The Arab Region SDG Index and Dashboards 2025

Building Resilience

Appendices

SUSTAINABLE DEVELOPMENT
SOLUTIONS NETWORK
A GLOBAL INITIATIVE FOR THE UNITED NATIONS

كليــــة محمـــد بن راشــــد
للإدارة الحكـــــومـــية
MOHAMMED BIN RASHID
SCHOOL OF GOVERNMENT

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Authors: Experts involved in the production of the Arab Region SDG Index & Dashboards 2025 Report were:
- **Lama Zakzak** (MBRSG)
- **Keertana Subramani** (MBRSG)
- **Mari Luomi** (KAPSARC and MBRSG)
- **Grayson Fuller** (SDSN)
- **Fadi Salem** (MBRSG)
- **Guillaume Lafortune** (SDSN)

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For interactive visualization of the Arab SDG Index and Dashboards 2025, or to download a copy of the dataset and the latest edition of the report, please visit: **www.ArabSDGIndex.com**

To contact the Arab SDG Index & Dashboards 2025 Report team, email: sustainability.research@mbrsg.ac.ae

Appendix 1: Indicator Descriptions

SDG	Indicator	Reference Year	source	Source Link	description
1	Poverty headcount ratio at $2.15/day (2017 PPP, %)	2024	World Data Lab	http://worldpoverty.io/	Estimated percentage of the population that is living under the poverty threshold of US$2.15 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 $3.65/day (2017 PPP, %)	2024	World Data Lab	http://worldpoverty.io/	Estimated percentage of the population that is living under the poverty threshold of US$3.65 a day. Estimated using historical estimates of the income distribution, projections of population changes by age and educational attainment, and GDP projections.
1	Working poor at PPP$3.65 a day (% of total employment)	2023	ILO data	https://ilostat.ilo.org/topics/working-poverty/	Proportion of employed people who live on less than US$3.65 (in purchasing power parity terms) a day, expressed as a percentage of the total employed population ages 15 and older. The final indicator value sums up the % of extremely poor and moderately poor. Extremely poor: Less than $2.15 a day; Moderately poor: $2.15 to $3.65 a day Original source: ILOSTAT database, www.ilo.org/ilostat. Last update: 30 April 2024.
2	Prevalence of undernourishment (%)	2021	FAO	https://www.fao.org/faostat/en/#data/SDGB	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. Due to uncertainty in the estimates, the lowest value FAO attributes to countries is 2.5%. We therefore assume 2.5% in all high-income countries with missing data.

2	Prevalence of stunting in children under 5 years of age (%)	2021	UNICEF et al.	http://data.worldbank.org/indicator/SH.STA.STNT.ZS	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 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 (%)	2021	UNICEF et al.	http://data.worldbank.org/indicator/SH.STA.WAST.ZS	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)	2022	WHO	https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-obesity-among-adults-bmi--30-(age-standardized-estimate)-(-)	The percentage of the adult population that has a body mass index (BMI) of $30kg/m^2$ or higher, based on measured height and weight.
2	Cereal yield (tonnes per hectare of harvested land)	2022	FAO	http://data.worldbank.org/indicator/AG.YLD.CREL.KG	Cereal yield, measured as tons per hectare of harvested land. Production data on cereals related 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)	2018	Zhang and Davidson (2019)	https://doi.org/10.1002/essoar.10501111.1	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	Human Trophic Level (best 2-3 worst)	2021	Bonhomme au et al. (2013) data updated to 2017	https://doi.org /10.1073/pna s.1305827110	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 each country. A higher trophic level represents a greater level of consumption of energy-intensive animals.
2	Exports of hazardous pesticides (tons per million population)	2021	FAO	http://www.fa o.org/faostat/ en/#data/RT/ metadata	Exports of pesticides deemed hazardous to human health, standardized by population. Due to volatility, the calculation uses the average value over the last 5 years.
3	Maternal mortality ratio (per 100,000 live births)	2020	WHO et al.	https://www. who.int/data/ gho/data/indi cators/indicat or- details/GHO/ maternal- mortality- ratio-(per- 100-000-live- births)	The estimated number of women, between the age of 15 and 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)	2022	UN Inter- agency Group for Child Mortality Estimation	https://child mortality.org/	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)	2022	UN Inter- agency Group for Child Mortality Estimation	https://child mortality.org/	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)	2022	WHO	http://data.wo rldbank.org/in dicator/SH.TB S.INCD	The estimated rate of new and relapse cases of tuberculosis each 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, all ages)	2022	UNAIDS	https://aidsinf o.unaids.org/ ?chp=false	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 to 70 years (%)	2019	WHO	https://www.who.int/data/gho/data/indicators/indicator-details/GHO/probability-(-)-of-dying-between-age-30-and-exact-age-70-from-any-of-cardiovascular-disease-cancer-diabetes-or-chronic-respiratory-disease	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)	2019	WHO	https://unstats.un.org/sdgs/indicators/database/?indicator=3.9.1	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)	2021	WHO	https://www.who.int/data/gho/data/indicators/indicator-details/GHO/estimated-road-traffic-death-rate-(per-100-000-population)	Estimated number of fatal road traffic injuries per 100,000 people.
3	Life expectancy at birth (years)	2021	UNDESA	https://population.un.org/wpp/Download/Standard/MostUsed/	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.
3	Adolescent fertility rate (births per 1,000 females aged 15 to 19)	2022	WHO	https://www.who.int/data/gho/data/indicators/indicator-	The number of births per 1,000 females between the age of 15 and 19.

