

15th National Convention on Statistics
October 3-5, 2022

TITLE OF PAPER:

Reporting Regional SDG Performance Using UN ESCAP

NATIONAL SDG
TRACKER

by

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Reporting Regional SDG Performance Using UN ESCAP SDG Tracker

by:

Aldrin Federico R. Bahit Jr.¹, Jansenn Rexus F. Banaña², and Villafe P. Alibuyog³

ABSTRACT

As part of the commitment of the Philippines to monitor the SDGs, the Philippine Statistics Authority (PSA) was designated as the official repository of the SDG indicators through the PSA Resolution No. 04 Series of 2016, Enjoining Government Agencies to Provide Data Support to the Sustainable Development Goals (SDGs).⁴ The primary purpose of tracking the progress in achieving the SDGs is to be able to provide valuable inputs for evidence-based planning, decision-making, and program development geared toward the achievement of the 2030 agenda. At the regional level, PSA-CAR prepares the SDG Watch that reports the baseline data, target data, and latest data, providing information on the available data for the progress status of the Cordillera Administrative Region (CAR) in achieving the SDGs.

In order to better monitor the country and regional performance in achieving the SDGs, the PSA adopted the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) SDG Tracker. The SDG Tracker is an online interactive tool that provides every country with its SDG data available on the global database and enables them to generate SDG progress graphs (SDG Tracker User Manual).⁵ Users have ownership over data and results; customize indicator sets (add proxy indicators and/or drop indicators); update data and set national targets; and, choose to download and publish on preferred platform and reports or use the raw data to generate own visualizations.

CAR was part of the SDG Tracker pilot users in 2021 and this paper presents the outputs of the tracker and the assessment of the accessibility and functionality of the SDG Tracker.

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⁴ <https://psa.gov.ph/sdg>

⁵ https://unescap.org/sites/default/d8files/knowledge-products/National_SDG_Tracker_User_Manual.pdf

INTRODUCTION

LEAVE NO ONE BEHIND is the guiding principle of the Sustainable Development Goals (SDGs) or also known as the Global Goals. In September of 2015, the Philippines, along with the 192 United Nation member states, adopted the 2030 Agenda for Sustainable Development as a “universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity.”⁶ The SDGs are 17 targets that aim to weave sustainable development across economic growth, social inclusion, environmental protection and good governance to account the different national realities, capabilities, policies, and priorities.

As a firm advocate of the 2030 Sustainable Development Agenda, the Philippine government has set up several policies to be integrated and mainstreamed in the movement of achieving the SDGs. AmBisyon Natin 2040, which is a long-term vision and aspirations of the Filipinos to have a “*matatag, maginhawa, at panatag na buhay para sa lahat*”⁷ is anchored on development planning. The Philippine Development Plan (PDP) also mirrors the SDGs. It is a blueprint of the government where priorities of the administration are translated into policy and strategic framework and then into programs and projects.⁸

In adherence of the Philippines in attaining the SDGs, the Philippine Statistics Authority (PSA) is mandated to be the official repository of SDG statistics, in compiling indicators and monitoring the country’s condition. On the other hand, all concerned government agencies are to provide SDG data support to PSA.

In reference to the utilization of the SDG Tracker, this report presents the Cordillera’s experience, as its pilot user, in determining the challenges and opportunities for improvement of the tool.

THE PHILIPPINE SDGs

The PSA Resolution No. 09 Series of 2017, Approving and Adopting the Initial List of Sustainable Development Goals for Monitoring in the Philippines⁹ was adopted by the PSA Board to identify the following SDG indicators to monitor in the Philippines through a series of multi-stakeholder workshops conducted with various government agencies, academia, research institutions, civil society organizations (CSOs), and the private sector.

Based on the series of technical workshops conducted and the availability of data from the Philippine Statistical System (PSS), 155 indicators were selected to be the initial list for the Philippine SDG indicators.



⁶ <https://undp.org/sustainable-development-goals>

⁷ <https://2040.neda.gov.ph/about-ambisyon-natin-2040/>

⁸ <https://pdp.neda.gov.ph/>

⁹ <https://psa.gov.ph/sdg/Philippines/introduction>

The following were the milestones of the Philippine SDG preparation:

September 2013	Technical Workshop on Initial Goals and Targets Review and discuss the initial global post-2015 development agenda goals and targets
September 2014	Technical Workshop on the Data Needs Initial identification of data needed for the monitoring of the initial SDGs
June 2015	Technical Workshop on the Zero Draft UN Document Review and discuss the zero-draft of the outcome document for the UN Summit
October 2015	Multi-Sectoral Workshops Conduct data assessment of the global SDG indicators based on the Philippine context by accomplishing the SDG matrix
May 2016	
July 2016	Technical Workshop on WASH and Wastewater Indicators Finalize assessment of WASH and wastewater indicators in SDG 6 framework in collaboration with WHO
October 2016	Development of Metadata for Tier 1 indicators Discuss various tools and techniques towards building a Philippine Data Revolution Roadmap for the SDGs
April 2017	Bilateral Meetings with Major Data Source Agencies Development of metadata of SDG indicators identified as Tier 1 in the Philippine context
April 2017	NEDA-PSA Workshop Preparation of final Philippine SDG indicators for approval of the PSA Board
Oct. - Dec. 2017	Regional SDG Indicators Assessment Workshop To conduct data assessment of the Philippine SDG matrix based on the subnational context
October 2017	2017 International Conference on Sustainable Development Goals Statistics (ICSDGS) The Philippines, through the Philippine Statistics Authority (PSA), in collaboration with the United Nations Statistics Division (UNSD), organized the 2017 ICSDGS in Manila, Philippines.

THE CORDILLERA SDGs

The Cordillera region was the first region to come up with regional SDG indicators, even before the initial list of national SDG indicators were identified.

The following were the milestones of the Regional SDG preparation:

May 2016	RSC-CAR Resolution No 6, series of 2016 Creation of the Technical Working Group on SDG Statistics
21 Feb 2017	1st SDG Technical Working Meeting and Workshop Came up with the initial regional SDG indicators
27 Feb 2017	Regional SDG Indicators presented and approved by RSC Initial regional SDG indicators identified by the SDG TWG were presented and approved
August 2017	SDG Special Chapter in RSDP 2017-2023 Special chapter on the CAR SDGs was created/included in the CAR Regional Statistical Development Program (RSDP) 2017-2023

- October 2017** | **Luzon Cluster Regional SDG Assessment Workshop**
CAR was the only region during the Luzon Cluster workshop who had already brought regional SDG indicators during the workshop.
- August 2018** | **2nd SDG TWG Meeting and Workshop**
Gathered and discussed the national and regional SDG targets from the different government agencies for the preparation of SDG Watch of the region.
- August 2018** | **Cordillera SDG Watch**
SDG Watch was prepared presenting the baseline data, latest data, targets and the probability of achieving the goal. The regional SDG Watch is updated regularly and uploaded on the regional website.

