 per cent
Far from target	0.5 per cent < x ≤ 1.0 per cent
Very far from target	x ≤ 0.5 per cent

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

Trend towards 2030

There is no numerical target for sustain per capita economic growth as reflected by the annual growth rate of real GDP per capita. As real GDP per capita represents a flow of economic activity per head of the population, the assessment of progress cannot be determined by the change in the percentage changes of real GDP per capita.

The assessment of progress for indicators that are derived from flow values (such as GDP or the number of new toilets build in one year) as opposed to stock values (such as the cumulative number of toilets available). Changes in flow values are independent from each other from one period to another and as such cannot be used to assess progress (for example, the number of toilets built in period 1 is not related to the number build in period 2, but represents to flow

related to each respective period). However, the total number of toilets available (stock of toilets) period 1 can be compared with the total number in period 2 to reflect progress or not.

It is also not good practise to use a single year as baseline for a flow indicator such as real GDP per capita. The cumulated growth of real GDP per capita over more than one period needs to be used for the baseline and for assessing progress.
The trend towards 2030 of sustained per capita economic growth was therefore assessed as follows:
The projected average annual growth rates of real GDP per capita from 2015 to 2030 are then compared with the baseline values to assess progress. For the world as a whole the average annual growth rate of real GDP per capita from 2000 to 2015 (the 2015 baseline value) is 1.8 per cent. According to the UN/DESA World Economic Forecasting Model[4], world real GDP per capita is projected to increase at an average annual growth rate of 2.0 per cent per year from 2015 to 2030. It is therefore assumed that the numerical target for sustain per capita economic growth is 2 per cent.
It is assumed that when the projected average annual growth of a particular region is above 2 per cent from 2015 to 2030, progress towards the SDG is **on track**, and the region is marked green.
When the projected average annual growth is less than the world average, but it is projected to be higher than the baseline value, it is considered that **progress towards sustainable growth will be achieved**, and the region is marked yellow.
When the projected average annual growth is less 1.5 per cent and it is projected that the average annual growth would be more than or equal to the level of the baseline value, it is considered that **little progress towards sustainable growth will be achieved**, and the region is marked orange.
When the projected average annual growth is less than the world average, and it is projected that the average annual growth would be less than the baseline value, it is considered that **growth deteriorated**, and the region is marked red.

Where the baseline year being used for measuring trend is NOT the year 2015, comment is offered below:

As real GDP per capita represents a flow of economic activity per head of the population, the assessment of progress cannot be determined by the change in the percentage changes of real GDP per capita. It is also not good practise to use a single year as baseline for a flow indicator such as real GDP per capita. The cumulated growth of real GDP per capita over more than one period needs to be used for the baseline and for assessing progress. The baseline value for 2015 is therefore calculated as the average annual growth rate of real GDP per capita from 2000 to 2015.

Please define the calculation thresholds applied for measuring the trend in the table below:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	More than 2 per cent average annual growth 2015-2030

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[4] https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/WESP2020_FullReport.pdf

Yellow	Fair progress but acceleration needed	Less than 2 per cent average annual growth, but more than the baseline growth
Orange	Limited or no progress	Less than 1.5 per cent average annual growth, but more or equal to the baseline growth
Red	Deterioration	Less than 2 per cent average annual growth, and less than the baseline growth

Use of a nowcasting or forecasting technique

The nowcasting or forecasting technique which was applied in the contribution for the progress chart is briefly described below:

The forecasting is built from 2019 to 2030
The real GDP per capita growth projections of the UN/DESA World Economic Forecasting Model is used. See https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/WESP2020_FullReport.pdf and https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESP2020_MYU_Report.pdf

Indicator 8.5.2: Unemployment rate

Current level

Description of the methodology applied for measuring current level:

The thresholds recommended by UNSD was used. The current level assessment is based on 2019 data.

Thresholds applied for measuring level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	$x \leq 3$ per cent x: Unemployment rate
Close to target	3 per cent < x ≤ 6 per cent
Moderate distance to target	6 per cent < x ≤ 10 per cent

Far from target	10 per cent < x ≤ 15 per cent
Very far from target	x > 15 per cent

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

The CR methodology (CR = actual compound annual growth rate (CAGR) upon required CAGR to meet target by 2030) recommended by UNSD was used. The actual annual growth rate (CAGR) is conducted based on the data from 2015 to 2019. The target set is 3 per cent by 2030.

Please define the calculation thresholds applied for measuring the trend in the table below:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CR > 0.95 or Target met
Yellow	Fair progress but acceleration needed	0.5 ≤ CR ≤ 0.95
Orange	Limited or no progress	-0.1 ≤ CR < 0.5
Red	Deterioration	CR < -0.1

Indicator 9.2.1: Manufacturing value added as a proportion of GDP

Current level

Description of the methodology applied for measuring current level:

The thresholds recommended by UNSD was used. The current level assessment is assessed based on 2019 data.