				details/GHO/ adolescent-birth-rate-(per-1000-women-aged-15-19-years)	
3	Births attended by skilled health personnel (%)	2022	UNICEF	https://unstats.un.org/sdgs/dataportal/database	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	Surviving infants who received 2 WHO-recommended vaccines (%)	2022	WHO and UNICEF	https://data.unicef.org/topic/child-health/immunization/#data	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)	2021	WHO	https://unstats.un.org/sdgs/indicators/database/?indicator=3.8.1	Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population). 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)	2023	Gallup	https://worldhappiness.report/ed/2024/#appendices-and-data	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	Diabetes prevalence (% of	2021	World Bank (World Developme	https://data.worldbank.org/i	Diabetes prevalence refers to the percentage of people ages 20-79 who have type 1 or type 2 diabetes.

				nt Indicators)	ndicator/SH.STA.DIAB.ZS	
	population ages 20 to 79)			nt Indicators)	ndicator/SH.STA.DIAB.ZS	
3	Age-standardized suicide rates (per 100 000 population)	2019	WHO	https://www.who.int/data/gho/data/indicators/indicator-details/GHO/age-standardized-suicide-rates-(per-100-000-population); https://www.who.int/data/gho/data/themes/mental-health/suicide-rates	The age-standardized mortality rate is a weighted average of the age-specific mortality rates per 100,000 persons, where the weights are the proportions of persons in the corresponding age groups of the WHO standard population.
3	Age standardized prevalence of current tobacco smoking among persons aged 15 years or older (%)	2020	WHO	https://www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/ ; https://unstats.un.org/sdgs/dataportal/database (search for 3.a.1)	The indicator is defined as the percentage of the population aged 15 years and over who currently
4	Net primary enrollment rate (%)	2022	UNESCO	http://data.uis.unesco.org/	The percentage of children of the official school age population who are enrolled in primary education.
4	Literacy rate (% of population aged 15 to 24)	2022	UNESCO	http://sdg4-data.uis.unesco.org/	The percentage of youth, aged 15 to 24, who can both read and write a short simple statement on everyday life with understanding.
4	Lower secondary completion rate (%)	2022	UNESCO	https://data.worldbank.org/indicator/SE.SEC.CMPT.LO.ZS	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	Participation rate in pre-primary organized learning (% of children aged 4 to 6)	2022	UNESCO	http://sdg4-data.uis.unesco.org/	Participation rate in organized learning one year before the official primary entry age measured by the adjusted net enrollment rate in organized learning.
4	School enrollment, tertiary (% gross)	2022	World Bank (World Development Indicators)	https://data.worldbank.org/indicator/se.ter.enrr	The ratio of total enrolment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Tertiary education, whether or not to an advanced research qualification, normally requires, as a minimum condition of admission, the successful completion of education at the secondary level.
4	Harmonized Test Scores	2020	World Bank (Human Capital Index)	https://databank.worldbank.org/source/human-capital-index	The database harmonizes scores across major international student achievement testing programs measured in TIMMS-equivalent units, where 300 is minimal attainment and 625 is advanced attainment. Most recent estimates as of 2020 are used.
5	Demand for family planning satisfied by modern methods (% of females aged 15 to 49)	2024	UNDESA	https://unstats.un.org/sdgs/indicators/database/	The percentage of women of reproductive age whose demand for family planning has been met using modern methods of contraception.
5	Modeled estimate: Demand for family planning satisfied by any modern method (% of females aged 15 to 49)		UNDESA	https://www.un.org/development/desa/pd/data/family-planning-indicators	
5	Ratio of female-to-male mean years of education received (%)	2022	UNDP	https://hdr.undp.org/data-center/documentation-and-downloads	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	2023	ILO	https://data.worldbank.org/indicator/SL.T	Modeled estimate of the proportion of the female population aged 15 years and older that is economically active,

