INTEGRATED SDG INSIGHTS
Methodological Note

VERSION 1.4

The purpose of this guide is to provide the methodological reference for the SDG Integrated Insights. More specifically, it guides users on how to follow the four steps sections of the SDG Integrated Insights. The four steps focus on SDG Moment, Trends & Priorities, Interlinkages, Finance & Stimulus.
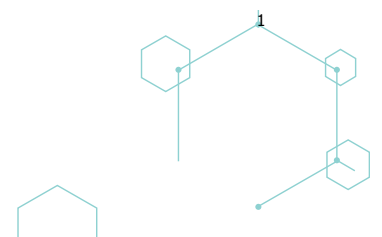
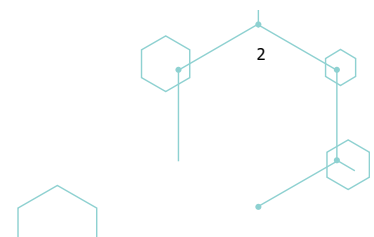For additional questions please contact data@undp.org

Table of Contents

Overview

In support of national SDG ambition at the mid-point in the 2030 Agenda, UNDP collaborated with 95 countries to assess where they are on the road to achieving the SDGs and, more importantly, to identify where there is strongest potential for accelerating progress on the SDGs between now and 2030.

Integrated SDG insights deliver something unique --not a statistical gaps report or evaluation of development impact -- but a playbook, exploring both the strategies and tactics needed to advance SDG pathways. The playbook transcends the SDG Summit, and points to macro trends and potential pathways that meet the collective ambition of the 2030 Agenda.

Integrated SDG Insights provides an overview of the country's current status and highlights potential conflicts between growth, environmental concerns, and societal well-being (referred to as the SDG Moment). It builds from the foundation of national SDG progress through the lens of the 5Ps and uses machine learning to analyze national development ambition with an SDG lens (SDG Trends & Priorities). Combined, these insights are mapped against SDG interlinkages to define policy choices the accelerate SDG progress, tailored to national context (SDG Interlinkages). These policy choices are made against fiscal constraints and opportunities for stimulus to ensure choices translate to development impact and leaves no one behind (Finance & Stimulus).

Links to Digital Spaces:

- Global Overview https://sdgpush.undp.org/
- Country Reports https://sdgpush.undp.org/reports.html
- SDG Push Diagnostic https://sdgdiagnostics.data.undp.org/

Each SDG Insight report leverages data, AI and systems intelligence through four key features:

- **SDG Moment:** Assesses challenges and opportunities in national growth trajectories with insights on environmental sustainability and inclusiveness.
- **Trends & Priorities:** Utilizes official UN statistics to assess SDG progress, and custom-built machine learning to synthesize national priorities & align to the SDGs.
- **SDG Interlinkages:** Maps synergies and trade-offs for the most relevant SDG targets to chart policy pathways with biggest multiplier effects
- **Finance & Stimulus:** Provides insight into indicators of fiscal and financial stress with options (INFF) for stimulus and other means to accelerate progress.

METHODOLOGY AND DATA SOURCE SUMMARY

SDG MOMENT	TRENDS & PRIORITIES	INTERLINKAGES	FINANCE & STIMULUS
Methodology Assesses challenges and opportunities in national growth trajectories with insights on environmental sustainability and inclusiveness.	**Methodology** SDG trends tracks progress from 2015 to date for the 231 indicators. National priorities are analysed using machine learning to reveal the most prominent SDGs referenced in national policy documents.	**Methodology** Global target-level interlinkages are drawn from the KnowSDGs Platform by European Commission. SDG interlinkages were retrieved through a structured literature review in Scopus and Google Scholar to tap both grey literature and peer-reviewed publications as a source of information.	**Methodology** Provides insight into indicators of fiscal and financial stress with options (INFF) for stimulus and other means to accelerate progress.
Data Sources Future trajectories to 2025 are based on IMF-WEO GDP projections, distributions of per capita income or consumption from the World Bank, and CO$_2$ emissions from the Global Carbon Budget 2022 and EDGAR (JRC and IEA).	**Data Source** Trends utilizes official UN statistics to assess SDG progress, supplemented with national data when available. Priorities uses a custom-built model for SDG classification. The policy documents analyses are provided by Governments.	**Data Source** The exercise globally considered a total of 454 documents published from 2015 to August 2022. (Miola et al., 2019 updated in 2021-2022)	**Data Source** Most recent resource data from UNU-WIDER GRD (between 2018 and 2021), debt and revenue from IMF WEO (between 2020 and forecasts for 2023), external debt from IDS (2023), yields from Haver Analytics (8 June 2023), credit ratings from S&P, Moodys and FITCH (2023), and DSA ratings from World Bank/IMF (31 May 2023).

SDG Moment:

- Methodology: Assesses challenges and opportunities in national growth trajectories with insights on environmental sustainability and inclusiveness.

- Data Sources: Future trajectories to 2025 are based on IMF-WEO GDP projections, distributions of per capita income or consumption from the World Bank, and CO_2 emissions from the Global Carbon Budget 2022 and EDGAR (JRC and IEA).

Trends & Priorities:

- Methodology: SDG trends tracks progress from 2015 to date for the 231 indicators. National priorities are analysed using machine learning to reveal the most prominent SDGs referenced in national policy documents.

- Data Sources: Trends utilizes official UN statistics to assess SDG progress, supplemented with national data when available. Priorities uses a custom-built model for SDG classification. The policy documents analyses are provided by Governments.