To generate the regional SDG indicators for Cordillera, the Regional Statistics Committee (RSC) created the Technical Working Group (TWG) on SDG Statistics in May of 2016 to spearhead the work. The initial SDG indicators for the region was prepared as the output of the first meeting and workshop of the TWG. The list of Cordillera SDG indicators was further refined during the Regional Data Assessment Workshop for the Luzon Cluster on 16th of October 2017. The number of regional SDG indicators and the tiers they belong were:

TIER		
1	2	3
116 indicators (27 are proxy and 26 are sup indicators)	37 indicators	66 indicators

Tier 1 are indicators with established methodology and with data regularly collected. A total of 116 indicators were identified including the 27 proxy indicators and 26 supplemental indicators.












Tier 2 represents the indicators with established methodology and with data that is not regularly collected. In this tier, 37 indicators were enumerated.

Tier 3 indicators are without established methodology and/or methodologies are still being developed/tested. The regional agencies identified 66 indicators.

Based on the actual data gathering of PSA and the commitment of partner agencies, however, only 108 out of the 116 identified Tier 1 indicators can be monitored in the Cordillera with 11 goals out of the 17 global goals.



The breakdown for the Cordillera SDG indicators were as follows:

GOAL	TARGETS	INDICATORS	GOAL	TARGETS	INDICATORS
1 NO POVERTY 	6	20	8 DECENT WORK AND ECONOMIC GROWTH 	3	3
2 ZERO HUNGER 	2	5	11 SUSTAINABLE CITIES AND COMMUNITIES 	4	7
3 GOOD HEALTH AND WELL-BEING 	10	18	13 CLIMATE ACTION 	2	2
4 QUALITY EDUCATION 	7	26	15 LIFE ON LAND 	7	9
5 GENDER EQUALITY 	4	6	16 PEACE, JUSTICE AND STRONG INSTITUTIONS 	6	9
6 CLEAN WATER AND SANITATION 	3	3			

THE UN ESCAP SDG TRACKER

Evidence-based planning leads to focused and targeted development because tracking the progress of achieving the SDG means useful insights for planners, decision and policy makers to produce informed plans and decisions. SDG monitoring platforms facilitate the collation of indicators and processing of data to understand the landscape of sustainable development, the accomplishments, as well as the challenges and issues that hamper the attainment of the goals and targets. The outputs of the monitoring tools highlight performances, the hits and misses, that would point where resources should be directed.

In addition to the SDG Watch as the first monitoring platform of PSA-CAR for the achievement of the SDG, the United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP) SDG Tracker has been proposed as a supplement tool for monitoring in 2021. Cordillera was then identified as one of the pilot regions to utilize the said system since a regional SDG Watch was already in place.

The UN ESCAP SDG Tracker is an online interactive platform that allows users to utilize their available data, input their target values, and visualize progress in an accessible manner.¹⁰ Data structure within the tool has five levels: Goal, Target, Indicator, Data Series, and Disaggregation. These require sound understanding of the data structure in order to tailor the tracker in different circumstances. The platform integrates a progress assessment process for indicators with baseline, updated and target data.

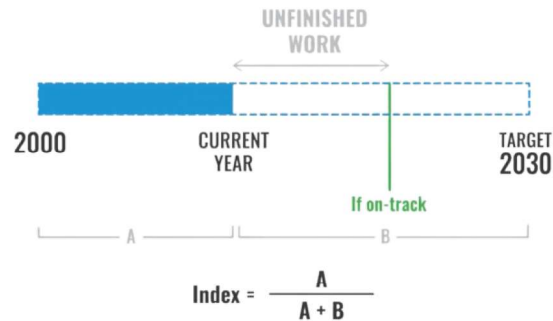
¹⁰ <https://data.unescap.org/stories/national-sdg-tracker>

Methodology

Proper utilization of the SDG Tracker demands a proficiency in the complex assessment mechanism structured in its system. The platform implements two (2) assessment index in measuring progress towards the SDGs: The Current Status Index and The Anticipated Progress Index.

- Current Status (CS) Index

Correlating progress made since 2000 to the progress required by 2030, the CS Index measures the present condition of development. In illustration, the CS Index is as follows:



To estimate the progress made since 2000 relative to the progress required by 2030 SDG target, it applies the 2030 SDG target value (TV) for each indicator (I) with values for both the current year (I_{CV}) and the year 2000 (I_O). The formula of the CS Index is as follows:

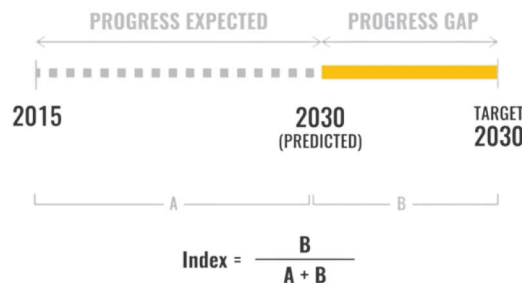
$$CS = \frac{I_{CV} - I_O}{|TV - I_O|} \times D$$

in which (D) is the desired set direction (increase or decrease).

$$D = \begin{cases} 10, & \text{increasing is desirable} \\ -10, & \text{decreasing is desirable} \end{cases}$$

- Anticipated Progress (AP) Index

The AP Index determines the needed progress towards the target by the end of 2030 by forecasting target year indicator value and benchmarking the predicted value contrary to the target value, in notion that the progression rate is constant. In illustration, the CS Index is as follows:



Indicators that are not on track to the achievement of 2030 target are the requisite in estimating the AP Index, otherwise, if it is on track or already exceeded the target, the indicator is firmly identified as “will be achieved”. The AP Index is constructed as follows:

$$AP = \frac{|TV - I_T|}{|TV - I_O|} \times 100$$

where:

TV is target value for 2030

I_T is predicted value

I_O is value for 2015

There are three (3) indicator categories of predefined achievement levels basing on the expected progress:

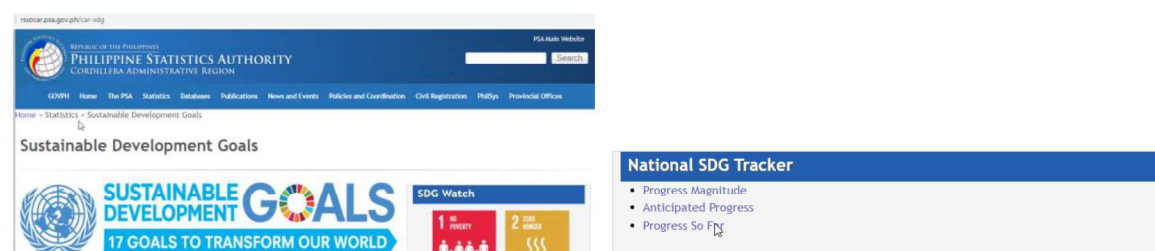
$$\begin{cases} AP > 9 & \text{(will meet the target with current rate or minor extra effort)} \\ 0 < AP \leq 9 & \text{(need to accelerate the current rate of progress to achieve the target)} \\ AP \leq 0 & \text{(regression or no progress expected)} \end{cases}$$

Thereafter, the assessment indices answer two questions:¹¹

1. CS Index: *How much progress has been made since 2000?*
2. AP Index: *How likely will the targets be achieved by 2030?*

SDG TRACKER OUTPUTS FOR THE CORDILLERA

The generated outputs of the UN ESCAP SDG Tracker are incorporated in the SDG pages of the regional website at <http://rssocar.psa.gov.ph/car-sdg>.