However, this methodology may yield results which mask the below concerns:

The SDG 9.2 target states to "promote inclusive and sustainable industrialization, and by 2030 raise significantly industry's share of employment and GDP in line with national circumstances, and double its share in least developed countries (LDCs)". The national circumstances play a very important role in the development of industrial policies. An explicit target is given only for the LDCs. In general, assessing progress made on a regional or global level is difficult as countries can behave very heterogeneously within each group.

UNIDO conducted an exercise on forecasting the share of manufacturing value added in GDP for LDCs to see prospects of the group on achieving the target 9.2. The target clearly states to double the industry's share in GDP for LDCs by 2030 and thus it enables us to set up the explicit target value. The forecasting exercise was based on time series from 1990 to 2018 and the results show diverging behavior if we split the group by region – African LDCs, Asian LDCs. While African LDCs show stagnation in terms of manufacturing, Asian LDCs reveal very positive prospects towards reaching the SDG target 9.2 by 2030 and thus they clearly drive the growth of the LDC group.

Another important aspect is the economic interpretation of the 9.2.1 indicator. Manufacturing is considered to be a driver of economic growth but the share of manufacturing varies by different stages of industrial development. As per capita incomes rise, the share of the manufacturing sector in GDP typically follows an inverted U-shaped path peaking at a threshold level of income and declining as income rises further. Once the peak has been reached, the share of manufacturing tends to gradually decrease and the share of the services sector rises. There is no predetermined or unique path to development, and individual countries have specific features that influence the extent to which they may deviate from the general or average pattern. Moreover, such a structural transformation is a long-term process which is difficult to evaluate based on a few recent years.

Thresholds applied for measuring level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x > 20 per cent x: Manufacturing value added as a proportion of GDP
Close to target	15 per cent < x ≤ 20 per cent
Moderate distance to target	10 per cent < x ≤ 15 per cent
Far from target	5 per cent < x ≤ 10 per cent
Very far from target	x ≤ 5 per cent

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

The methodology recommended by UNSD was used; the actual compound annual growth rate (CAGR) is conducted based on 2015 to 2019 data

Please define the calculation thresholds applied for measuring the trend in the table below:

	Trend	Thresholds applied in methodology used
Green	Substantial progress/ on track	Actual CAGR > 1 per cent or Target met
Yellow	Fair progress but acceleration needed	0.5 per cent ≤ Actual CAGR ≤ 1 per cent
Orange	Limited or no progress	-1 per cent ≤ Actual CAGR < 0.5 per cent
Red	Deterioration	Actual CAGR < -1 per cent

Use of a nowcasting or forecasting technique

The nowcasting or forecasting technique which was applied in the contribution for the progress chart is briefly described below:

Nowcasting methods are used to provide the most recent data of MVA and GDP.

Nowcasting methods are applied on MVA and GDP data on a country level to fill in the missing data up to the current year. The technique considers the relationship between MVA and GDP and the fact that accurate nowcasts of current GDP are available from external sources. The detailed methodology is described in the following article.

Boudt K, Todorov V and Upadhyaya S (2009). Nowcasting manufacturing value added for cross-country comparison. Statistical Journal of the IAOS: Journal of the International Association of Official Statistics, 26, 15-20.
https://content.iospress.com/articles/statistical-journal-of-the-iaos/sji00694

Indicator 9.5.1: Research and development expenditure as a proportion of GDP

Current level

Description of the methodology applied for measuring the current level:

The current level is assessed based on 2017 data.

For the SDG indicator 9.5.1, i.e. Research and development (R&D) expenditure as a proportion of GDP, there is no numerical target and the term "significant" progress/increase is used in the formulation of the same. Therefore, in the absence of a globally recommended numerical target, the current level reached for R&D expenditure as a proportion of GDP is assessed by reviewing the range within which this indicator varies at present and the distribution of figures by country and region. Accordingly, the following levels of investments are identified: Very high investment, high investment, moderate investment, low investment, very low investment. Further, the following groupings are respectively determined, to measure the current levels reached: 3.0 per cent and above, 2.0 per cent - 3.0 per cent, 1.0 per cent - 2.0 per cent, 0.5 per cent - 1.0 per cent, and less than 0.5 per cent.

