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WG/EMIS/2

**UPDATE ON UIS DATA COLLECTION MECHANISMS:
PROGRESS IN IMPLEMENTATION OF NEW UIS
QUESTIONNAIRE**

Prepared by the UNESCO Institute for Statistics

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Dynamic templates: indicators with data collected from national sources

The new approach is based on entering publicly available raw data into dynamic templates that automatically produce the related 23 indicators: 16 SDG 4 indicators and 7 OPRI indicators – or, put differently, 21 indicators on students, teachers, and schools, and 2 indicators on education expenditure.

This process allows countries to directly validate the indicators instantly generated and check their consistency over time. It also enables them to immediately view what indicators are missing, what data are needed to produce them and then to work on filling these data gaps. The templates are an excellent tool for capacity-building as they present the methodology of calculation of each indicator in detail, increasing countries' ownership of the produced data and indicators.

1. Dynamic templates, workflows and data points produced

Administrative data template

The template collects data for 13 years (2010 to 2022) on students, teachers and schools. It is automatically prefilled with population data from UNPD, ISCED mapping data on the national education system (theoretical entrance age and duration of the national education programmes), and with indicator figures available at the UIS for comparison purposes. Indicators are automatically calculated with the indicator formulas embedded in the template.

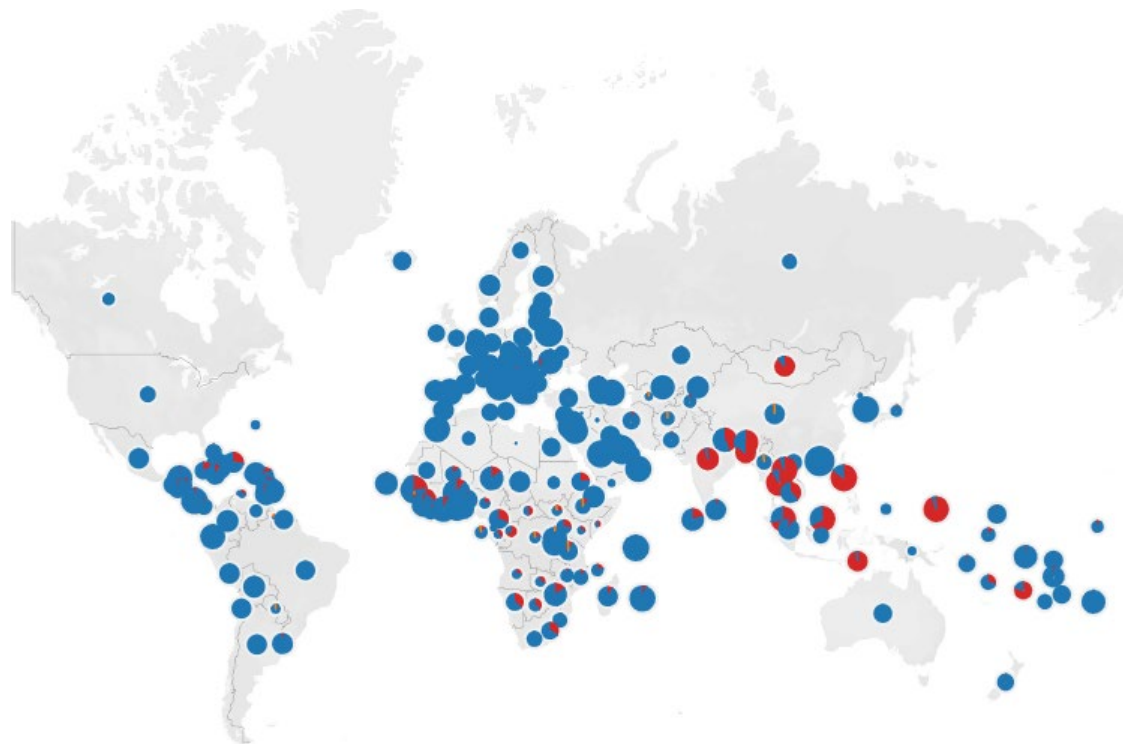
The template includes the following:

- Metadata sheet: It presents the definition, calculation method and formula, and data required for every indicator; allows the comparison of UIS published indicators with the ones produced in the template from national data; and enables the selection of the source of population data (UNPD or national).
- Data source sheet: It compiles the names and links of all the national publications from which data were extracted and used to populate the template.
- Six sheets to collect data on students from early childhood to tertiary education: data are disaggregated by age and sex. Data for primary and secondary education (general programmes) also include data by grade and repeaters.
- A sheet to collect data on teachers from pre-primary to secondary education: data disaggregated by programme orientation, qualified and trained status, sex and newly recruited teachers.
- A sheet to collect data on schools for primary and secondary education: data disaggregated by type of facility including electricity, internet and computers for pedagogical purposes, infrastructure and materials for students with disabilities, basic drinking water, single-sex basic sanitation facilities, basic handwashing facilities and life skills-based HIV and sexuality education.
- Two sheets with population data (national sources and UNPD) including the education structure according to the ISCED mapping and the school-age population.
- Fourteen sheets with the calculation of selected SDG 4 and OPRI indicators.

Finance data template

The finance template collects data for 11 years (2012 to 2022) on government expenditure spent on education by level of education and total government expenditure. The template is prefilled with GDP data from the World Bank and with indicator figures available at the UIS for comparison purposes. Indicators are automatically calculated with the indicator formulas embedded in the template. The template allows the calculation of two indicators: 1.a.2 Proportion of total government spending on essential services (education) and Government expenditure on education as a percentage of GDP.

Data released for SDG 4 indicators by collection method



Collection method

- Dynamic templates
- Education Survey

Template workflows

The following workflows are implemented to produce globally comparable data:

1. Design and development of the two dynamic templates
2. Completion of both templates with data and metadata published by countries
3. Production of a database with data and metadata for all countries
4. Creation of repositories for the official data sources available at the country level:
 - Repository of education expenditure reports:
<https://tcg.uis.unesco.org/data-resources/repository-education-budgets/>
 - Repository of education indicators report:

<https://tcg.uis.unesco.org/data-resources/repository-education-indicators/>

5. Curation of compiled data to remove outliers.

2. Validation of data and indicators in the dynamic templates: first phase

Asia and the Pacific

The first round of piloting of the new education templates was conducted in South and West Asia (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka); Southeast Asia (Brunei Darussalam, Cambodia, Lao PDR, Thailand, Timor-Leste, Malaysia and Philippines); East Asia (Mongolia); the Pacific (Fiji and Micronesia).

It is necessary that the data inputted in the templates through data mining and data provided by country focal points are validated properly with countries. In this regard, a team in UIS carefully reviewed the templates submitted by the countries and checked the consistency of the data and statistics with historical data and metadata. In addition, the team also ran a series of data checks to ensure data quality and validity. Based on this validation process, a review report was prepared with detailed comments and suggestions on the data provided and sent to the countries to provide more data and explanation, including data sources, reference documents, and available metadata at the national level, as pointed out in the review.

Countries reviewed the review report and provided additional data and information. Follow-up meetings (at least one meeting) were organized to review the updated data and statistics in the template. Based on the discussion, countries provided additional data, revised previous submissions and information and finalized the template in consultation with their senior officials.

The UIS Regional Field Network is critical in the efficient and quality validation process. During the validation process, UIS field offices closely worked with country focal points to compile data from various sources and ensure the data provided are accurate and valid. UIS field offices were regularly in touch with country focal points through various channels to support completing the templates and their validation.

Sub-Saharan Africa

The first round of piloting of the new education templates was conducted in 16 countries, including Botswana, Burundi, Comoros, Ethiopia, Gambia, Ghana, Kenya, Lesotho, Liberia, Madagascar, Malawi, Namibia, Nigeria, Sierra Leone, United Republic of Tanzania and Zimbabwe.

The new dynamic templates were introduced to key data producers from Ministry of Education, Ministry of Finance and NSO. During the training, a lot of questions were asked regarding the UIS methodology for SDG 4 and other policy relevant indicators. Other topics for discussion were ISCED mapping, use of national population and possible estimation for the data gaps.

All of the countries found the new data collection tools are very efficient for data collection and calculation of indicators that could be very useful on the national and sub-national levels. Additional support was requested from Liberia, Nigeria and Tanzania for national training for the representatives from all the sub-regions.