Three visualization pages are created by the tracker: (1) *Progress Gap: Magnitude*, (2) *Anticipated Progress*, and (3) *Progress So Far*.

¹¹ <https://www.youtube.com/watch?v=hKETAjCyESI&t=35s>

About Expected Gap

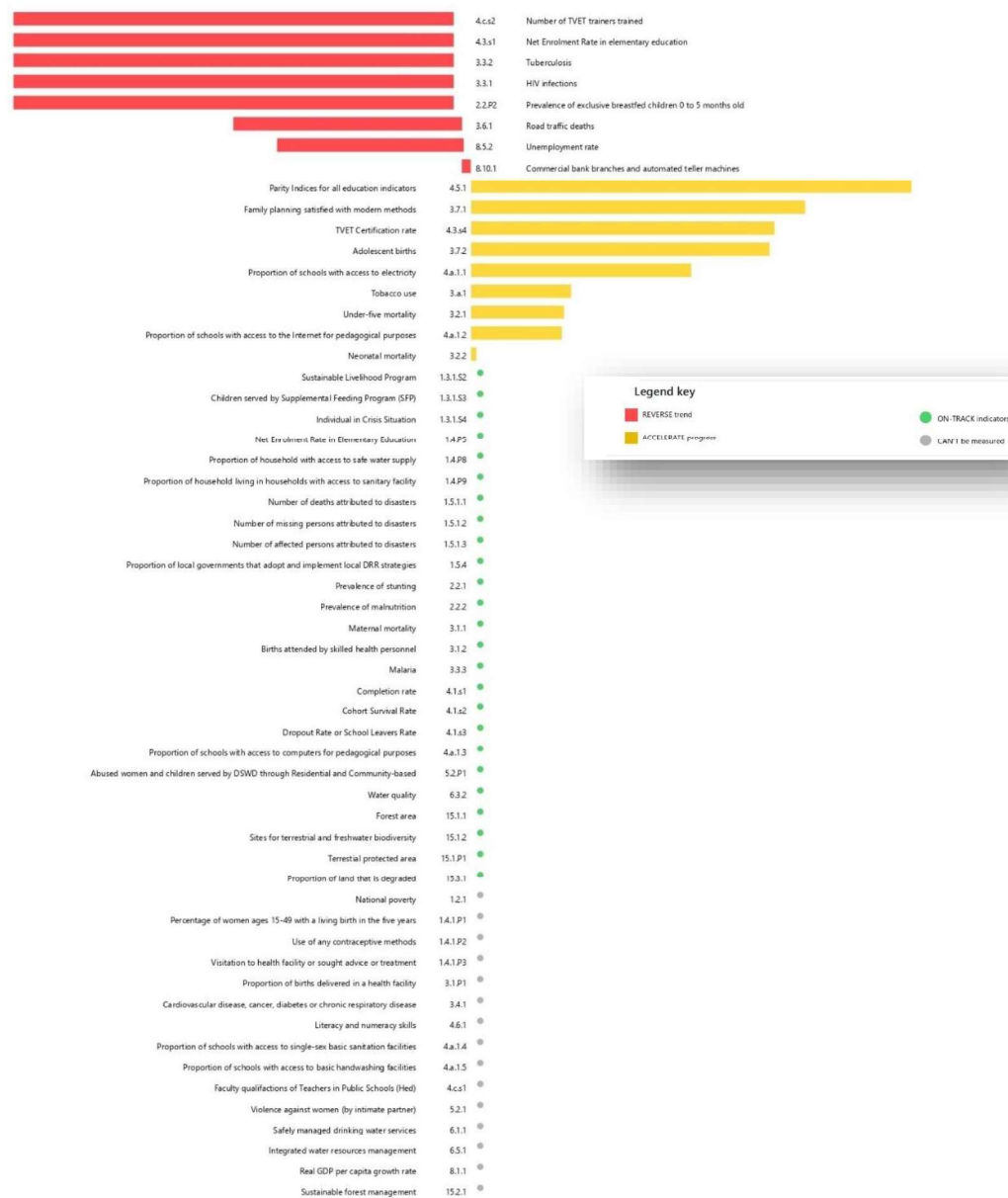
Indicators for which the country is "on track" and expected to achieve the target value by 2030 are listed below. The bar chart shows the magnitude of the gap between the predicted and target values of indicators that are not expected to hit the target by 2030. Red bars refer to indicators for which the trend needs to be reversed, and yellow bars to indicators for which progress needs to be accelerated.

For more details, please refer to ESCAP's [Progress Assessment Methodology](#).

☒ National SDG Progress

☐ Global SDG Progress

Cordillera Administrative Region (Philippines) - Expected Gap



NATIONAL SDG TRACKER

About Dashboard

How likely is it that the targets will be achieved by 2030, judging by the pace of progress thus far? The dashboard is based on the prediction of 2030 values for indicators under each target.

For more details, please refer to ESCAP's [Progress Assessment Methodology](#).