Interlinkages:

- Methodology: Global target-level interlinkages are drawn from the KnowSDGs Platform by European Commission. SDG interlinkages were retrieved through a structured literature review in Scopus and Google Scholar to tap both grey literature and peer-reviewed publications as a source of information.

- Data Sources: The exercise globally considered a total of 454 documents published from 2015 to August 2022. (Miola et al., 2019 updated in 2021-2022)

Finance & Stimulus:

- Methodology: Provides insight into indicators of fiscal and financial stress with options (INFF) for stimulus and other means to accelerate progress.

- Data Sources: Most recent resource data from UNU-WIDER GRD (between 2018 and 2021), debt and revenue from IMF WEO (between 2020 and forecasts for 2023), external debt from IDS (2023), yields from Haver Analytics (8 June 2023), credit ratings from S&P, Moodys and FITCH (2023), and DSA ratings from World Bank/IMF (31 May 2023).

SDG Moment

Overview

Assesses challenges and opportunities in national growth trajectories with insights on environmental sustainability and inclusiveness.

The growth trajectory plots countries' current GDP growth forecasts and assess the economic cycle by contrasting such forecasts with those made before the pandemic and subsequent crises. This allows us, for instance, to gauge whether a country's current pace of growth is still mitigating the recent contractions and slowdowns or already in an acceleration path. Additionally, we assess whether this growth trajectory is aligned with pressing environmental challenges and inclusiveness —e.g., whether an economy's expansion is either increasingly or decreasingly dependent on carbon emissions and whether such expansion translates into monetary poverty reduction.

SOURCES AND METHODOLOGY

The growth trajectory covers the period 2019-2025 and it is based on data from the IMF World Economic Outlook (WEO) Databases (April 2023 for the current series 2019-2025, and October 2019 and October 2020 for the pre-crisis series 2019-2025).

The indicator on carbon emissions is measured by country's CO_2 emissions intensity of GDP, which is defined as tonnes of CO_2 per $1,000 at 2017 PPP. This indicator is based on GDP data from the IMF World Economic Outlook (WEO) Database (April 2023), and on fossil and land-use change CO_2 emissions by country in 2021 from Friedlingstein et al. (2022). "Global Carbon Budget 2022." *Earth System Science Data*, 14: 4811-4900 and EDGAR (JRC and IEA). The projection of CO_2 emissions for the period 2022-2025 is based on the countries' average annual growth rate of emissions during the decade 2009-2019.

The projections on the incidence of monetary poverty are based on binned distributions ($0.10-bins) of per capita income or consumption (2017 PPP) in 2019 reconstructed from the World Bank's Poverty and Inequality Platform through the pip: Stata Module (version 0.9.5); GDP per capita growth rates computed from the IMF, World Economic Outlook (WEO) Databases (April 2023); and population growth rates computed from the United Nations, World Population Prospects 2022. The estimates for 2023 and 2025 are computed by projecting forward the distribution of per capita income or consumption in 2019 using the WEO forecasts of April 2023 for GDP per capita and annual population growth. The projection is distribution-neutral with a pass-through rate of 85 percent.

SDG Trends

The SDG Trends section provides a straightforward visualization of the current SDG progress for the selected countries. Progress on the 17 SDGs are tracked through 169 sub-targets, which in turn are measured using 232 unique indicators. Understanding how countries perform against these provides a comprehensive assessment of the current trends and the baseline landscape against which to build SDG policy pathways.

Countries' SDG trends are based on data and methodology from the UN Statistics Division. Additional data may be added to address gaps at governments' request, to provide a comprehensive landscape for identification of SDG policy pathways.

The SDG trends page is divided into two sections (1) SDG targets status organized according to the 5 P's of sustainable development and (2) SDG trend status at the target and indicator levels.

These sections use four colour-coded, categorical scales to classify the progress of SDGs, targets, or indicators:

- Green for "On Track" -–The country is on track to fulfill the SDG by 2030.

- Yellow for "For Review" – With current progress, the country will miss the SDG by 2030 by a small margin.

- Red for "Off-Track" – With current progress, the country will miss the SDG by 2030 by a large margin.

- Grey for "Trend Not Available" – The country does not have enough data to identify the progress of the SDG or a methodology is not available.

Data source

All the time series data for all the indicators in all the SDGs are either fetched using UNStats API (https://unstats.un.org/sdgapi/swagger/#!/Goal/V1SdgGoalDataGet), or the data are provided by the government to the national country team.

Additional data may be added to address gaps at government request, to provide a comprehensive landscape for identification of SDG policy pathways. To request the inclusion of additional national data please contact data@undp.org.
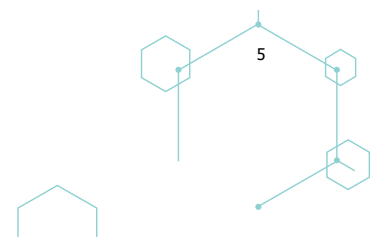
METHODOLOGY TO IDENTIFY THE CATEGORIES FOR EACH SDG TARGET

A single **SDG** has multiple **targets;** each **target** has multiple **indicators**, and each **indicator** can have multiple time series**.** The data that are fetched from UNStats are for these time series. Some of the time series have very granular disaggregation, which might not be required in each case; therefore, key time series for each indicator are identified by their thematic relevance and filtered. For instance, to assess a country's progress towards eradicating poverty, the proportion of population below the international poverty line (Indicator 1.1.1) was assessed against the overall value for all ages, areas and sexes.