	participation rate (%)			LF.CACT.FM.ZS	divided by the same proportion for men.
5	Seats held by women in national parliament (%)	2024	IPU	https://data.ipu.org/women-ranking?month=1&year=2024	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	Ratio of estimated gross national income per capita, female/male (2017 PPP $)	2022	UNDP (Human Development Data)	https://hdr.undp.org/data-center/documentation-and-downloads	Ratio of female to male wages; female and male shares of economically active population and gross national income (in 2017 purchasing power parity terms).
5	Women (aged 20-24 years) married or in union before age 15 (%)	2023	UNICEF	https://data.unicef.org/resources/dataset/child-marriage/	Percentage of women aged 20 to 24 years who were first married or in union before age 15.
5	Proportion of women in ministerial positions (%)	2022	World Bank (World Development Indicators)	https://data.unwomen.org/arab-states/data-portal/roas?parent-theme=GG&theme=GG-PLDM&fisbi%5Bmrg-49%5D%5B%5D=sind_1&fitop%5B5.5.2%5D%5B%5D=pos_1&finic%5B%5D=SG.GEN.MNST.ZS&fyr%5B%5D=Latest%20available&fgendr=Female&tab=map	Women in ministerial level positions is the proportion of women in ministerial or equivalent positions (including deputy prime ministers) in the government. Prime Ministers/Heads of Government are included when they hold ministerial portfolios. Vice-Presidents and heads of governmental or public agencies are excluded.
5	Mandatory paid maternity leave (days)	2023	World Bank (World Development Indicators)	https://databank.worldbank.org/source/gender-statistics/Seri	The mandatory minimum number of calendar days that legally must be paid by the government, the employer or both. It refers to leave related to the birth of a child that is only available to

				es/SH.MMR.L EVE	the mother; it does not cover parental leave that is available to both parents.
6	Population using at least basic drinking water services (%)	2022	JMP	https://data.w orldbank.org/i ndicator/SH. H2O.BASW.Z S	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 (%)	2022	JMP	https://data.w orldbank.org/i ndicator/SH.S TA.BASS.ZS	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)	2021	FAO	https://unstat s.un.org/sdgs/ indicators/dat abase/?indic ator=6.4.2	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 (%)	2020	EPI	http://epi.yale .edu/	The proportion of wastewater that undergoes at least primary treatment in each country, multiplied by the proportion of the population connected to a wastewater collection system.
6	Scarce water consumption embodied in imports (m^3 H_2Oeq/capita)	2024	UNEP	http://scp-hat.lifecyclein itiative.org/m odule-2-scp-hotspots/	Water scarcity is measured as water consumption weighted by scarcity indices. In order to incorporate water scarcity into the virtual water flow calculus, 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.
6	Degree of integrated water resources management implementation (%)	2023	UNEPDHI	http://iwrmda taportal.unep dhi.org/	The indicator measures the degree of implementation of Integrated Water Resources Management (IWRM), measured in per cent (%) from 0 (implementation not yet started) to 100