Thresholds applied for measuring level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Very high investment	If R&D expenditure as a proportion of GDP (per cent):≥ 3.0 per cent
High investment	If R&D expenditure as a proportion of GDP (per cent):≥ 2.0 per cent and < 3.0 per cent
Moderate investment	If R&D expenditure as a proportion of GDP (per cent):≥ 1.0 per cent and < 2.0 per cent
Low investment	If R&D expenditure as a proportion of GDP (per cent):≥ 0 .5 per cent and < 1.0 per cent
Very low investment	If R&D expenditure as a proportion of GDP (per cent): < 0.5 per cent

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

In order to measure the trend for the SDG indicator 9.5.1 (R&D expenditure as a proportion of GDP), first simple projections until 2030 were produced. Second, as described above, due to the fact that there is no numerical target for this indicator, the compound annual growth (CAGR) of R&D expenditure as a proportion of GDP between 2015 – 2030 is considered to determine if there is a significant progress/increase in the level of investment. Accordingly, the following growth levels are identified: Very high increase in the level of investment, high increase in the level of investment, little increase in the level of investment, and deterioration in the level of investment. Further, the following thresholds are respectively determined, to assess the increase in the level of investment: 2.5 per cent and above, 1.0 per cent to 2.5 per cent, between 1.0 per cent and -1.0 per cent, and less than -1.0 per cent.

Please note, the trend assessment for Latin America and the Caribbean has been modified as Red colour (Deterioration) to reflect the reversed trend based on the actual data points from 2015 to 2017.

The thresholds applied for measuring the trend:

Trend	Thresholds applied in methodology used

Green	Substantial progress/ on track	Projected to achieve a very high increase in the level of investment by 2030: if compound annual growth of R&D expenditure as a proportion of GDP between 2015 – 2030: ≥ 2.5 per cent
Yellow	Fair progress but acceleration needed	Projected to achieve a high increase in the level of investment by 2030: if compound annual growth between 2015 – 2030: ≥ 1 per cent and <2.5 per cent
Orange	Limited or no progress	Projected to achieve a little increase in the level of investment by 2030: if compound annual growth between 2015 – 2030: <1 per cent and >= -1 per cent
Red	Deterioration	Projected to achieve a deterioration in the level of investment by 2030: if compound annual growth between 2015 – 2030: <-1 per cent

Use of a nowcasting or forecasting technique

The nowcasting or forecasting technique which was applied in the contribution for the progress chart is briefly described below:

The UNESCO Institute for Statistics (UIS) produces global and regional totals for the SDG indicator 9.5.1 (R&D expenditure as a proportion of GDP) for the period of 1996-2017. At present, neither did it publish any projections until 2030 nor did it develop a substantive methodology to produce the same. Such projection methodology is yet to be developed by taking into account all possible factors, such as rate of growths in R&D expenditure, GDP, R&D expenditure as a proportion of GDP itself, and their relationships/behaviours. This entails developing a best-fitting regression model in order to produce reliable projections until 2030. Amidst the above situation, simple projections for 2018-2030 were produced by applying the compound annual growth rate (CAGR) between 2000-2015, for the latest available year (2017) and onward, for global and regional level.

Indicator 9.c.1: Proportion of population covered by a mobile network

Current level

Description of the methodology applied for measuring the current level:

The current level is assessed based on 2018 data.

The majority of the countries are reaching saturation for this indicator, therefore the range of 98 to 100 per cent is used as the target. Since almost all countries have more than 80 per cent of the population covered by a mobile network, this has been applied as the lower bound. The other ranges are selected in function of the lower bound and upper bound.

Thresholds applied for measuring level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	99.9 per cent ≥ x > 98 per cent x: proportion of population covered by a mobile network
Close to target	98 per cent ≥ x > 90 per cent
Moderate distance to target	90 per cent ≥ x > 85 per cent
Far from target	85 per cent ≥ x > 80 per cent
Very far from target	80 per cent ≥ x > 0

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

For this indicator, where a majority of countries are reaching saturation, the CAGR > 1 per cent criteria does not apply. The trend was determined using the 2015 to 2018 data taking into consideration that most countries are reaching saturation (most countries have more than 90 per cent of their population were covered by mobile signal). Regions that were still relatively far from the target would get the rating "Fair progress but acceleration needed", despite having positive growth.

Indicator 10.4.2: Gini Coefficient

Current level

Description of the methodology applied for measuring the current level:

The current level is assessed based on 2017 data.

Where no data for the target year (2017) are available, the closest available data point (up to 2 years either side) is used.

For the regional and global averages, unweighted means are used. These provide a measure of average within-country inequality (not global or regional inequality).
The number of countries with comparable data over time is limited.

Assessment of current level is not provided in terms of distance to the target. Rather, assessment of current level is made in terms of the degree of inequality. Refer to categorizations and thresholds in table below.

Thresholds applied for measuring level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met (Low inequality)	x ≤ 25 per cent x: Gini Coefficient
Close to target (Moderately low inequality)	25 per cent < x ≤ 30 per cent
Moderate distance to target (Moderately high inequality)	30 per cent < x ≤ 40 per cent
Far from target (High inequality)	40 per cent < x ≤ 45 per cent
Very far from target (Very high inequality)	x > 45 per cent

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

Where no data are available for the baseline (2010) and latest (2017) year are available, the closest available data point (up to 2 years either side) is used.
For the regional and global averages, unweighted means are used. The trends show changes in average within-country inequality, not global or regional inequality.
The number of countries with comparable data over time is limited.