Once the key time series are identified and the data are available, the indicators are classified into five categories following the trend methodology given by UNStats (technical note link):

Indicators are classified into the following categories:

- Target achieved (if the country has already reached the target value)[1]
- On track
- Fair progress but acceleration needed
- Limited or no progress
- Deterioration.

Please note that we are not able to classify all the indicators in these categories because for some, we might not have enough data for a country, or we might not have the target values for some indicators. To provide a comprehensive assessment, the team combined the latest available methodology from technical note by UNStats and information provided by Custodian Agencies (i.e FAO, UNWomen). In some cases, after consulting with the governments, different UNDP country offices may provide target values for indicators for which we might not have a global target value.

All the **time series** within an indicator (since a single indicator can have multiple time series) are assigned scores from -2 to 1:

- 1, "*Target achieved*" or "*On track*";
- 0, "*Fair progress but acceleration needed*";
- -1, "*Limited or no progress/ Target not achieved (for binary)*"; and
- -2,"*Deterioration*".

    The time series for which the categories cannot be identified due to lack of sufficient data are ignored.

An average of the score of all the time series within an **indicator** is calculated (ignoring all for which the categories cannot be identified due to lack of sufficient data). This average value ranges between -2 and 1. Based on this average score, the **indicators** are classified into four categories (defined earlier) as follows:

- On Track (for scores >0.5),
- For Review (for scores of -0.5 to 0.5 (0.5 included))

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[1] The determination of whether a target is achieved is based on the UNStats methodology for 'current level', wherein if the latest value has surpassed the target value, the target is considered achieved.

- Off-Track (for scores of <-0.5)

- Trend Not Available (N/A) (for indicator with no time series with a category).

Using the above categorization, **indicators** within a **target** are assigned scores of -1 to 1 (1, "*On Track*"; 0, "*For Review*"; and -1, "*Off-Track*"). An average of the score of all the indicators within a target is calculated (ignoring all the indicators belonging to the category Trend NA). This average value ranges from -1 to 1. Based on this average score, the **targets** are classified into four categories (defined earlier) as follows:

- On Track (for scores >0.5),

- For Review (for scores of -0.5 to 0.5 (0.5 included))

- Off-Track (for scores of <-0.5)

- Trend Not Available (N/A) (for indicator with no time series with a category).

METHODOLOGY TO IDENTIFY THE NORMATIVE DIRECTION AND TREND METHODOLOGY FOR EACH SDG INDICATOR

Assigning Normative Trends

Using the UNStats technical note, methodologies were assigned to approximately 65 time series out of approximately 700 time series. The remaining approximately 635 time series had missing methodologies.

For these time series, the UNDP team assigned normative directions (*positive*, which, for example, can thematically relate to measurements of universal access, or *negative* which can relate to measurements of zero deprivation) to improve on the existing methodology used by UNStats. To assign normative directions to each indicator, UNDP researchers carefully evaluated the indicator descriptions and engaged in a thorough peer-review process following which normative directions were assigned based on consensus.

The normative direction was assigned based on the following criteria:

1. Use absolute quantitative thresholds in SDGs and targets description: for example, zero poverty, universal school completion, universal access to water and sanitation, full gender equality.
2. Where no explicit SDG target is available, apply the principle of "leave no one behind" in setting the normative direction towards either universal access or zero deprivation.

The normative directions additions to the methodology allow determining whether an increasing or decreasing trend in the time series was considered positive or negative in relation to the SDG target. As per the UNStats technical note, for these time series that do not have an explicit numerical target set in the SDG agenda but have now been assigned a normative direction, the actual Compound Annual Growth Rate ($CAGRa$), rather than the required Compound Annual Growth Rate ($CAGRr$), was used to calculate the trend. For example, for the progress towards reducing the proportion of population living below the national poverty line (Indicator 1.2.1) no explicit target was provided in the UNStats technical note and therefore $CAGRr$ could not be applied and $CAGRa$ was instead used.

The scoring methodology (Section 1.1) was applied equally to time series with a UNStats pre-defined and those time series assigned a *post hoc* normative direction by the UNDP team.

The base year for the analysis is 2015. If data from 2015 is not available, the subsequent year's data (i.e. for 2016) is used. If data for 2016 is also unavailable, the closest alternate years within a range of plus or minus three years from 2015 are considered (i.e. 2014 is checked first, and if unavailable then 2017 is checked, followed by 2013, etc.) with a maximum of plus or minus three year range from the base year 2015. If no data is available from any of these years, the analysis will be deemed insufficient due to inadequate data.

Assigning Trends

Indicative targets were additionally assigned to approximately 240 time series which were of a percentage or ratio-type, and for which due to a missing target value, the required Compound Annual Growth Rate could not be calculated, and therefore the progress for this subset of timeseries could not be assessed.

Targets were assigned to individual time series according to the following criteria:

1. If a target was specified for a time series in the UNStats technical note, the same target was assigned to all thematically analogous time series. In the cases where there was not a full thematic match between the compared time series, the target was instead categorized as a 'range', wherein $CAGRa$ is applied.

    - Example: Time series for multi-dimensional poverty headcounts were assigned a target of 3%, in line with the target for the 'Proportion of Population Below International Poverty Line (%)' time series within indicator 1.1.1.