					(fully implemented) is currently being measured in terms of different stages of development and implementation of Integrated Water Resources Management (IWRM).
6	Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (per 100,000 population)	2019	World Bank (World Development Indicators)	https://data.worldbank.org/indicator/SH.STA.WASH.P5?view=chart	Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene is deaths attributable to unsafe water, sanitation and hygiene focusing on inadequate WASH services per 100,000 population. Death rates are calculated by dividing the number of deaths by the total population. In this estimate, only the impact of diarrhoeal diseases, intestinal nematode infections, and protein-energy malnutrition are taken into account.
7	Population with access to electricity (%)	2021	IEA, IRENA, UNSD, WB, WHO	http://data.worldbank.org/indicator/EG.ELC.ACCS.ZS	The percentage of the population who has access to electricity.
7	Population with access to clean fuels and technology for cooking (%)	2021	WHO	https://www.who.int/data/gho/data/indicators/indicator-details/GHO/gho-phe-primary-reliance-on-clean-fuels-and-technologies-proportion	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 per total electricity output ($MtCO_2$/TWh)	2022	Global Carbon Project & IEA	https://www.icos-cp.eu/science-and-impact/global-carbon-budget https://www.eia.gov/international/data/world/electricity/electricity-generation	A measure of the carbon intensity of energy production, calculated by dividing CO_2 emissions from the combustion of fuel by electricity output. The data are reported in Megatons per billion kilowatt hours.

7	Renewable electricity output (% of total electricity output)	2023	Our World in Data	https://ourworldindata.org/grapher/elec-mix-bar?time=2020	Renewable electricity is the share of renewable energy sources (Solar PV, Solar Thermal, Wind, Biofuels & Hydro power) in total electricity consumption in the country (fossil fuels, nuclear energy and renewables)
7	Energy intensity (Total energy supply (TES) by GDP (PPP))(MJ per 2017 USD PPP)	2021	IEA	https://www.iea.org/data-and-statistics/data-product/sdg7-database#energy-intensity	Energy intensity level is the ratio between total energy supply and gross domestic product measured at purchasing power parity. Energy intensity is an indication of how much energy is used to produce one unit of economic output. Lower ratio indicates that less energy is used to produce one unit of output. Note: IEA considers Total energy supply (TES) as production + imports - exports - international marine bunkers - international aviation bunkers ± stock changes.
8	Adjusted GDP growth (%)	2022	World Bank	https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD	The growth rate of GDP adjusted to income levels (where rich countries are expected to grow less) and expressed relative to the average growth rate of high income countries. The growth rate over the last 3-year period (t-3 to t) was calculated where $GR_a=(A_t/A_{t-3})^{(1/3)}-1$ and where GR_a is the growth rate for country A and A_t is the GDP per capita data for the year t in country A. Then our adjustment is as follows : $ADJ_a= [GR_a-(GR_{hic} - 0,015*log(A_{t-3}/hic_{t-3}))] * 100$, where GR_{hic} is the average growth rate of high-income countries and hic_{t-3} is the average GDP per capita of high-income countries three years ago.
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)	2021	Global Findex Database	https://data.worldbank.org/indicator/FX.OWN.TOTL.ZS	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	Unemployment rate (% of total labor force, ages 15+)	2024	ILO	https://www.ilo.org/shinyapps/bulkexplorer14/?lang=en&segment=i	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