The methodology recommended by UNSD along with the actual percentage point changed in Gini were used. The thresholds are shown below

Where the baseline year being used for measuring trend is NOT the year 2015, comment is offered below:

2010 to 2017 used to measure trend. Measuring trend over 2 years (2015-2017) is not feasible given the methodology used and is also likely to provide limited insight due to the short time period.

Please define the calculation thresholds applied for measuring the trend in the table below:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	Actual CAGR < -1 per cent AND percentage point change in Gini < -1
Yellow	Fair progress but acceleration needed	Percentage point change in Gini < -1
Orange	Limited or no progress	-1 < percentage point change in Gini < 1
Red	Deterioration	Percentage point change in Gini > 1

Indicator 11.1.1: Proportion of urban population living in slums

Current level

Description of the methodology applied for measuring the current level:

The current level assessment is based on 2018 data.

The full computation methodology is available from the SDG 11 metadata document and step by step guide notes accessible from.
https://guo-un-habitat.maps.arcgis.com/sharing/rest/content/items/fa14983ef1c849518306484bc6daa406/data

Thresholds applied for measuring level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x ≤ 0.1 per cent x: proportion of urban population living in slums
Close to target	0.1 < x ≤ 5 per cent
Moderate distance to target	5 per cent < x ≤ 20 per cent
Far from target	20 per cent < x ≤ 40 per cent

Very far from target	x > 40 per cent

Trend

The actual compound annual growth rate from 2014 to 2018 is used to assess the trend. Refer to the thresholds in table below:

The thresholds applied for measuring the trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	Actual CAGR < -1 per cent or Target met
Yellow	Fair progress but acceleration needed	-1 per cent ≤ Actual CAGR < -0.5 per cent
Orange	Limited or no progress	-0.5 per cent < Actual CAGR ≤ 0.5 per cent
Red	Deterioration	Actual CAGR > 1 per cent

Where the baseline year being used for measuring trend is NOT the year 2015, comment is offered below:

Baseline year is 2014, based on the last data production year that was used to close MDGs slums monitoring progress, and open a new baseline for monitoring SDGs in 2015. Data updates happen every 2-3 years for tracking progress on this indicator and target.

Indicator 11.6.2: Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)

Current level

Description of the methodology applied for measuring the current level:

The yearly average population weighted ambient concentration ($\mu g/m^3$) of particulate matter with diameter equal or below 2.5 μm ($PM_{2.5}$) is reported for 2016. This is then used to assess the concentration levels based on the table reported below, where the target concentration is set to 10 $\mu g/m^3$, which is the World Health Organization (WHO) annual guideline value for $PM_{2.5}$ as defined in the WHO Air quality Guidelines (AQG). The WHO AQG also defines interim targets (e.g. 15, 25 and 35), which are used below to set boundaries for the scale.

Thresholds applied for measuring level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	$x \leq 10$ x: yearly average population weighted ambient concentration $PM_{2.5}$ μg/m^3
Close to target	$10 < x \leq 15$
Moderate distance to target	$15 < x \leq 25$
Far from target	$25 < x \leq 35$
Very far from target	$x > 35$ μg/m^3

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

WHO is in the process of releasing a revised dataset for 2016 (currently only year available), together with trend data for the years 2010-2016.
Values reported for 2010 were used as baseline values for the estimation of direction of change. Trends analysis was hence conducted on the change between 2010 and 2016, with the classification of regional and global trend as being over the four categories, in accordance to the scale as described below, based on a thorough analysis as described in Shaddick et al (2020)[5].

Where the baseline year being used for measuring trend is NOT the year 2015, comment is offered below:

Values reported for 2010 were used as baseline values for the estimation of direction of change. Using a higher time span allows to best magnify changes, which are difficult to identify on a per year basis.

The thresholds applied for measuring the trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	Actual CAGR < -3 per cent or Target met
Yellow	Fair progress but acceleration needed	-3 per cent ≤ Actual CAGR < -1 per cent
Orange	Limited or no progress	-1 per cent < Actual CAGR ≤ 1.5 per cent

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[5] G. Shaddick, M. L. Thomas, P. Mudu, G. Ruggeri and S. Gumy (2020). Half the world's population are exposed to increasing air pollution. Climate and Atmospheric Science (in press).

Red	Deterioration	Actual CAGR > 1.5 per cent

Indicator 12.2.2: Domestic material consumption per unit of GDP

Current level

Description of the methodology applied for measuring current level:

The current level assessment is based on 2017 data.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x < 0.5 x: Domestic Material Consumption (DMC) kilograms per constant 2010 US dollar GDP
Close to target	0.5 ≤ x < 1
Moderate distance to target	1 ≤ x < 1.5
Far from target	1.5 ≤ x < 2
Very far from target	x ≥ 2

Trend

The CR methodology (CR = actual compound annual growth rate (CAGR) upon required CAGR to meet target by 2030) recommended by UNSD was used to assess the trend from 2015 to 2017. The target set is 0.5 kilograms per constant 2010 US dollar.