2. Where no explicit target was available, a rapid review of the available literature and latest available data was conducted to assign plausible targets or ranges. As above, where a full match for the time series is not found, the target is instead classed as a 'range'.

    - Example: The target for infant mortality rate per 1000 live births within indicator 3.2.1. was set to 12, in line with UNICEF's recommendations.

3. In the cases where (1) or (2) were not possible a lower bound target or range of 95% or an upper bound of 1% of the maximum value were respectively applied to time series with positive and negative normative directions.

    - Example: Analogous time series or available literature were not found for the 'Proportion of population that has convenient access to public transport (%)' time series (within indicator 11.2.1) and in line with the 'universal access' approach of this methodology a range of 95%-100% was provided.

The scoring methodology (Section 1.1) was applied equally to time series with a UNStats pre-defined target and those time series with an assigned *post hoc* target by the UNDP team.

OTHER TYPES OF TIME SERIES

There are several situations where trend methodology is available, yet normative direction is not applicable. These indicators were defined as binary, parity, doubling, halving and Likert below:

Binary

- Definition: The target value is binary.
- Normative Direction: Not Applicable.
- Example: 15.6.1 Countries that are parties to the Nagoya Protocol (1 = YES; 0 = NO)

Parity

- Definition: The target value can be achieved by either an increase or decrease, depending on the current level value.
- Normative Direction: Not Applicable
- Example: 4.5.1 Gender Parity Index for Youths/Adults with Information and Communication Technology (ICT)

- o The normative direction would be either positive or negative depending on whether the current value is less or more than 1, respectively.

Doubling

- Definition: The target is to double the value of the base year and apply CAGRR.[2]
- Normative Direction: Not Applicable.
- Example: 2.3.1 Productivity of large-scale food producers (agricultural output per labour day, PPP) (constant 2011 international $)
  - o The target of indicator 2.3.1 is to double the Productivity of large-scale food producers (agricultural output per labour day, PPP) (constant 2011 international $) by 2030.

Halving

- Definition: The target is to half the value of the base year and apply CAGRR.
- Normative Direction: Not Applicable.
- Example: 1.2.1 Proportion of population living below the national poverty line (%)
  - o The target of indicator 1.2.1 is to half the proportion of population living below the national poverty line by 2030.

Likert

- The Likert scale is a type of measurement scale applied to ranked indicators, typically on a five-point scale, which can provide a structured way of measuring responses and statistically analyzing them to identify patterns or trends.
- Normative Direction: Available
- Example: 14.b.1 Degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries (level of implementation: 1 lowest to 5 highest)
  - o The target value for indicator 14.b.1 is to achieve the highest degree of application of a legal/ regulatory/ policy/ institutional framework which recognizes and protects access rights for small-scale fisheries

SECTION 1: SDG TARGETS STATUS ORGANIZED ACCORDING TO THE 5 P'S OF SUSTAINABLE DEVELOPMENT

The SDG targets are organized according to the 5 P's of sustainable development. The size of the pie chart is determined by the number of SDG targets used to measure each P: People (47 targets), Peace (12 targets), Planet (46 targets), Prosperity (45 targets) and Partnership (19 targets).

The user can hover over the sections in the pie chart to see how many targets are on-track (green), for-review (yellow), off-track (red) or have missing data or assessment methodology (grey).

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[2] CAGRr is calculated as $CAGRr = \left(\left(\frac{x_{final}}{x_{initial}}\right)^{\frac{1}{2030-t0}} - 1\right) * 100$, where x_f and x_i respectively denote the final and initial values in the time series and t_0 denotes the baseline year.
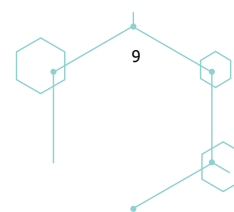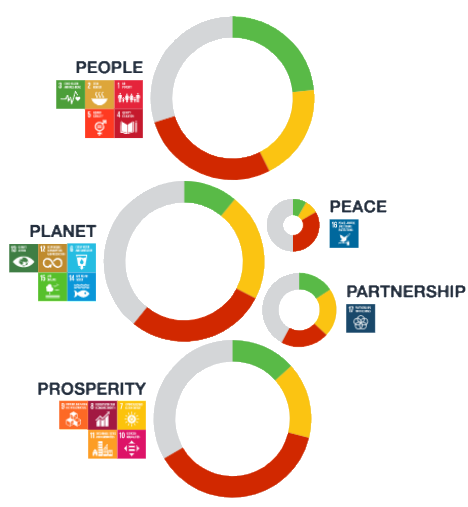
● ON TRACK   ● FOR REVIEW   ● OFF TRACK   ● TRENDS NA

Example: South Africa https://data.undp.org/sdg-push-diagnostic/ZAF/sdg-trends

The visualisation provides an overview of progress to date but also the substantial data gaps (in grey) that create significant challenges in providing a comprehensive picture of the status of SDGs using all indicators in the framework.

SECTION 2: SDG TRENDS AT THE TARGET AND INDICATOR LEVEL

The data that powers the visualization at the aggregate 5 Ps level is further disaggregated in section 2 at the target and timeseries level.

For each SDG, the user is provided with information on the number of targets and indicators used to measure that SDG. Additionally, highlighted is the number indicators out of the total for which there is available data and methodology.