				ndicator&id=UNE_2EAP_SEX_AGE_RT_A	employment for people who want to work but are not doing so.
8	Victims of modern slavery (per 1,000 population)	2022	Walk Free Foundation (2018)	https://www.globalslaveryindex.org/	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	Fatal work-related accidents embodied in imports (per million population)	2018	Alsamawi et al. (2017) data updated to 2018	https://doi.org/10.1016/j.jclepro.2016.12.110	The number of fatal work-related accidents associated with imported goods. Calculated using extensions to a multiregional input-output table.
8	Victims of modern slavery embodied in imports (per 100,000 population)	2018	Malik et al (2022)	Data provided by Malik A. https://onlinelibrary.wiley.com/doi/abs/10.1111/jiec.13169	Victims of forced labor embodied in supply chains. Calculated using a multi-regional input-output table (Gloria) extended with a slavery satellite account
8	Labor freedom score	2024	The Heritage Foundation	https://www.heritage.org/index/explore	The labor freedom component is a quantitative measure that considers various aspects of the legal and regulatory framework of a country's labor market, including regulations concerning minimum wages, laws inhibiting layofs, severance requirements, and measurable regulatory restraints on hiring and hours worked, plus the labor force participation rate as an indicative measure of employment opportunities in the labor market. Seven quantitative sub-factors are equally weighted, with each sub-factor counted as one seventh of the labor freedom component: Ratio of minimum wage to the average value added per worker, Hindrance to hiring additional workers, Rigidity of hours, Difficulty of firing redundant employees, Legally mandated notice period, Mandatory severance pay, and Labor force participation rate. (https://www.heritage.org/index/pdf/2021/book/02_2021_IndexOfEconomicFreedom_METHODOLOGY.pdf)

8	Unemployment, youth total (% of total labor force ages 15-24)	2023	World Bank (World Development Indicators)	https://data.worldbank.org/indicator/SL.UEM.1524.ZS	Youth unemployment refers to the share of the labor force ages 15-24 without work but available for and seeking employment. Definitions of labor force and unemployment differ by country.
8	Product concentration index, exports	2023	UNCTAD WDS	https://unctadstat.unctad.org/wds/	Concentration index, also named Herfindahl-Hirschmann Index (Product HHI), is a measure of the degree of product concentration. The export concentration index shows to which degree exports of individual economies are concentrated on a few products rather than being distributed in a more homogeneous manner among several products.
9	The Times Higher Education Universities Ranking: Average score of top 3 universities (worst 0-100 best)	2024	Times Higher Education	https://www.timeshighereducation.com/world-university-rankings	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.
9	Population using the internet (%)	2022	ITU	https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx	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)	2022	ITU	https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx	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: Infrastructure Score (worst 1-5 best)	2023	World Bank	https://lpi.worldbank.org/international/global	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	Articles published in academic journals (per 1,000 population)	2022	Scimago Jounal Rank	https://www.scimagojr.com/countryrank.php?year=2020	Number of citable documents published by a journal in the three previous years (selected year documents are excluded). Exclusively articles, reviews and conference papers are considered.

9	Expenditure on research and development (% of GDP)	2022	UNESCO	http://data.uis.unesco.org/index.aspx?queryid=3684	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	Carbon dioxide emissions per unit of manufacturing value added (kilograms of CO2 per constant 2015US$)	2021	SDGS/UN Stats	https://unstats.un.org/sdgs/dataportal/database	Carbon dioxide emissions per unit of manufacturing value added (kilograms of CO_2 per constant 2015 US$) measures the carbon intensity of the manufacturing economic output, and its trends result from changes in the average carbon intensity of the energy mix used, in the structure of the manufacturing sector, in the energy efficiency of production technologies in each sub-sector, and in the economic value of the various outputs.
9	Rural population with access to all-season roads (%)	2024	SDSN (2023), based on Workman, R. & McPherson, K., TRL (2019)	https://sdsn.maps.arcgis.com/home/item.html?id=d386abdab7d946aa8b1a0cd11496d91f	Proportion of the rural population that lives within 2 km of an all-season road. An all-season road is one that is motorable throughout the year but may be temporarily unavailable during inclement weather.
10	Palma ratio	2022	OECD & UNDP	https://data-explorer.oecd.org/vis?tm=palma&pg=0&snb=43&df[ds]=dsDisseminateFinalDMZ&df[id]=DSD_WISE_IDD%40DF_IDD&df[ag]=OECD.WISE.INE&df[vs]=1.0&pd=2010%2C&dq=.A.INC_DISP_GINI..._T.METH2012.D_CUR.&ly[rw]=REF_AREA%2CUNIT_MEASURE&ly[cl]=TIME_PERI	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.