☒ National SDG Progress

☐ Global SDG Progress

Cordillera Administrative Region (Philippines) - Dashboard

☐ Hide/Show targets with no data

GOAL 1

- 1.3 Social protection
- 1.4 Access to basic services
- 1.5 Resilience to disasters
- 1.2 National poverty
- 1.1 International poverty
- 1.a Resources for poverty programs
- 1.b Poverty eradication policies

GOAL 2

- 2.2 Malnutrition
- 2.1 Undernourishment and food security
- 2.3 Small-scale food producers
- 2.4 Sustainable agriculture
- 2.5 Genetic resources for agriculture
- 2.a Investment in agriculture
- 2.b Agricultural export subsidies
- 2.c Food price anomalies

GOAL 3

- 3.1 Maternal mortality
- 3.2 Child mortality
- 3.7 Sexual & reproductive health
- 3.a Tobacco control
- 3.3 Communicable diseases
- 3.6 Road traffic accidents
- 3.4 NCD & mental health
- 3.5 Substance abuse
- 3.8 Universal health coverage
- 3.9 Health impact of pollution
- 3.b R&D for health
- 3.c Health financing & workforce
- 3.d Management of health risks

GOAL 4

- 4.1 Effective learning outcomes
- 4.5 Equal access to education
- 4.a Education facilities
- 4.3 TVET & tertiary education
- 4.c Qualified teachers
- 4.6 Adult literacy & numeracy
- 4.2 Early childhood development
- 4.4 Skills for employment
- 4.7 Sustainable development education
- 4.b Scholarships

GOAL 5

- 5.2 Violence against women & girls
- 5.1 Discrimination against women & girls
- 5.3 Early marriage
- 5.4 Unpaid care and domestic work
- 5.5 Women in leadership
- 5.6 Reproductive health access & rights
- 5.a Equal economic rights
- 5.b Technology for women empowerment
- 5.c Gender equality policies

GOAL 6

- 6.3 Water quality
- 6.1 Safe drinking water
- 6.5 Transboundary water cooperation
- 6.2 Access to sanitation & hygiene
- 6.4 Water-use efficiency
- 6.6 Water-related ecosystems
- 6.a Int. cooperation on water & sanitation
- 6.b Participatory water & sanitation mgmt.

GOAL 7

- 7.1 Access to energy services
- 7.2 Share of renewable energy
- 7.3 Energy efficiency
- 7.a Int. cooperation on energy
- 7.b Investing in energy infrastructure

GOAL 8

- 8.5 Full employment & decent work
- 8.10 Access to financial services
- 8.1 Per capita economic growth
- 8.2 Economic productivity & innovation
- 8.3 Formalization of SMEs
- 8.4 Material resource efficiency
- 8.6 Youth NEET
- 8.7 Child & forced labour
- 8.8 Labour rights & safe working env.
- 8.9 Sustainable tourism
- 8.a Aid for Trade
- 8.b Strategy for youth employment

GOAL 9

- 9.1 Infrastructure development
- 9.2 Sustainable/inclusive industrialization
- 9.3 Small-scale industries access to finance
- 9.4 Sustainable & clean industries
- 9.5 Research and development
- 9.a Resilient infrastructure
- 9.b Domestic technology development
- 9.c Access to ICT & the Internet

GOAL 10

- 10.1 Income growth (bottom 40%)
- 10.2 Inclusion (social, economic & political)
- 10.3 Eliminate discrimination
- 10.4 Fiscal & social protection policies
- 10.5 Regulation of financial markets
- 10.6 Inclusive global governance
- 10.7 Safe migration & mobility
- 10.a Special & differential treatment (WTO)
- 10.b Resource flows for development
- 10.c Remittance costs

GOAL 11

- 11.1 Housing & basic services
- 11.2 Public transport systems
- 11.3 Sustainable urbanization
- 11.4 Cultural & natural heritage
- 11.5 Resilience to disasters
- 11.6 Urban air quality & waste mgmt.
- 11.7 Urban green & public spaces
- 11.a Urban planning
- 11.b Disaster risk management policies
- 11.c Sustainable & resilient buildings

GOAL 12

- 12.1 Programmes on SCP
- 12.2 Sustainable use of natural resources
- 12.3 Food waste & losses
- 12.4 Managing chemicals & wastes
- 12.5 Reduction in waste generation
- 12.6 Corporate sustainable practices
- 12.7 Public procurement practices
- 12.8 Sustainable development awareness
- 12.a Support for R&D capacity for SD
- 12.b Sustainable tourism monitoring
- 12.c Fossil-fuel subsidies

GOAL 13

- 13.1 Resilience & adaptive capacity
- 13.2 Climate change policies
- 13.3 Climate change awareness
- 13.a UNFCCC commitments
- 13.b Climate change planning & mgmt.

GOAL 14

NATIONAL SDG
TRACKER

14.4 Sustainable fishing
14.5 Conservation of coastal areas
14.6 Fisheries subsidies
14.7 Marine resources for SIDS & LDCs
14.a Research capacity & marine technology
14.b Small-scale artisanal fishing
14.c Implementing UNCLOS

GOAL 15

15.1 Terrestrial & freshwater ecosystems
15.3 Desertification and land degradation
15.2 Sustainable forests management
15.4 Conservation of mountain ecosystems
15.5 Loss of biodiversity
15.6 Utilization of genetic resource
15.7 Protected species trafficking
15.8 Invasive alien species
15.9 Biodiversity in national & local planning
15.a Resources for biodiversity & ecosystems
15.b Resources for forest management
15.c Protected species trafficking (global)

16.1 Reduction of violence & related deaths
16.2 Human trafficking
16.3 Justice for all
16.4 Illicit financial & arms flows
16.5 Corruption and bribery
16.6 Effective institutions
16.7 Inclusive decision-making
16.8 Inclusive global governance
16.9 Legal identity
16.10 Public access to information
16.a Capacity to prevent violence
16.b Non-discriminatory laws

GOAL 17

17.4 Debt sustainability
17.5 Investment promotion for LDCs
17.6 Science and tech int. cooperation
17.7 Transfer of technologies
17.8 Capacity building for ICT
17.9 Capacity building for SDGs
17.10 Multilateral trading system (WTO)
17.11 Exports of developing countries
17.12 Duty-free market access for LDCs
17.13 Global macroeconomic stability
17.14 Policy coherence for SD
17.15 Respect country's policy space
17.16 Global partnership for SD
17.17 Partnerships (public, private, CSO)
17.18 National statistics availability
17.19 Statistical capacity

Legend key

MAINTAIN progress to achieve target

ACCELERATE progress to achieve target

REVERSE trend to achieve target

Cannot be measured

About Snapshot

How much progress has been made on each of the 17 Goals? The length of each bar shows the progress of the country since 2000. If a bar reaches or crosses the 2020 line, the country has made the expected progress to date. However, whether a Goal can be achieved by 2030 depends not only on the distance traveled so far, but also on the pace of progress going forward, as reflected in the Snapshot.