SDG 1: No Poverty ⌄
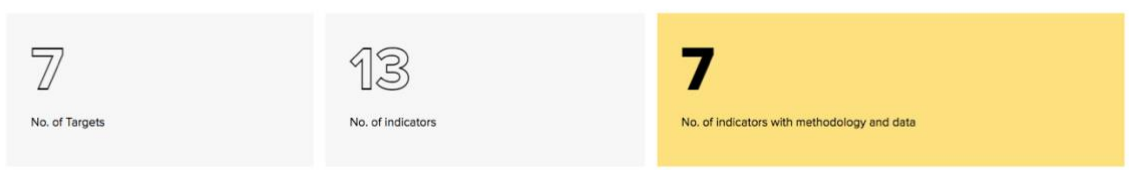
The user can select the SDG of interest from the drop-down list and then explore the trends of each target, indicator and time series with that SDG.
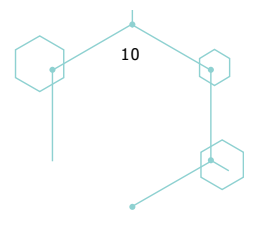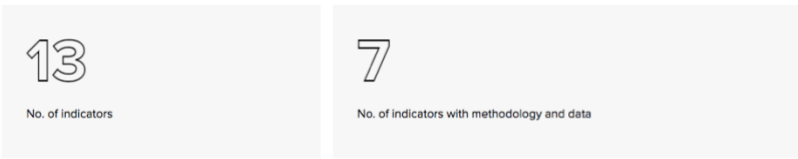
Within each SDG, the user can explore the indicators for each target. The same traffic-light classification applies here as was explained in the previous section.

All available timeseries are visualised as line charts and can be downloaded for further use offline.

National Priorities (Beta)

GENERAL DESCRIPTION
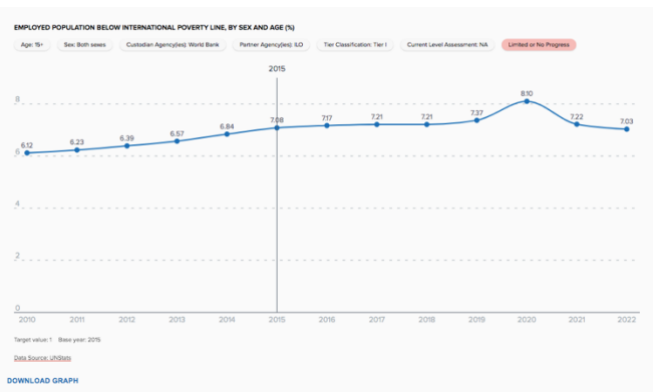
The second tab, National Priorities, enables users to explore the priorities of a country in terms of SDGs by analyzing the content of relevant documents. It uses natural language processing to extract and parse the content of a document and a custom-built machine learning model to link this content to SDGs. The main underlying assumption of the tool is that the amount of text linked to an SDG correlates with how important that SDG is in terms of priorities, i.e., the larger the amount, the higher the priority.

By default, the users see the results of the analysis based on the most recent country's Voluntary National Review (VNRs are drawn from the website of the High-Level Political Forum on Sustainable Development). Through the consultations for the Integrated Insights Reports, Governments and UNDP Country Teams provide a maximum of ten policy documents relevant for the countries national priorities. These documents often include National Development Plants, National Budgets, SDG roadmaps etc.
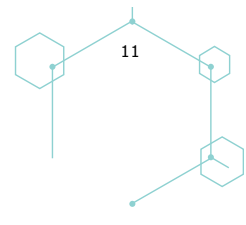
Based on the documents loaded in the tool, the visual provides a summary of the prominence of specific SDGs. Larger bubbles correspond to higher priority SDGs (based on the documents provided). By clicking on any of the SDGs, users can also see key topics that are discussed in the document(s) in relation to the selected SDGs.
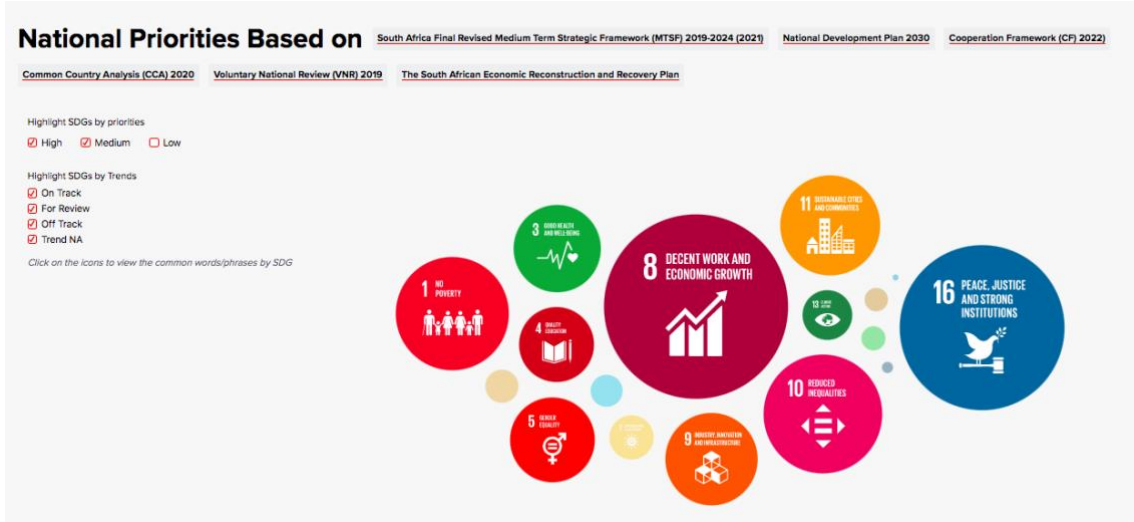
Another interesting feature of the National Priorities section is the ability to overlay the SDG trends status together with the National Priorities. In the chart below. On the X axis is the classification as per the National Priority text analysis and on the Y axis is the SDG trends status. This visual allows users to see which SDGs might be low priority but off-track and vice-versa.
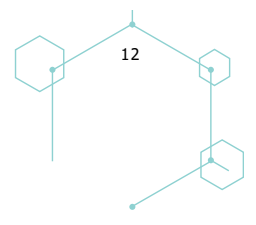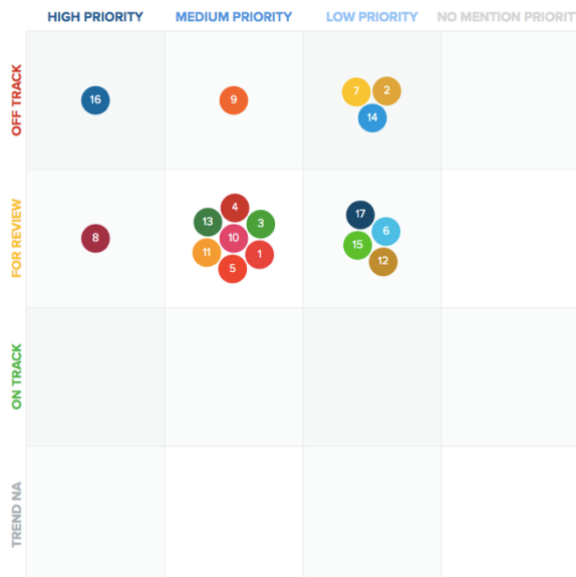
TRAINING DATA