				OD&to[TIME_PERIOD]=false	
10	Gini coefficient	2021	World Bank	https://data.worldbank.org/indicator/SI.POV.GINI	The Gini coefficient measures the extent to which the distribution of income among individuals or households within an economy deviates from a perfectly equal distribution.
11	Annual mean concentration of PM2.5 (µg/m^3)	2022	Washington University in St Louis	https://sites.wustl.edu/acag/datasets/surface-pm2-5/	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	Population with convenient access to public transport in cities (%)	2020	UN-Habitat	https://unstats.un.org/sdgs/dataportal/database	The proportion of the population that has convenient access to public transport. The access to public transport is considered convenient when a stop is accessible within a walking distance along the street network of 500 m from a reference point such as a home, school, work place, market, etc. to a low-capacity public transport system (e.g. bus, Bus Rapid Transit) and/or 1 km to a high-capacity system (e.g. rail, metro, ferry).
11	Access to improved water source, piped (% of urban population)	2022	WHO and UNICEF	https://washdata.org/data/household#!/table?geo0=region&geo1=sdg	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.
12	Municipal solid waste (kg/capita/day)	2019	World Bank	https://datacatalog.worldbank.org/search/dataset/0039597/What-a-Waste-Global-Database	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	Nitrogen emissions associated with imports (kg/capita)	2024	UNEP	http://scp-hat.lifecycleinitiative.org/module-2-scp-hotspots/	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	Electronic waste (kg/capita)	2019	UNU-IAS	https://www.itu.int/en/ITU-D/Environment/Documents/Toolbox/GEM_2020_def.pdf	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 air pollution (DALYs per 1,000 population)	2024	UNEP	http://scp-hat.lifecycleinitiative.org/module-2-scp-hotspots/	Emissions of air pollution embodied from the production of goods and services. Air pollutants are converted into disability-adjusted life years lost (DALYs) to aggregate across types of pollution.
12	Air pollution associated with imports (DALYs per 1,000 population)	2024	UNEP	http://scp-hat.lifecycleinitiative.org/module-2-scp-hotspots/	Emissions of air pollution embodied in imported goods and services. Air pollutants are converted into disability-adjusted life years lost (DALYs) to aggregate across types of pollution.
12	Production-based nitrogen emissions (kg/capita)	2024	UNEP	http://scp-hat.lifecycleinitiative.org/module-2-scp-hotspots/	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	Fossil-fuel subsidies (consumption and production) per capita (nominal US$)	2022	UNSDG/UN Stats	https://unstats.un.org/sdgs/unsdg	Fossil-fuel subsidies (consumption and production) per capita (nominal United States dollars)
12	Compliance with multilateral environmental	2020	UNEP/UN Stats	https://unstats.un.org/sdgs/dataportal	Compliance with four multilateral environmental agreements (MEAs) on hazardous waste and other chemicals:

					Basel Convention, Montreal Protocol, Rotterdam Convention and Stockholm Convention. Data from 2015-2020. Absence of compliance data for a convention equals to a score 0 for the convention in question.
12	Exports of plastic waste (kg/capita)	2023	UN Comtrade	https://comtrade.un.org/data/	The average annual amount of plastic waste exported over the last 5 years expressed per capita.
13	CO_2 emissions from fossil fuel combustion and cement production (tCO2/capita)	2022	Global Carbon Project	https://www.icos-cp.eu/science-and-impact/global-carbon-budget	Emissions from the combustion and oxidation of fossil fuels and from cement production. The indicator excludes emissions from fuels used for international aviation and maritime transport.
13	GHG emissions embodied in imports (tCO$_2$/capita)	2021	Lenzen et al. (2022)	Data provided by Malik, A.	CO_2 emissions embodied in imported goods and services.
13	CO_2 emissions embodied in fossil fuel exports (kg/capita)	2023	UN Comtrade	https://comtrade.un.org/data/	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	People affected by climate-related disasters (per 100,000 population, 5 year average)	2024	EM-DAT	www.emdat.be	The yearly average number of people that have died, been left injured, homeless or in need of basic survival needs due to climate related disasters (Hydrological, Meteorological, Climatological) over a five-year period per 100,000 population.
14	Fish caught that are then discarded (%)	2019	Sea around Us	http://www.seaaroundus.org/data/#/search	The percentage of fish that are caught only to be later discarded.
14	Marine biodiversity threats embodied in imports (per million population)	2018	Lenzen et al. (2012) data updated to 2018	https://www.nature.com/articles/nature11145	Threats to marine species embodied in imports of goods and services.
14	Mean area that is protected in marine sites important to biodiversity (%)	2023	Birdlife International et al.	https://unstats.un.org/sdgs/indicators/dat	The mean percentage area of marine Key Biodiversity Areas (sites that are important for the global persistence of marine biodiversity) that are protected.

				abase/?indic ator=14.5.1	
14	Ocean Health Index: Clean Waters score (worst 0-100 best)	2023	Ocean Health Index	https://ocean healthindex.o rg/global-scores/data-download/	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 by trawling or dredging (%)	2019	Sea Around Us	http://www.s eaaroundus.o rg/data/#/sear ch	The percentage of fish caught by bottom trawling, a method of fishing in which industrial fishing vessels drag large nets (trawls) along the seabed. This indicator is the sum of the series for bottom trawling, shrimp trawling, and dredging.
14	Ocean Health Index Goal - Fisheries (0-100)	2023	Ocean Health Index	http://ohi-science.org/o hi-global/downl oad	The Fisheries sub-goal of the Ocean Health Index assesses the amount of wild-caught seafood harvested and its sustainability for human consumption. The model compares landings with Maximum Sustainable Yield. A score of 100 means the country is harvesting seafood to the ecosystem's production potential in an sustainable manner.
15	Imported deforestation (m^2/capita)	2022	GSCI	https://gcsi.u nsdsn.org/ma p/indicators/s pillover-deforestation-3-year-average/prop ortional/rating s	Deforestation abroad caused by goods imported for final consumption locally. First, land-use change driven carbon emissions were calculated by determining into which economic activities caused observed deforestation by using geospatial datasets on yearly deforestation, crop and livestock distribution and main deforestation drivers, as well as carbon stocks. The results are then linked to the MRIO tables in order to link the total deforestation to the final consumer of each commodity.
15	Mean area that is protected in terrestrial sites important to biodiversity (%)	2023	Birdlife Internationa l et al.	https://unstat s.un.org/sdgs/ indicators/dat abase/?indic ator=15.1.2	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	2023	Birdlife Internationa l et al.	https://unstat s.un.org/sdgs/ indicators/dat	The mean percentage area of freshwater Key Biodiversity Areas (sites that are important for the global

				abase/?indic ator=15.1.2	persistence of biodiversity) that are protected.
15	Red List Index of species survival (worst 0-1 best)	2024	IUCN and Birdlife International	http://unstats .un.org/sdgs/i ndicators/dat abase/?indic ator=15.5.1	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.
16	Homicides (per 100,000 population)	2022	UNODC	https://datau nodc.un.org/d p-intentional- homicide- victims	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)	2022	UNODC	https://datau nodc.un.org/d p-prisons- persons-held	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.
16	Birth registrations with civil authority (% of children under age 5)	2023	UNICEF	http://data.un icef.org/child- protection/bir th- registration.ht ml	The percentage of children under the age of five whose births are reported as being registered with the relevant national civil authorities.
16	Corruption Perceptions Index (worst 0-100 best)	2023	Transparenc y Internationa l	https://www.t ransparency.o rg/	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 (%)	2020	UNICEF	https://data.u nicef.org/topi c/child-	The percentage of children, between the age of 5 and 17 years old, involved in child labor at the time of the survey.