Please note the region 'Central and Southern Asia' is modified as yellow to reflect its progress from 2015 to 2017 based on the actual data points.

The thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CR ≥ 0.95 or target met
Yellow	Fair progress but acceleration needed	0.5 ≤ CR < 0.95

Orange	Limited or no progress	-0.1 ≤ CR < 0.5
Red	Deterioration	CR < -0.1

Indicator 12.c.1 (a): Amount of fossil-fuel subsidies per unit of GDP

Current level

Description of the methodology applied for measuring current level:

The current level assessment is based on 2017 data.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x ≤ 0.1 per cent x: fossil-fuel pre-tax subsidies as a proportion of GDP (production and consumption)
Close to target	0.1 per cent < x ≤ 0.5 per cent
Moderate distance to target	0.5 per cent < x ≤ 1 per cent
Far from target	1 per cent < x ≤ 1.5 per cent
Very far from target	x > 1.5 per cent

Trend

The CR methodology (CR = actual compound annual growth rate (CAGR) upon required CAGR to meet target by 2030) recommended by UNSD was used to assess the trend from 2015 to 2017. The target set is 0.1 per cent fossil-fuel pre-tax subsidies as a proportion of GDP (production and consumption).

Please note the region 'Central and Southern Asia', 'Northern Africa and Western Asia', and 'Latin America and the Caribbean', the trend assessments are modified as yellow (Fair progress but acceleration needed) to reflect their progress from 2015 to 2017 based on the actual data points.

The thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CR ≥ 0.95 or target met
Yellow	Fair progress but acceleration needed	0.5 ≤ CR < 0.95
Orange	Limited or no progress	-0.1 ≤ CR < 0.5
Red	Deterioration	CR < -0.1

Indicator 13.2.2: Total greenhouse gas emissions per year

Current level

Description of the methodology applied for measuring current level:

Assessment made at global level only. Data, for the year 2018, are sourced from the World Meteorological Organization. Source: https://library.wmo.int/index.php?lvl=notice_display&id=21620#.XvK7CpMza3J

Both **Current Level** and **Trend** assessment are at the world level only and are the same as the Progress Chart in 2019 with the same data used.

Indicator 14.4.1: Proportion of fish stocks within biologically sustainable levels

Current level

Description of the methodology applied for measuring current level:

The current level assessment is based on 2017 data and the assessment is at the world level only.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x > 80 per cent x: proportion of fish stocks within biologically sustainable levels

Close to target	75 per cent < x ≤ 80 per cent
Moderate distance to target	70 per cent < x ≤ 75 per cent
Far from target	65 per cent < x ≤ 70 per cent
Very far from target	x ≤ 65 per cent

Trend

> The actual compound annual growth rate (CAGR) recommended by UNSD was used to assess the trend from 2015 to 2017. The trend assessment is at the world level only.

The thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	Actual CAGR > 1 per cent or target met
Yellow	Fair progress but acceleration needed	1 per cent ≥ Actual CAGR > 0.5 per cent
Orange	Limited or no progress	0.5 per cent > Actual CAGR ≥ -1 per cent
Red	Deterioration	Actual CAGR < -1 per cent

Indicator 14.5.1: Coverage of protected areas in relation to marine areas

Current level

Description of the methodology applied for measuring current level:

Current level is assessed based on 2019 data

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x ≥ 10 per cent
Close to target	6 per cent ≤ x < 10 per cent
Moderate distance to target	3 per cent ≤ x < 6 per cent

Far from target	1 per cent ≤ x < 3 per cent
Very far from target	x < 1 per cent

Trend

The CR methodology (CR = actual compound annual growth rate (CAGR) upon required CAGR to meet target by 2030) recommended by UNSD was used to assess the trend from 2015 to 2019. The target set is 10 per cent conservation of coastal and marine areas in 2020.

The thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CR ≥ 0.95 or target met
Yellow	Fair progress but acceleration needed	0.5 ≤ CR < 0.95
Orange	Limited or no progress	-0.1 ≤ CR < 0.5
Red	Deterioration	CR < -0.1

Indicator 15.1.2: Proportion of important sites for terrestrial biodiversity that are covered

Current level

Description of the methodology applied for measuring current level:

Current level is assessed based on 2019 data.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x > 83 per cent x: proportion of important sites for terrestrial biodiversity that are covered by protected areas
Close to target	67 per cent < x ≤ 83 per cent
Moderate distance to target	33 per cent < x ≤ 67 per cent

Far from target	17 per cent < x ≤ 33 per cent
Very far from target	x ≤ 17 per cent

Trend

The actual compound annual growth rate (CAGR) recommended by UNSD was used to assess the trend from 2015 to 2019.

The thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	Actual CAGR > 1 per cent or target met
Yellow	Fair progress but acceleration needed	1 per cent ≥ Actual CAGR > 0.5 per cent
Orange	Limited or no progress	0.5 per cent > Actual CAGR ≥ -1 per cent
Red	Deterioration	Actual CAGR < -1 per cent

Indicator 15.5.1: Red List Index

Note: Level and trend assessment are based on the Red List Index and regional disaggregations of the index.

Current level

Description of the methodology applied for measuring current level:

Current level is assessed based on 2020 data. The assessment for 'Developed countries' refers to Europe only.

Thresholds applied for measuring current level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Extinction risk below global average	x > global red list index (RLI) x: regional RLI
Extinction risk at global average	Global RLI

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Extinction risk above global average	X < global RLI

Trend

The actual compound annual growth rate (CAGR) recommended by UNSD was used to assess the trend from 2015 to 2020. Since this target is matured in 2020, the target CAGR is set based on 2020 as the deadline and '1' as the red list index target.

Please note the trend assessment for the region 'Central and Southern Asia' has been modified as red since there was an explicit deterioration trend observed from 2015 to 2020 for this region.

The thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CR ≥ 0.95 or target met
Yellow	Fair progress but acceleration needed	0.5 ≤ CR < 0.95
Orange	Limited or no progress	-0.1 ≤ CR < 0.5
Red	Deterioration	CR < -0.1

Indicator 16.1.1: Number of victims of intentional homicide per 100,000 population

Current level

Description of the methodology applied for measuring the current level:

Due to the absence of a numerical target for the SDG 16.1.1 (Number of victims of intentional homicide per 100,000 population, by sex), UNODC has defined the categories to assess the levels of the SDG 16.1.1 based on the distribution of homicide rates observed in 2018 at national level. The thresholds are in line with the 20th, 40th, 60th and 80th percentile.
UNODC suggested a different terminology to be used for level categories: Very low, low, moderate, high, very high

Thresholds applied for measuring level:

Assessment of the current level	Thresholds applied in the methodology used
Very low	x ≤ 1 x: number of victims of intentional homicide per 100,000 population
Low	1< x ≤ 2.5
Moderate	2.5 < x ≤ 5
High	5 < x ≤ 10
Very high	10 > x

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

UNODC computed the Compound Annual Growth Rate (CAGR) to assess the indicator trend as UNSD proposed for Progress Chart Assessment for SDGs without a numerical target. The suggested thresholds were used. The trend assessment is conducted based on the period of 2015 to 2018

The thresholds applied for measuring trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CAGR < -0.01
Yellow	Fair progress but acceleration needed	-0.01 ≤ CAGR < -0.005
Orange	Limited or no progress	-0.005 < CAGR ≤ 0.01
Red	Deterioration	CAGR > 0.01

Use of a nowcasting or forecasting technique

The nowcasting or forecasting technique which was applied in the contribution for the progress chart is briefly described below:

No nowcasting or forecasting techniques have been applied, however when at least two values in a country's time series were available, missing values were imputed using the Exponentially Weighted Moving Average (EWMA).

Applying the Exponentially Weighted Moving Average, for each individual country-year, missing values in the homicide rate were replaced by the average homicide rate of other years in that country's series, using weighting factors that decrease exponentially.

Exponentially weighted moving average (EWMA) imputes missing values proceeding from the impact of the central value of the time series on all other years, which decreases exponentially for more distant time periods. As such, observations located next to a central value i have a weight of 0.5^1, all observations that are two periods away (i+2, i-2) have a weight of 0.5^2, those three periods away (i+3, i-3) obtain the weight of 0.5^3, etc. For producing a moving average, all years with actual values are taken into account, but the further an actual value is located from the actual central value, the lower the weight it is accorded in a country's time series. This method has a number of advantages: it differs from a simple moving average that would impute the same values for each missing year and result in a flat trend without changes between consequently imputed years; EWMA, on the contrary, produces a value for each missing year depending on the weights of the actual observations, which in turn depend on their distance from the central value; this method also has a major advantage in comparison to linear-based approaches which base their imputation proceeding from the value of a direct neighbor, which could happen to be an outlier, thus reducing the impact of single outlying observations on the overall trend. For details, see Moritz, S. & Bartz-Beielstein, T. (2017). imputeTS: Time Series Missing Value Imputation in R. The R Journal. 9 (1).

A moving average effectively reflects the fact that the homicide rate of most countries is generally quite stable over time and takes advantage of that property for the calculation of trend estimates. In addition, by using a moving average, all estimated homicide rates were limited by the range of all other available homicide rates of that same country, thus avoiding the generation of outliers that were either too high, or too low. Finally, this methodology was purposefully developed to be simple. A single estimation formula is applied to all data without exception, thus generating estimates that are objective, easy to communicate and to replicate.