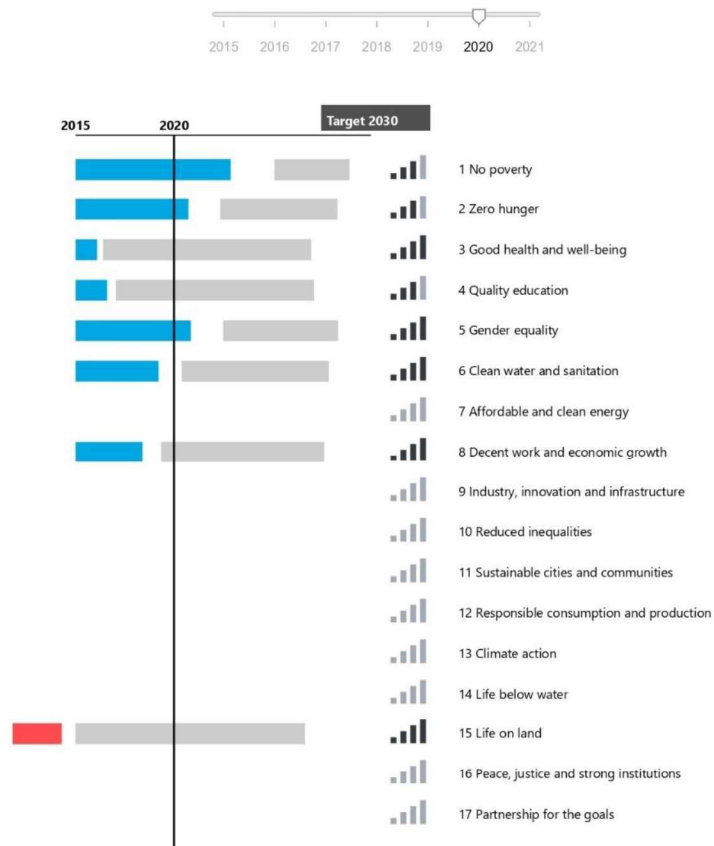
For more details, please refer to ESCAP's [Progress Assessment Methodology](#).

☒ National SDG Progress

☐ Global SDG Progress

Cordillera Administrative Region (Philippines) - Snapshot

Click on the bars to discover the progress of each indicator



Legend key

■ Regress since 2000

■ Progress since 2000

■ ■ Insufficient indicators

■ Evidence Strength

As useful as the SDG Tracker provides, there are improvements on the tool that are wanting. The following were the actions taken, observations, and comments when using the SDG monitoring platform.

- ## National SDG Tracker


Getting Started

Purpose:

This template is used for offline data entry of indicator framework of a country that will eventually be imported into the SDG Progress system.

Important Notice:

This template requires that the user enables Macro to execute in Excel. The user must enable Macro in order to fully use this template. Please click on the Enable Content button at the top bar. Please note that some features and functions of Excel will be disabled to prevent accidental data modification and to enforce strict data validation.



You must enable macro in order to use this template. Please click on the Enable Content button at the top bar. The Go to Indicators/Series/Disaggregate buttons will not respond unless Excel Macro is enabled.

Getting Started:

Once Macro is enabled in Excel, click on Go to Indicators/Series/Disaggregate button to use this template. The data entry has dependency hence there must be sequence in entering the data. First, Indicators must be entered and saved in order for the Indicators Lookup to be populated in the next section, which is the Series section. Similarly, Series must be entered and saved in order for the Series Lookup to be populated in the last section, which is the Disaggregate section.

This chart isn't available in your version of Excel.

Editing this shape or saving this workbook into a different file format will permanently break the chart.

1 INDICATOR ENTRY

Indicators must be entered first to start the data entry process.

Go to Indicators

2 SERIES ENTRY

The Indicator selection column is drop down selection of indicators that are populated in the Indicators section.

Go to Series

3 DISAGGREGATION ENTRY

The Series selection column is drop down selection of series that are populated in the Series section.

Go to Disaggregation

- You have modified data that are not yet reflected in your result dashboards. To commit to your dashboard, Please click

- NATIONAL SDG
TRACKER

Edit Indicators & Data
Results
Resources

angelkaycastro@gmail.com

You have modified data that are not yet reflected in your result dashboards. To commit to your dashboard, Please click Run