The model is trained on an improved and cleaned [OSDG Community Dataset (Version 2022.07)](#) from UNDP IICPSD SDG AI Lab. Because the original dataset had no texts labelled with respect to SDG 16 and 17 and was multiclass but not multilabel, we relied on dictionary-based approaches using text2sdg package in R and heuristics to augment and modify existing labels so as to obtain multilabel training data for all 17 SDGs. The training texts were all in the English language.

MODEL ARCHITECTURE AND PERFORMANCE

To accommodate the need for an increased interpretability and transparency, we opted for a bag-of-words shallow neural network. The model achieved a macro-average precision of 90% but recall of 75% only on the test set. The results were adversely affected by a particularly poor recall for SDG 17.

DETERMINING PRIORITIES

Once each piece of text in a document is classified with respect to SDGs, we normalize the counts of texts linked to each SDG by the highest count. This results in all values being squeezed in the range from 0 to 1 and at least one SDG always having the value of 1. We call these values "relative salience" or "relative importance". We assume that a higher relative salience implies a higher priority for the country. Finally, we assign the priority tier to each SDG based on its salience as follows: high priority (> 0.75), medium priority (=> 0.25 and <= 0.75) and low priority (< 0.25).

ROBUSTNESS CHECKS

To support the analysis of multilingual texts, we use machine translation. We tested the robustness of this strategy by comparing the results for VNRs that are available in English and one other official UN language. First, we obtained the results for the original English version. Then, we used machine translation to translate the non-English version to English and analyzed that. We compared the results across 5 official UN languages plus Portuguese and German using 14 different reports. We found that 91% of assigned priority tiers do not change when machine translation is used.

LIMITATIONS

There are three key limitations to the current approach.

1. It has a particularly poor performance for SDG 17 (due to the limitations of the original data).
2. It cannot natively handle multilingual data.
3. The main underlying assumption of the tool may not hold true in some cases.

We are going to address the first and the second limitations in the next release of the tool, Regarding the third limitation, using thematic documents only will provide results that reflect the fact that some SDGs are simply not discussed in them or discussed much less than others. We therefore recommend making sure that the documents included in the analysis cover different aspects of the country's policies.

SDG Interlinkages: Synergies and Tradeoffs

The final section covers the SDG Interlinkages and opportunities for accelerations. The SDGs do not exist in silos. Understanding the interactions across social, economic and environmental elements of sustainable development is essential to move the needle on the SDGs. SDG Interlinkages show how actions directed towards one SDG can influence the others. Uncovering and understanding these interactions helps
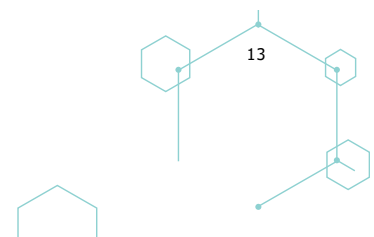
in achieving the 2030 Agenda - avoiding the unintended deterioration of the SDGs and their 169 associated targets.

The target-level interlinkages are based on the latest available methodology by the KnowSDGs Platform by European Commission. A first literature review (Miola et al., 2019) was updated and expanded in 2021-2022 by a team of researchers who retrieved and analysed all relevant scientific and grey literature* on SDG interlinkages, both in Scopus and Google Scholar.

The Interlinkages colour-coded figure allows users to select any target for which a visual display of the target and its synergies with other targets (represented by green lines) are presented in default mode. Furthermore, users can click on the tradeoff tab to obtain a visual presentation of the target and its tradeoff (instead of synergies), represented by red lines.