Indicator 16.3.2: Unsentenced detainees as a proportion of overall prison population

Current level

Description of the methodology applied for measuring the current level:

Due to the absence of a numerical target for the SDG 16.3.2, UNODC has defined the categories to assess the levels of the SDG 16.3.2 based on the distribution of the percentage of unsentenced detainees as a proportion of overall prison population observed in 2018. The thresholds are in line with the 20th, 40th, 60th percentile, while the highest category threshold has been based on expert assessment. UNODC suggested a different terminology to be used for level categories: : Very low, low, moderate, high, very high

Thresholds applied for measuring level:

Assessment of the current level	Thresholds applied in the methodology used
Very low	x ≤ 15 per cent x: proportion of unsentenced detainees in overall prison population
Low	15 per cent < x ≤ 20 per cent
Moderate	20 per cent< x ≤ 30 per cent
High	30 per cent < x ≤ 40 per cent
Very high	40 per cent >x

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

> UNODC computed the Compound Annual Growth Rate (CAGR) to assess the indicator trend as UNSD proposed for Progress Chart Assessment for SDGs without a numerical target. The suggested thresholds were used. The trend assessment is conducted based on the period of 2015 to 2018.

The thresholds applied for measuring the trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CAGR < -0.01
Yellow	Fair progress but acceleration needed	-0.01 ≤ CAGR < -0.005
Orange	Limited or no progress	-0.005 < CAGR ≤ 0.01
Red	Deterioration	CAGR > 0.01

Use of a nowcasting or forecasting technique

The nowcasting or forecasting technique which was applied in the contribution for the progress chart is briefly described below:

> No nowcasting or forecasting techniques have been applied. However, UNODC has imputed missing values in the series with the average of the available values observed in the previous three years.

Indicator 16.a.1: Existence of independent national human rights institutions in compliance with the Paris Principles

Current level

Description of the methodology applied for measuring the current level:

Current level is assessed based on 2019 data.

Thresholds applied for measuring level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	x ≥ 75 per cent x: proportion of countries in each region with independent National Human Rights Institutions in compliance with the Paris Principles
Close to target	75 per cent > x ≥ 50 per cent
Moderate distance to target	50 per cent > x ≥ 25 per cent
Far from target	25 per cent > x ≥ 10 per cent
Very far from target	x < 10 per cent

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

The CR methodology (CR = actual compound annual growth rate (CAGR) upon required CAGR to meet target by 2030) recommended by UNSD was used to assess the trend from 2015 to 2019. The target set is 75 per cent by 2030.

Please define the calculation thresholds applied for measuring the trend in the table below:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	CR > 0.95 or Target met
Yellow	Fair progress but acceleration needed	0.5 ≤ CR ≤ 0.95
Orange	Limited or no progress	-0.1 ≤ CR < 0.5

Red	Deterioration	CR < -0.1

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

Current level

Description of the methodology applied for measuring the current level:

> For this indicator, the current level assessment is only applied to the world level. Given this is a measure of ODA/GNI in relation to the 0.7 per cent target, it is considered "Low ODA" on this basis. The current level assessment is based on 2019 data.

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

> For this indicator, the trend assessment is only applied to the world level. There is a compound annual growth rate of 0.02 per cent between 2015 and 2019. This is regarded as 'limited or no progress'.

Indicator 17.8.1: Proportion of individuals using the Internet

Current level

Description of the methodology applied for measuring the current level:

> The Connect 2020 states that "Worldwide, 60 per cent of individuals should be using the Internet by 2020". This is however only an intermediate goal towards universal Internet usage, which is defined as 90 per cent or more of the population using the Internet. Therefore, only regions that have reached universal usage receive the rating "Target met or almost". 60 per cent is defined as the threshold between close to target and moderate distance to target.
>
> The current level is assessed based on 2018 data with the thresholds below.

Thresholds applied for measuring level:

Assessment of the current level (or distance to the target)	Thresholds applied in the methodology used
Target met or almost met	99.9 per cent ≥ x > 90 per cent x: proportion of individuals using the internet
Close to target	90 per cent ≥ x > 60 per cent
Moderate distance to target	60 per cent ≥ x > 40 per cent
Far from target	40 per cent ≥ x > 30 per cent
Very far from target	30 per cent ≥ x > 0

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

> The Compound Annual Growth Rate (CAGR) is used to assess the indicator trend as UNSD proposed. The suggested thresholds were used as below. The trend assessment is conducted based on the period of 2015 to 2018.