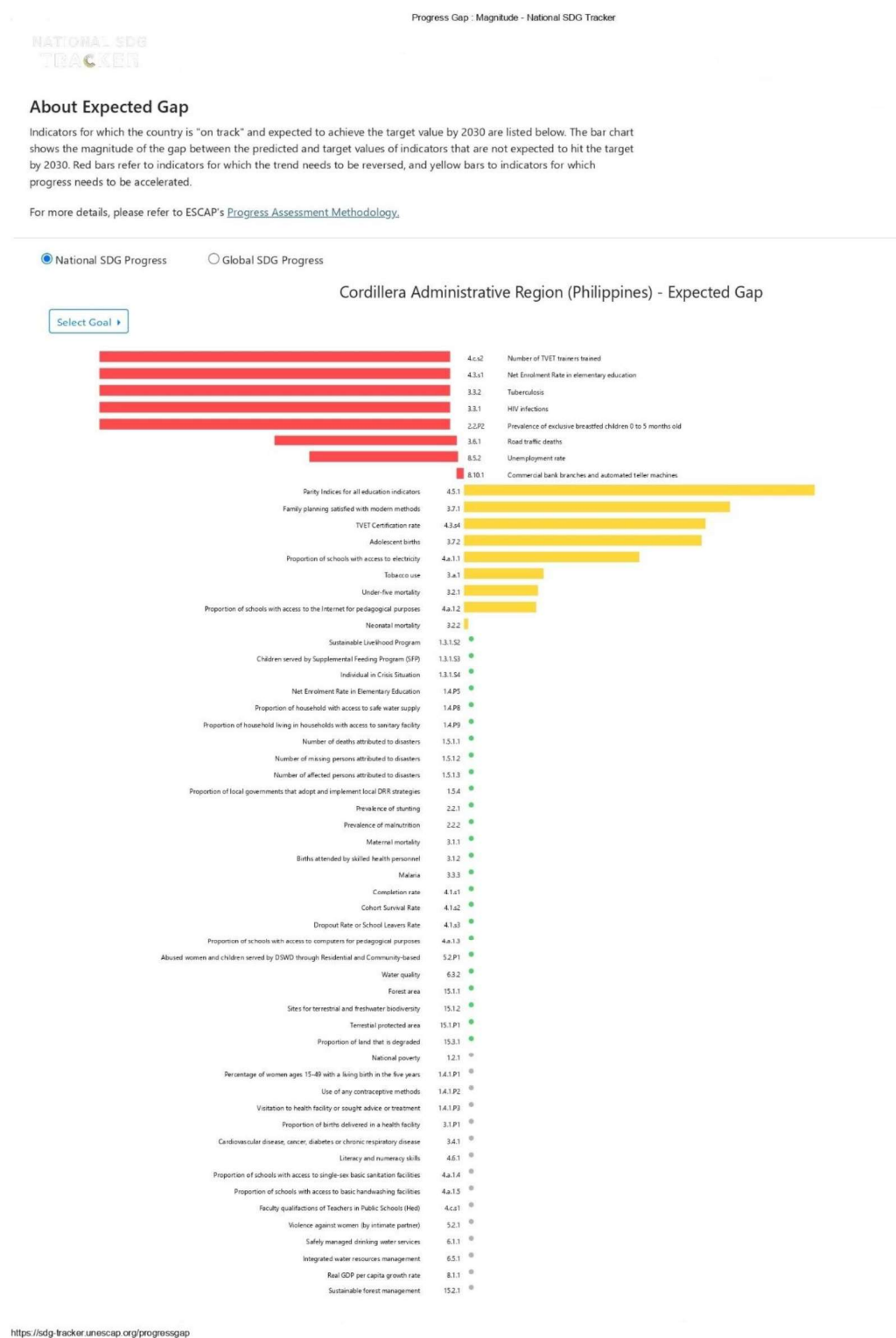
Indicators & Data

Baseline Year for Snapshot : 2015

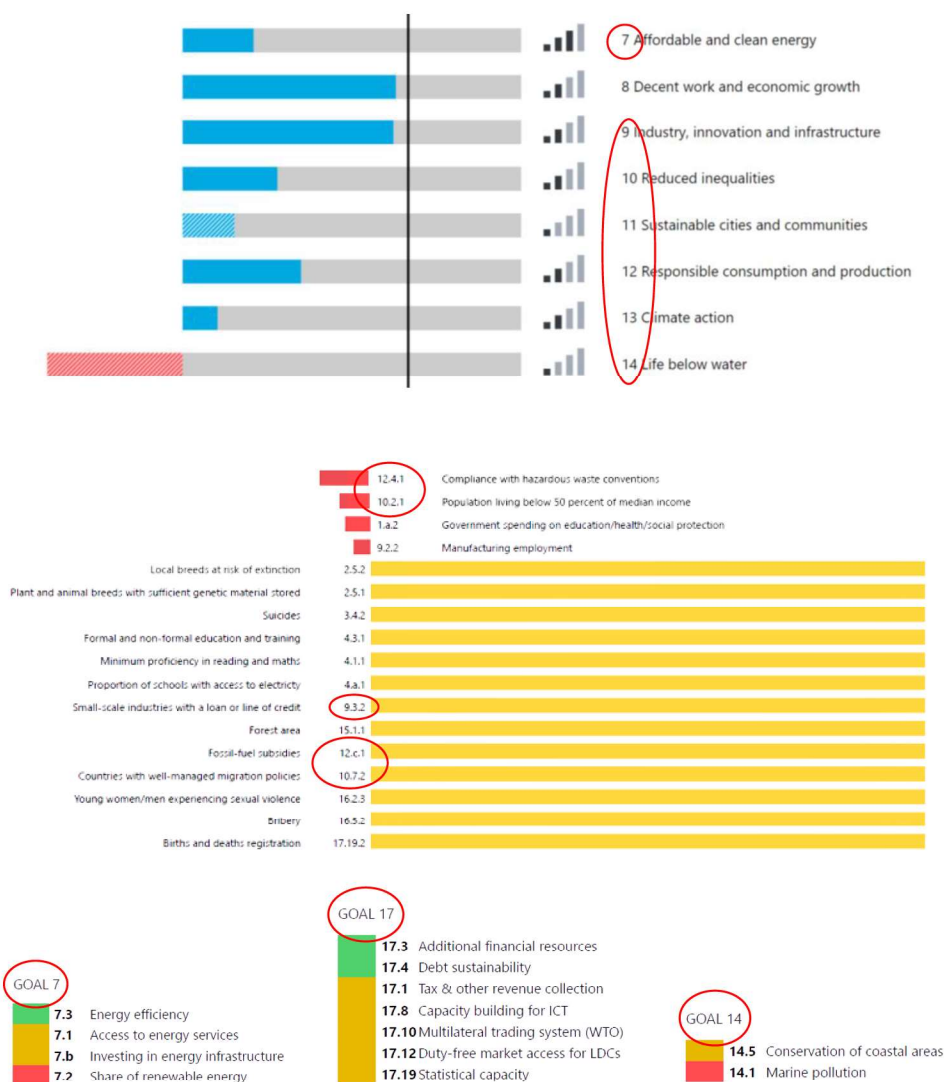
Disaggregation Not Saved

```
Microsoft.EntityFrameworkCore.DbUpdateException: An error occurred while updating the entries. See the inner exception for details. ---> Microsoft.Data.SqlClient.SqlException (DWB131904): The INSERT statement conflicted with the FOREIGN KEY constraint "FK_NationalDataSeries_NationalSubIndicators". The conflict occurred in database "sdg_progress", table "dbo.NationalSubIndicators", column "Id". The statement has been terminated. at Microsoft.Data.SqlClient.SqlConnection.OnError(SqlException exception, Boolean breakConnection, Action`1 wrapCloseInAction) at Microsoft.Data.SqlClient.TdsParser.ThrowExceptionAndWarning(TdsParserStateObject stateObj, Boolean callerHasConnectionLock, Boolean asyncClose) at Microsoft.Data.SqlClient.TdsParser.TryRun(IAsyncResult runBehavior, SqlCommand cmdHandler, SqlDataReader dataStream, BulkCopySimpleResultSet bulkCopyHandler, TdsParserStateObject stateObj, Boolean isAdapted, Int32 timeout) at Microsoft.Data.SqlClient.SqlDataReader.ReadGetMeta(Data) at Microsoft.Data.SqlClient.SqlDataReader.Get_MetaData() at Microsoft.Data.SqlClient.SqlCommand.ExecuteReader(CommandBehavior commandBehavior, String resultSetOptions, Boolean isInternal, Boolean forDescribeParameterEncryption, Boolean shouldCacheForAlwaysEncrypted) at Microsoft.Data.SqlClient.SqlCommand.RunExecuteReaderTds(CommandBehavior cmdBehavior, RunBehavior returnStream, Boolean returnStream, Boolean async, Int32 timeout, Task& task, Boolean asyncWrite, Boolean asyncWrite, Boolean describeParameterEncryptionRequest) at Microsoft.Data.SqlClient.SqlCommand.RunExecuteReader(CommandBehavior cmdBehavior, RunBehavior returnStream, TaskCompletionSource`1 completion, Int32 timeout, Task& task, Boolean& usedCache, Boolean asyncWrite, Boolean inferfy, String method) at Microsoft.Data.SqlClient.SqlCommand.ExecuteReader(CommandBehavior parameterObject) at Microsoft.EntityFrameworkCore.Update.ReaderModificationCommandBatch.ExecuteNonQueryTrace ---> at Microsoft.EntityFrameworkCore.Update.ReaderModificationCommandBatches.Relational(Connection connection) at Microsoft.EntityFrameworkCore.Storage.RelationalDatabaseSaveChanges(List`1 entries) at Microsoft.EntityFrameworkCore.ChangeTracking.Internal.StateManager.SaveChanges(List`1 entriesToSave) at Microsoft.EntityFrameworkCore.ChangeTracking.Internal.StateManager.SaveChanges(DbContext`1 Boolean acceptAllChangesOnSuccess) at Microsoft.EntityFrameworkCore.ServerStorage.Internal.ServerExecutionStrategy.Execute(StateTransitionState, Func`3 operation, Func`3 verifySucceeded) at Microsoft.EntityFrameworkCore.ChangeTracking.Internal.StateManager.SaveChanges(Boolean acceptAllChangesOnSuccess) at Microsoft.EntityFrameworkCore.DbContext.SaveChanges(Boolean acceptAllChangesOnSuccess) at Web.Models.SDGProgressContextExtended.SaveChanges(Boolean acceptAllChangesOnSuccess) in C:\Users\longan\workspace\sdg_tracker\src\Web\Dashboard\SDGProgressContextExtended.cs:line 97 at Microsoft.EntityFrameworkCore.DbContext.SaveChanges(Models.SDGProgressContextExtended SaveChanges) in C:\Users\longan\workspace\sdg_tracker\src\Web\Dashboard\SDGProgressContextExtended.cs:line 90 at Web.Controllers.IndicatorFrameworkController.CreateNationalDataSeries(int32 subindicatorid, int32 dataSeriesUniquelid, int32 countryUserid, String unit, int32 typelid in C:\Users\longan\workspace\sdg_tracker\src\Web\Controllers\IndicatorFrameworkController.SaveDisaggregation(int32 id, int32 subindicatorid, int32 countryUserid, String name, String unit, String series in C:\Users\longan\workspace\sdg_tracker\src\Web\Controllers\IndicatorFrameworkController.SaveDisaggregation(lambda, methodClosure, Object, Object) at
```