The synergies and trade-offs are global, which means they are the same for all countries as mapped by the European Commission. Additional to the synergies and trade-offs, a third 'not-specific' option is provided for interlinkages that do not have a clear positive or negative interaction. The traffic light colouring of the targets is customised based on each countries data on the SDG trends. See section "Methodology to Identify the Categories for each SDGs" above. To learn more about the methodology behind the Synergies and Trade-offs see details here.

Targets are greyed out because of lack of data, however, the information on interlinkages still applies.

Future Scenarios

The final tab of the main page is labelled "Future Scenarios". The Future Scenarios provide projections based on accelerators in governance, social protection, green economy, and digital disruption. UNDP's flagship study, conducted with the Pardee Center for International Futures at the University of Denver, assesses the long-term impact of three COVID-19 scenarios on the SDGs.

It captures the multifaceted effects of the pandemic over the next decades. The findings reveal that although COVID-19 can have significant long-term consequences, a set of ambitious yet achievable integrated SDG investments can surpass the development trajectory before the pandemic. These SDG Investments, outlined below, aim to address the gaps identified on the 'SDG Trends' page. Their projected impact in the upcoming decades is illustrated as the "SDG Push" scenario.

The International Futures (IFs) model used to forecast the development path and the effects of combined set of interventions in the areas of Governance, Social Protection, Green Economy, and Digital Disruption across different and predefined set of scenarios. IFs is an open-source integrated assessment modeling tool that simulates interactions within and across 186 countries and 12 core systems: agriculture, demographics, economics, education, energy, environment, finance, governance, health, infrastructure, international politics and technology. These systems are dynamically connected so that changes in one system may lead to changes across all others, which can illuminate spillover effects as well as tradeoffs and synergies with different policy choices.
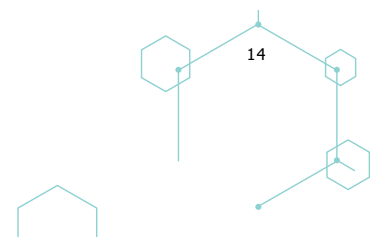
The figure below shows how the models within the IFs correspond to the 5 Ps of the SDGs and associated SDGs.
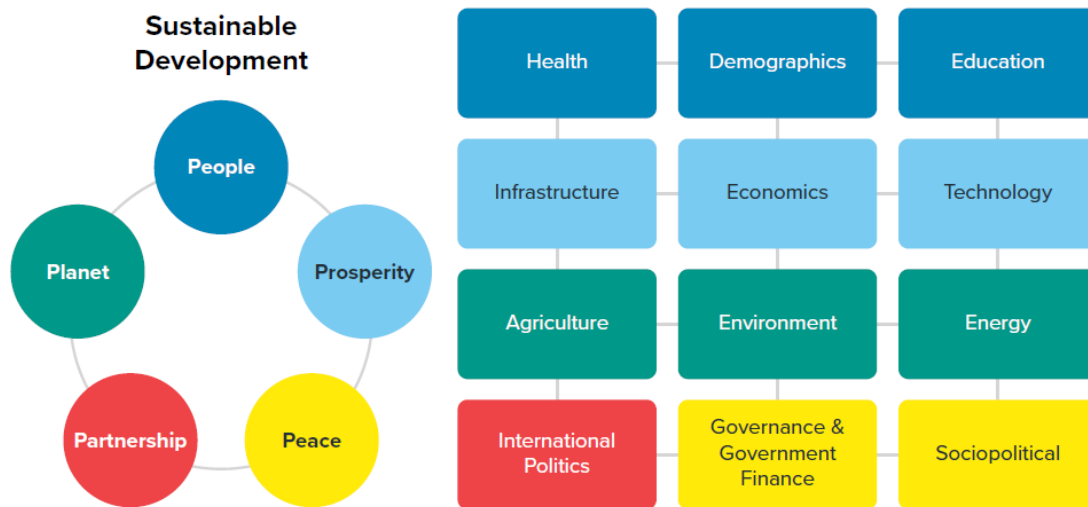
The second part illustrates the impact of Future Scenario investments in five SDGs and its targets and compares it with the baseline scenario where such investments are not undertaken. The time series graphs show progress until 2050 on a yearly basis for every target related to specific SDG tab shown in the subheading. Each of these graphs provides two scenarios for each country in terms of what the gaps would look like with and without the SDG Push scenarios, colour-coded in green and red, respectively.

For example, for the default country South Africa, users can see that SGD 1 tab produces three graphs, one for poverty set at under $1.90 per day by number of people and the second by percent of population, while the third one show female poverty headcount by number of people. The top line in each of these graphs is shown as a red line is a scenario when the SDG Push scenario is not implemented; the bottom line is when the SDG Push scenario is implemented and shown as a green line. Therefore, by having these graph lines right on top of each other, users can easily identify the gaps with and without the push scenario. See an example below.
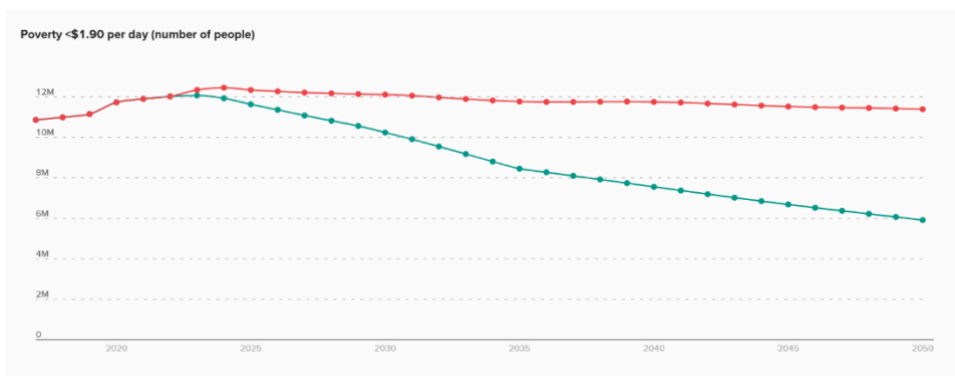