				protection/child-labour/	We assumed 0% child labor for high-income countries for which no data was reported.
16	Press Freedom Index (worst 0-100 best)	2024	Reporters sans frontières	https://rsf.org/en/ranking	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	Exports of major conventional weapons (TIV constant million USD per 100,000 population)	2023	Stockholm Peace Research Institute	https://sipri.org/databases/armstransfers	Volume of major conventional weapons exported, expressed in constant 1990 US$ millions (TIV) per 100,000 population. The trend-indicator value 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. Values were calculated using a 5-year average on the latest ten years of data. *The inclusion of an indicator on the exports of major conventional weapons should not be interpreted as a value judgment by the authors on the policies implemented in the context of the war in Ukraine.
16	Battle-related deaths (per 100,000 population, average of 5 years)	2022	World Bank (World Development Indicators)	https://data.worldbank.org/indicator/VC.BTL.DETH	Battle-related deaths are deaths in battle-related conflicts between warring parties, usually involving armed forces. This includes traditional battlefield fighting, guerrilla activities, and all kinds of bombardments of military units, cities, and villages, etc. All deaths--military as well as civilian--incurred in such situations, are counted as battle-related deaths.
16	Prison population (per 100,000 persons)	2023	UNODC	https://dataunodc.un.org/dp-prisons-persons-held	As per UN-CTS definition, prison population is composed of Persons Held in Prisons, Penal Institutions or Correctional Institutions. It refers to persons held on a specified day and it should exclude non-criminal prisoners held for administrative purposes, for example, persons held pending investigation into their immigration status or foreign citizens without a legal right to stay. Latest year available (2013-2018)

16	Imports of major conventional weapons (TIV US$ million per 100,000 population, 5 year average)	2023	Stockholm Peace Research Institute	https://armstrade.sipri.org/armstrade/page/values.php	Figures are SIPRI Trend Indicator Values (TIVs) expressed in millions. SIPRI TIV figures do not represent sales prices for arms transfers. They should therefore not be directly compared with gross domestic product (GDP), military expenditure, sales values or the financial value of export licenses in an attempt measure the economic burden of arms imports or the economic benefits of exports.
16	Status of fundamental human rights treaties	2022	UNOHCHR	https://indicators.ohchr.org/	Ratification of 11 fundamental International Human Rights Treaties: ICERD, ICCPR, ICESCR, CEDAW, CAT, CRC, ICMW, CRC-AC, CRC-SC, ICPED and CRPD.
16	Political stability and absence of violence/terrorism	2022	World Bank (Worldwide Governance Indicators)	www.govindicators.org	Measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism.
17	Corporate Tax Haven Score (best 0-100 worst)	2021	Tax Justice Network	https://corporatetaxhavenindex.org/	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 average value across the jurisdictions was assigned to the country.
17	Statistical Performance Index (worst 0-100 best)	2022	World Bank	https://www.worldbank.org/en/programs/statistical-performance-indicators	The Statistical Performance Index is a weighted average of the statistical performance indicators that evaluate the performance of national statistical systems. It aggregates five pillars of statistical performance: data use, data services, data products, data sources, and data infrastructure.
17	Government spending on health and education (% of GDP)	2022	UNESCO	https://www.who.int/data/gho/data/indicators/indicator-details/GHO/domestic-general-government-health-	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. This indicator is based on the World Bank health and education spending datasets, sourced from WHO & UNESCO respectively. Values are carried forward for both health and

				expenditure-(gghe-d)-as-percentage-of-gross-domestic-product-(gdp)-(-) https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS	education, but a value in a given year is only reported if at least one data point is a real observation (not carried forward).
17	Index of countries' support to UN-based multilateralism (worst 0-100 best)	2023	SDSN	https://sdgtransformationcenter.org/static/docs/methodologies/11-03-2023-Multilateralism_Index.pdf	Measures countries' support to UN-based multilateralism via six indicators: (1) Ratification of major UN treaties; (2) UNGA votes with the international majority; (3) Membership in selected UN organizations; (4) Participation in conflicts and militarization; (5) Use of unilateral coercive measures and (6) Contribute to the UN budget & International solidarity