The thresholds applied for measuring the trend:

	Trend	Thresholds applied in methodology used
Green	Substantial progress/ on track	Actual CAGR > 1 per cent or Target met
Yellow	Fair progress but acceleration needed	0.5 per cent ≤ Actual CAGR ≤ 1 per cent
Orange	Limited or no progress	-1 per cent ≤ Actual CAGR < 0.5 per cent
Red	Deterioration	Actual CAGR < -1 per cent

Indicator 17.18.3: Number of countries with a national statistical plan that is fully funded and under implementation, by source of funding

Current level

Description of the methodology applied for measuring the current level:

> The level is measured through the share of qualified countries, i.e. the ones who have national statistical plans fully funded and under implementation. It can be calculated as:

$$Share\ of\ qualified\ countries = \frac{x}{Y}$$

Where x is the number of countries with a national statistical plan fully funded and under implementation, and Y is the number of countries that reported their information on national statistical plans.

The current level is assessed based on 2019 data.

Thresholds applied for measuring level:

Assessment of the current level	Thresholds applied in the methodology used
Target met or almost met	More than 80 per cent of countries have a national statistical plan that is fully funded and under implementation
Close to target	60-80 per cent of countries have a national statistical plan that is fully funded and under implementation
Moderate distance to target	40-60 per cent of countries have a national statistical plan that is fully funded and under implementation
Far from target	20-40 per cent of countries have a national statistical plan that is fully funded and under implementation
Very far from target	Less than 20 per cent of countries have a national statistical plan that is fully funded and under implementation

Trend

Description of the methodology applied for measuring trend (or progress made since 2015 or other baseline year):

Trend assessment is conducted based on the period of 2017 to 2019.

Simply comparing the total number of countries, as suggested in the default methodology, cannot show real progress. As the indicator only became available after 2016 and the coverage has increased steadily, the total number of countries with fully funded and under implementation will almost certainly increase over time. Countries may begin to report to the survey in later years despite having a fully funded and under-implementation national statistical plan prior to 2016. The increase in sample size will also make it difficult to calculate the Compound Annual Growth Rate (CAGR).

If the current level is in category i (i.e. target met or almost met), no trend analysis is needed. If the current level is in categories ii-v. The progress of indicator 17.18.3 is measured through the actual Average Annual Growth Rate ($AAGR_a$):

$$AAGR_a = (\frac{1}{t_n - t_0}) \sum_{k=0}^{n} \Delta x_{t_k \to t_{k+1}}$$

Where $\Delta x_{t_k \to t_{k+1}}$ is the actual growth from year t_k to year t_{k+1}. It is defined as number of countries who 1) didn't have a national statistical plan fully funded and under implementation in year t_k, and 2) advanced to having one in the next year t_{k+1}. t_0 is the baseline year while t_n is the most recent year. y_n is the total number of countries with available information, i.e. the total number of countries who reported their data on this indicator.

It is important to distinguish between the actual growth and "nominal" growth, which can be defined as the difference between number of countries in year t_{k+1} and year t_k. For a newly established indicator such as 17.18.3, the coverage expanded quickly in the first few years (from 112 countries in 2017 to 188 in 2019). If use the nominal definition, one may mistakenly treat the expansion of coverage as actual progress toward the target.

See the example below:

Year	Countries reported to have statistical plans fully funded and under implementation	Countries reported to have no statistical plans fully funded and under implementation	Actual growth from the previous year	Nominal growth from the previous year
t_1	Country A, B	Country C, D		
t_2	Country A, B, E	Country C, D	0 country	+1 country
t_3	Country A, B, C, E	Country D	+1 country	+1 country

In this example, when comparing with year t_1, we observed that one more country (country E) reported to have a statistical plan fully funded and under implementation in year t_2. However, it should not be counted as an "actual improvement" because there is not sufficient evidence to indicate that country E did not have such plan fully funded prior to year t_2.

When comparing year t_3 with year t_2, we also observed that one more country (country C) reported to have a statistical plan fully funded and under implementation. Because country C also reported that they didn't have such plan in the previous year, it can be counted as an actual improvement.

Another example can be found in the actual data of indicator 17.18.3. In 2017-2019, 36 countries reported the implementation status of their statistical plans every year, but some countries did not report the funding status in the first two years. In 2017, 3 sub-Saharan

African countries reported that they had a national statistical plan fully funded and under implementation. The number was 8 for 2018 and 9 for 2019. However, none of these countries have reported that they did not have a statistical plan fully funded and under.

Where the baseline year being used for measuring trend is NOT the year 2015, comment is offered below:

2017 is set as the baseline year.

The data on the funding status of national statistical plans first became available for 2016, which was reported in 2017. In 2018 reporting, the data collection methodology of this indicator was modified to ensure quality and coverage. 2017 is thus the first year with available data based on the new methodology.

The thresholds applied for measuring the trend:

Trend		Thresholds applied in methodology used
Green	Substantial progress/ on track	Actual $AAGR_a$ > 5 per cent or Target met
Yellow	Fair progress but acceleration needed	5 per cent ≥ Actual $AAGR_a$ > 2.5 per cent
Orange	Limited or no progress	2.5 per cent ≥ Actual $AAGR_a$ > 0 per cent
Red	Deterioration	$AAGR_a$ ≤ 0 per cent