Figure 1. Projected number of people in extreme poverty in South Africa under Baseline and SDG Push scenario
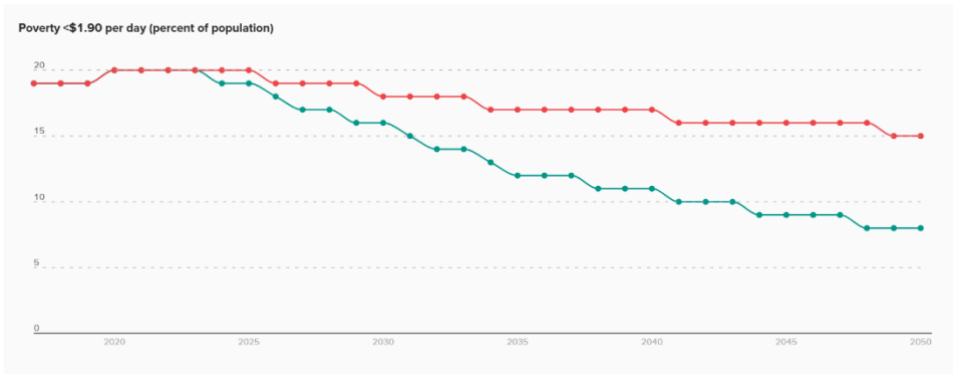
Poverty <$1.90 per day (percent of population)

Figure 2. Projected percent of people in extreme poverty in South Africa under Baseline and SDG Push scenario

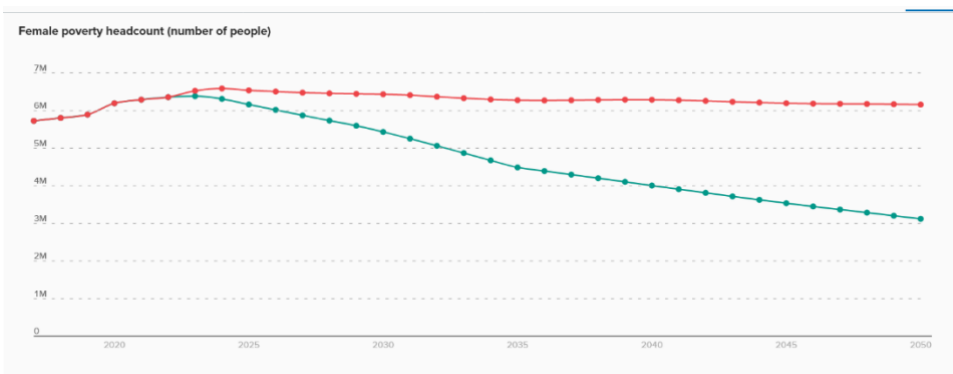**Female poverty headcount (number of people)**

Figure 3. Projected female poverty numbers in extreme poverty in South Africa under Baseline and SDG Push scenario

Fiscal and Financial Constraints

Overview

Provides insight into indicators of fiscal and financial stress with options (INFF) for stimulus and other means to accelerate progress.

The spider graph plots three slowly changing financial indicators and compares them to countries in the same IMF income group (either low-income developing countries, LIDCs, or emerging market and middle-income economies, EMMIEs), which allows us to assess whether a country faces above- or below-average fiscal and financial pressures. Those three indicators are government external debt and total revenue as a share of GDP, and – depending on availability – either the share of total revenue stemming from natural resources or natural resources rents as a share of GDP, which are both measures of resource dependence.

Additionally and subject to data availability, up to four fast-changing financial indicators are shown and again compared to countries belonging to the same IMF income group: total external debt servicing as a share of government revenue, which allows us to understand how much of a country's resources are used to service

debt rather than being available to be spend on national priorities, the country's sovereign credit rating and the 10-year government bond yield, which are both indicators of investor confidence, and the World Bank's and IMF's Debt Sustainability Analysis rating indicating the degree of debt distress a country is facing.

For countries using an Integrated National Financing Framework (INFF), priority actions to address key fiscal and financial constraints and to build a more sustainable financial architecture are laid out.

SOURCES AND METHODOLOGY

This analysis uses the most recent available government debt and total revenue data from the IMF WEO April 2023, ranging from forecasts for 2023 to data from 2020 depending on availability. The most recent data on total natural resources rents are sourced from the World Bank's World Development Indicators (WDI), ranging from 2018 to 2021. The most recent resource revenue data stem from the United Nations University World Institute for Development Economics Research (UNU-WIDER) Government Resource Dataset (GRD), ranging from 2017 to 2021. Data on external debt servicing are forecasts for 2023 by the World Bank's International Debt Statistics (IDS). The credit rating represents the numerical average of S&P's, Moodys', and FITCH's ratings for 2023, expressed in S&P's rating scale. Countries' most recent Debt Sustainability Analysis (DSA) ratings are sourced from the IMF and the World Bank.