- **Emergence of Unknown Data.** Based on the Cordillera Regional SDG Indicators, goals 7, 9, 10, 11, 12, 13, 14, and 17 are unavailable for estimation due to scarce data sources and lack of numerical targets. This results to no data being entered in the system, however, the SDG Tracker output exhibits such goals when comparing results to Global SDG Progress.



All three visual graphs (Progress Gap, and Anticipated Progress) display this malfunction of the tool.



- **Non-Numerical Target Values.** Some regional goals have targets that are non-numerical in nature and since the SDG Tracker requires numeric target values, we had to disable such goals making it irrelevant in the platform even having data inputs.

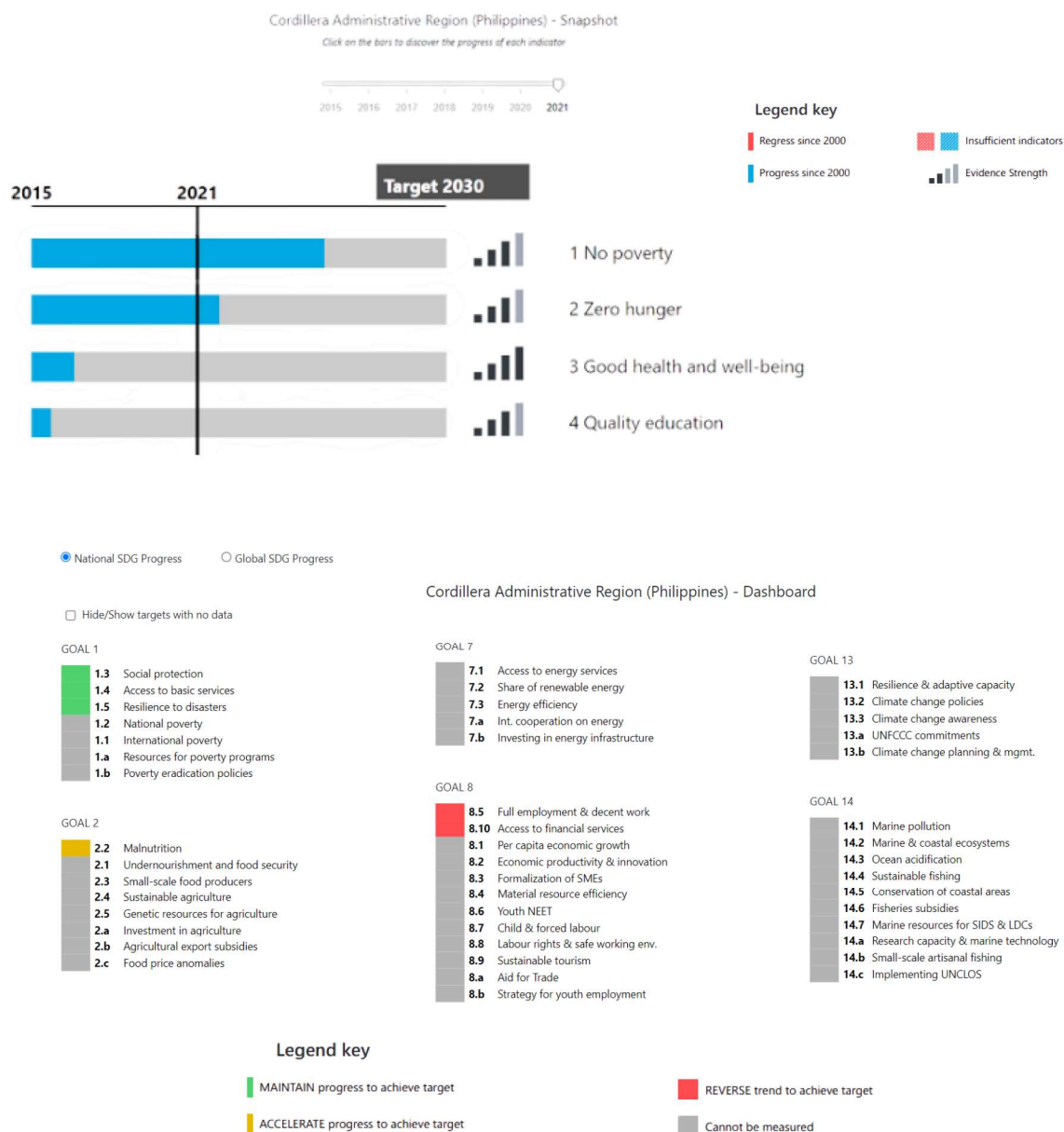
Target	
Data	Year
Affected persons – decreasing trend	2030
Affected persons – decreasing trend	2030
Affected persons – decreasing trend	2030

