ECA REGIONAL DATABASE FOR CHILDREN

API DOCUMENTATION

1. Introduction

Data plays a vital role in UNICEF's child rights monitoring work, enabling informed decision-making and enhancing our understanding of the challenges faced by children in the Europe and Central Asia (ECA) region. The ECA Regional Database for Children (aka TransMonEE database) serves as a centralized repository, consolidating over 800 indicators from a range of international databases. These indicators are organized into 35 subdomains aligned with the ECA Child Rights Monitoring Framework.

The database predominantly consists of time-series data which allows for the identification of trends and patterns over time. The database also aims to disaggregate information by sex, age, residence (urban/rural), and wealth quintile whenever feasible, and by analyzing data through these lenses, stakeholders can identify disparities and inequalities and tailor interventions accordingly. Designed to meet the information needs of UNICEF's regional office and country offices in the ECA region and other stakeholders invested in children's rights, the TransMonEE database serves as a comprehensive knowledge hub, facilitating evidence-based decision-making and providing valuable insights into child rights issues.

The purpose of this document is to provide comprehensive instructions on how developers and other users can access the data in the TransMonEE database via an application programming interface (API). The data is also available to view and download from the data browser on the SDMX server and the database explorer page the TransMonEE website.

2. Indicator Data Warehouse and SDMX Server

The TransMonEE database is hosted within UNICEF's Indicator Data Warehouse, specifically under the 'TRANSMONEE - ECARO for TransMonEE' dataflow. This dataflow, like all dataflows in the IDW, operates on the SDMX (Statistical Data and Metadata eXchange) standard, an international initiative designed to standardize and facilitate the sharing of statistical data and metadata.

Here are some key aspects of SDMX:

- Interoperability: Allows consistent data exchange across various systems, ensuring the same meaning and context.
- Standardized Formats: Provides consistent and accurate data by adhering to globally recognized standards.
- Metadata Integration: Beyond data, SDMX integrates the accompanying context or metadata, ensuring comprehensive understanding.
- Efficiency: Simplifies data exchange, minimizing manual interventions and offering more agile data transfers.

The utilization of SDMX ensures that the TransMonEE database remains accurate, relevant, and easily accessible.

3. Data Queries

To access data from the TransMonEE database through the SDMX API, users need to form precise data queries. The SDMX API endpoint for accessing the dataflow is: https://sdmx.data.unicef.org/ws/public/sdmxapi/rest/data/ECARO,TRANSMONEE,1.0/

The steps below outline how to form a full data query using the SDMX REST web service page.

- Navigate to the SDMX REST web service page: https://sdmx.data.unicef.org/webservice/data.html
- Select 'TRANSMONEE - ECARO for TransMonEE' from the 'Dataflow' dropdown options.
- Adjust the parameters based on your requirements – only the options available for the chosen indicators will show, i.e., if only '_T' shows in the 'Sex' dropdown then there is no sex disaggregated data available for that indicator.
- Choose which 'Data format' you would like the data in – SDMX, Excel or CSV
- The resulting API call will be showcased in the Query URL field, and the users can choose to open the URL in a new tab, download or view the data.

4. API Parameters

Users may decide to manually create the URL by adjusting the following parameters to shape the data query.

Dimension	Description	Code List
REF_AREA	Country name signified by a three-letter country code, e.g., 'BIH' for Bosnia and Herzegovina or 'SRB' for Serbia.	UNICEF – CL_COUNTRY
INDICATOR	Indicator code for all indicators in the TransMonEE database	ECARO – CL_INDICATORS_TRANSMONEE
SEX	Gender disaggregation - 'Total': '_T', 'Male': 'M', 'Female': 'F')	SDMX – CL_SEX
AGE	Indicates specific age groups, for instance, Y10T14 for 10 to 14 years old. See the age code list for a full breakdown of age groups.	UNICEF – CL_AGE
RESIDENCE	Residence disaggregation - 'Total': '_T', 'Rural': 'R', 'Urban': 'U')	UNICEF – CL_RESIDENCE

WEALTH_QUINTILE	Wealth quintile disaggregation, options include - 'Total': '_T', 'Quintile 1 (poorest)': 'Q1', 'Quintile 2': 'Q2', 'Quintile 3': 'Q3', 'Quintile 4': 'Q4', 'Quintile 5 (richest)': 'Q5')	UNICEF – CL_WEALTH_QUINTILE
TIME_PERIOD	The time range for which the data is sought. Use 'startPeriod' and 'endPeriod' to define the range. For example, 'startPeriod=2018&endPeriod=2023' will fetch data from the years 2018 through 2023.	N/A

Other Options	Description
Format	Type of data format. Options include: 'sdmx', 'excel', 'csv', 'sdmx-csv' and 'sdmx-json'
Labels	Choose to show code ids, names, or both (default) when the SDMX or CSV data formats are chosen. Options: 'id', 'name' and 'both'

The full code lists can be viewed here. Alternatively, users can use the web service page on the SDMX server to check which codes are available for each indicator.

To construct the API URL, follow this formula:

https://sdmx.data.unicef.org/ws/public/sdmxapi/rest/data/ECARO,TRANSMONEE,1.0/{REF_AREA}.{INDICATOR}.{SEX}.{AGE}.{RESIDENCE}.{WEALTH_QUINTILE}?startPeriod={START_YEAR}&endPeriod={END_YEAR}&format={FORMAT}&labels={LABEL}

For the above URL:

- Replace placeholders encapsulated in {} with relevant values.
- Combine parameters within a dimension using the '+' symbol, or leave blank to fetch all data values for that dimension.

5. Example Queries

Example 1: Child Population in Bosnia and Herzegovina

Retrieve population data for children aged 10-14 in Bosnia and Herzegovina across all residencies and wealth levels:

https://sdmx.data.unicef.org/ws/public/sdmxapi/rest/data/ECARO,TRANSMONEE,1.0/BIH.DM_CHLD_POP..Y10T14._T._T?format=csv&labels=both

Breakdown of the URL:

- REF_AREA is set to 'BIH' for Bosnia and Herzegovina
- INDICATOR is set to 'DM_CHLD_POP' for the 'Child population aged 0-17 years' indicator
- SEX is left blank to retrieve all total and sex disaggregated data if available
- AGE is set to 'Y10T14' to retrieve the data for the 10-14 years age group
- RESIDENCE is set to '_T' to retrieve the total for the residence disaggregation column
- WEALTH_QUINTILE is set to '_T' to retrieve the total for the wealth quintile disaggregation column
- No parameters are set for the TIME_PERIOD column so all historical data will be retrieved.

Example 2: Stunting Prevalence in Serbia for Specific Time Period

Obtain data on stunting prevalence for Serbian children under 5 years old in rural areas within the middle and fourth wealth quintiles from 2018 to 2023:

https://sdmx.data.unicef.org/ws/public/sdmxapi/rest/data/ECARO,TRANSMONEE,1.0/SRB.NT_ANT_HAZ_NE2._T.Y0T4.R.Q3+Q4?startPeriod=2018&endPeriod=2023&format=csv&labels=both

Breakdown of the URL:

- REF_AREA is set to 'SRB' for Serbia
- INDICATOR is set to 'NT_ANT_HAZ_NE2' for the 'Stunting prevalence (height-for-age <-2 standard deviations from the median of the WHO Child Growth Standards) among children under 5 years of age - SDG 2.2.2' indicator
- SEX is set to '_T' to retrieve the total for the sex disaggregation column
- AGE is set to 'Y0T4' to retrieve the data for the under 5 years age group
- RESIDENCE is set to 'R' to retrieve data for the rural population
- WEALTH_QUINTILE is set to 'Q3+Q4' to retrieve data for the population falling in wealth quintiles 3 and 4
- The startPeriod for the TIME_PERIOD column is set to '2018' and the endPeriod is set to '2023' to retrieve data for 2018-2023

6. Further information

For more information or to report issues with the API, please contact transmonee@unicef.org.