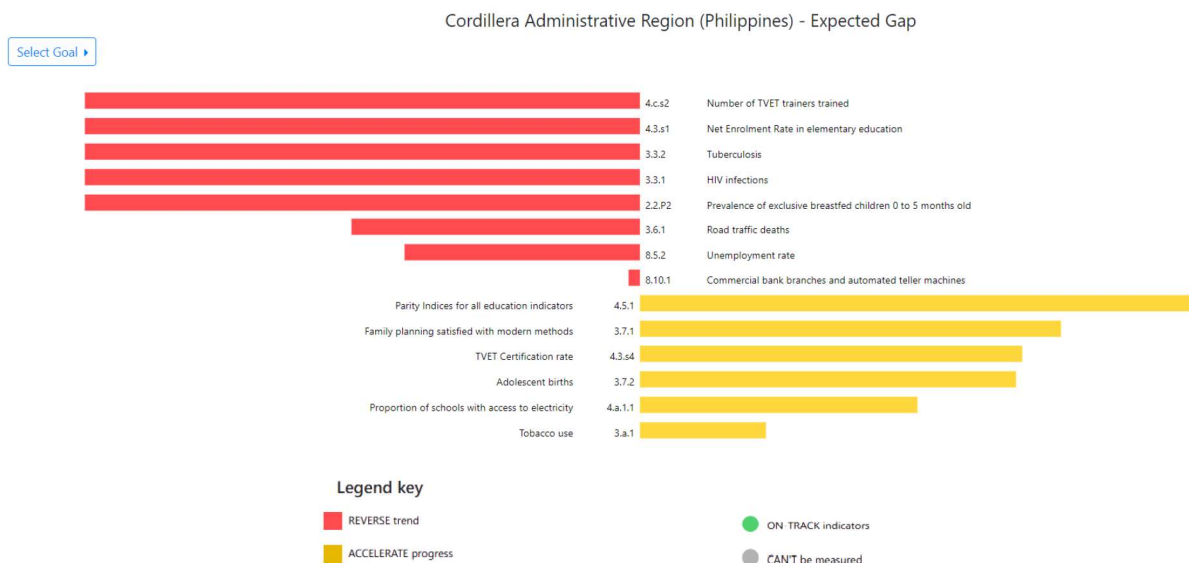
Target Value

Enter the numeric target value that should be between min and max target value.

- Absence of Estimates. A snapshot of the region's status on SDG monitoring can be generated by the use of graphical visualizations. However, the graphs are not accompanied by values.

The downloadable output graphs for the indicators are color coded as to their status of achievement but it is unknown what the percentages or number on how far or how close the region is in attaining such targets.





VALUE OF THE TRACKER

Notwithstanding the imperfections of the tracker, as a supplement tool for monitoring and assessing the attainment of the sustainable development goals, the UN ESCAP SDG Tracker is a helpful tool to monitor and prepare graphical visualizations to the attainment of the SDGs based on entries of available indicators. SDG data visualizations allow the viewers gain insight more easily into the numerous compiled indicators. These benefit data users or stakeholders to recognize trends and patterns, and thus better comprehend the directions of the individual SDG progress.

PSA-CAR incorporated SDG Tracker results to the presentations on the report on regional SDGs during various forums. And in all of these forums, the audiences appreciated the data visuals that made them understand easily the report and get conclusions without putting so much thought, even sufficiently amused. Consequently, discussions were facilitated by the visuals and conversations on the regional sustainable development goals were more focused on what really mattered.

The SDG Tracker and its results were presented on the following forums:

1. *Regional Statistics Committee (RSC) 4th Quarter Meeting, 29 November 2021.* The SDG Tracker was introduced to the Committee as a monitoring tool for SDG attainment of the region. Thus, it was considered as one of the statistical innovations of the region for CY 2021.
2. *Regional Budget Consultation, 21-24 February 2022.* Regional budget review and consultations are conducted annually. Budget proposals of regional line agencies (RLAs) and state colleges and universities (SUCs) are reviewed by a panel composed of the members of the Regional Development Budget Coordination Committee (RDBCC) and PSA-CAR is a member of the review panel. The SDG Watch is one of the vital reference documents in the review of the programs, activities and projects of the RLAs and the SUCs. The incorporation of the SDG Tracker results made the SDG-related discussions more meaningful.

3. *Regional Subcommittee on Sustainable Development Goals, 1st Regular Meeting, 6 July 2022*. The committee was especially interested in the SDG Tracker for obvious reasons. The tracker's results are what the committee needed to assess the progress and chart ways to achieve the regional SDGs. And so, the process and outputs of SDG Tracker were shared by PSA-CAR staff to the members of the committee. The SDG Tracker is acknowledged to greatly support the endeavors of the committee.

The SDG Tracker is functional due to its relatively user-friendly interface and the downloadable comprehensive results. The charts generated from the platform help in complementing and comparing data listed on the SDG Watch. The SDG Tracker data visuals make a very valuable complementary report of the SDG Watch of the region.

RECOMMENDATIONS

The UN ESCAP SDG Tracker has proven to be a valuable tool and complement other monitoring and assessment platforms on the attainment of sustainable development goals of the region. With the experience of PSA-CAR in using the tracker, admittedly a novice at that, there are few things that UN ESCAP could consider in refining the tool.

Aside from easing the challenges encountered in operating the tracker enumerated in the earlier sections of the paper, the following are some other recommendations to improve the SDG Tracker:

- 1) *Options on graphs*. In the graphical presentation, it is suggested to have an option to select an indicator, target, or by goal and by disaggregation to be able to show a more focused graph or table, or to let the user prepare the graphs for the specific target of his/her interest.
- 2) *Actions logbook*. Creation/addition of a log (logbook) of actions made in the SDG interface so that all actions or changes made in the SDG tracker are monitored to ensure the credibility of data.
- 3) *Technical notes*. There should be technical notes on the legends used on every graph (snapshot, dashboard, expected gap) in order to know when to expect each legend, what are the differences in each of the legend.
- 4) *Hierarchy of indicators*. Create hierarchy of indicators: national, regional and provincial.
- 5) *Generation of values*. Include an in-depth discussion on how the values were generated in order to validate the results, and a discussion on how to better and/or more appropriately explain the results of the graph.

REFERENCES

- National Economic and Development Authority (NEDA). (n.d.). *AmBisyon Natin 2040*. <http://2040.neda.gov.ph/about-ambisyon-natin-2040/>.
- NEDA. (2022). *Philippine Development Plan*. <https://pdp.neda.gov.ph/>.
- Philippine Statistics Authority (PSA). (n.d.). *Sustainable Development Goals*. <https://psa.gov.ph/sdg>.
- PSA. (n.d.). *The Philippine SDGs*. <https://psa.gov.ph/sdg/Philippines/introduction>.
- United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP). (n.d.). *National SDG Tracker User Manual*. https://unescap.org/sites/default/d8files/knowledge-products/National_SDG_Tracker_User_Manual.pdf.

UN ESCAP. (2021). *ESCAP Methodology for SDG Progress Assessment*.
<https://youtube.com/watch?v=hKETAjCyESI&t=35s>
United Nations Development Programme (UNDP). (2022). *THE SDGS IN ACTION*.
<https://undp.org/sustainable-development-goals>.