# Seventh Regional Workshop on the Use of Statistical Data and Metadata Exchange for reporting on SDGs – Advanced Level IV

## Cairo – Egypt, 3-5 June 2024

### Summary

The United Nation Economic and Social Commission of Western Asia (ESCWA), the Arab Institute for Training and Research in Statistics (AITRS), the League of Arab States (LAS), and the United Nations Statistics Division (UNSD) jointly organized the Seventh Regional Workshop on the Use of SDMX for Reporting on SDGs- advanced level IV, in Cairo Egypt from 3 to 5 June 2024.

The Workshop, the seventh in a series of ESCWA's workshops, introduced participants to advanced data exchange and dissemination tools, including SDMX Reference Infrastructure (SDMX-RI), Mapping Assistant, as well as SDMX-based data exchange of SDG Reference Metadata.

The training encouraged interactive dialogue including sharing of national experiences in SDMX including challenges.

1.  Statistical Data and Metadata eXchange (SDMX) is designed to automate data and metadata exchange between two or more entities within the same entity. The process of normalizing data exchange has improved the efficiency of sharing both statistical data and metadata across statistical organizations and entities, providing an integrated approach and enabling the interoperable implementation of exchanging, reporting, and disseminating statistical data and metadata within and between systems.

2.  The Economic and Social Commission of Western Asia (ESCWA) in collaboration with the United Nations Statistics Division (UNSD) and with the Arab Institute for Training and Research in Statistics (AITRS), and with the League of Arab States (LAS) jointly organized the 7th Workshop on the Use of the Statistical Data and Metadata Exchange (SDMX) for Reporting on SDGs-Advanced Level IV, in Cairo, Egypt, from 3 to 5 of June 2024. The training is the seventh in a series of capacity-building workshops and the third held in person.

3.  The workshop is in response to the resolution (A/RES/70/1) on the adoption of the 2030 Agenda of Sustainable Development in September 2015, to strengthen the capacity of national statistical offices and data systems to ensure access to high-quality, timely, reliable, and disaggregated data by income, sex, age, race, ethnicity, migration status, disability, and geographic location and other characteristics relevant in national contexts. It also responds to Member States' request to the 14th Statistical Committee for ESCWA to hold advanced training on SDMX emphasizing the importance of SDMX, and to the 15th Statistical Committee to bridge gaps in data flows for sustainable development indicators, to ensure the sustainability and modernization of national reporting platforms, and to exchange statistical data and metadata nationally between components of statistical systems using modern technologies, such as SDMX.

4.  The objectives of the workshop are to improve countries' skills in exchanging and disseminating SDG data, raise awareness of the latest developments and promote the use of SDMX at the national level.

5.  The Workshop agenda covered the following items:
    *   Review of latest updates and news on SDMX developments and activities.
    *   Introduce SDMX Reference-Infrastructure (SDMX-RI) and hands-on exercises.
    *   Review of SDMX mapping assistant, dataflows for dissemination; and hands-on exercises.
    *   Introduction to SDMX API.

- Review of SDMX-based data exchange of SDG Reference Metadata

6. The selection criteria for participating in the workshop were based on the successful demonstration of understanding and implementing correct mapping and converting SDG data using SDMX content constraints; participants attended a mandatory pre-training crash course done by ESCWA and were invited to complete the [SDMX Foundation E-Learning Course](#) and [SDMX for the SDGs E-Learning Course](#).

7. The three-day workshop was attended by a total of 23 participants in-person (8 statisticians and 15 Information Technology, which included 12 females and 11 males) that successfully completed all the exercises.

8. Discussion: main points

An introduction to SDMX was provided, it was indicated that SDMX has many important uses such as processing, validating, dissemination of data and management of metadata; the SDG data to be exchanged must have all its characteristics described in a Data Structure Definition (DSD) that must be developed before any SDMX exchange, reporting, and dissemination of processing takes place.

A quick review of the SDMX information model for the SDGs including SDMX main artifacts such as concepts, concept scheme, category scheme, cross-domain concepts, Data Structure Definition DSD, Data Flow, Content Constraints, and the representation of concepts (coded, uncoded/formatted, free text), moreover, all SDG concepts were presented.

The workshop also covered tools for connecting SDMX to relational databases using the SDMX Reference Infrastructure (SDMX-RI), the SDMX-RI is an efficient solution that promotes the automation of data exchange as well as facilitates the establishment of data warehouses and APIs. SDMX-RI requires having at least one statistical database and NSI web service and Web client, SDMX-RI enables the production and dissemination of SDMX data from existing reference/dissemination databases. It is composed of reusable building blocks that are designed to provide data and structural metadata based on mappings to each organization's dissemination data warehouse.

The workshop also presented the mapping assistant as a tool that creates connections to dissemination databases and retrieves data from a database but cannot be used to upload data to database, it also manages the dissemination dataflows and defines constraints, the mapping assistant requires three DB

(dissemination DB, Mapping Store DB, authentication DB). Additionally, the workshop also provided a demo on the process of querying SDG Data using SDMX API, including the string parameters, and the dataflow.

Finally, the workshop provided a thorough overview of statistical metadata namely, structural metadata that identify and describe data, reference metadata that describes the contents and the quality of the statistical data, it includes three separate types of metadata (conceptual, methodological, Quality), hands-on exercise was provided at the end of the session.

At the end of the workshop a round-table discussion was conducted where countries presented challenges they have at both national and institution levels.

9. The Workshop conclusions and recommendations are as follows:

- To further strengthen national SDG Teams through effective collaboration between statisticians and IT experts and share of knowledge to successfully compile and disseminate SDG data through SDMX tools i.e., ESCWA SDMX Converter.
- To update periodically and on a timely basis the SDG national reporting platforms as soon as data become available after every data collection process, as well as the metadata. ESCWA will prompt the countries for updates twice a year to ensure regular updating.
- To include on the SDG database disaggregated subnational-level indicators for improved policy making.

10. Simultaneous interpretation in the Arabic and English languages were provided during the period of the workshop. The workshop presentations and resources are available at the ESCWA website, accessible at the following link: https://www.unescwa.org/events/sdmx-training-series

11. The evaluation results received from 23 participants who attended the workshop (100% response rate) were as follows: 83% of the participants rated the workshop as excellent and 13% as good, and 4% did not respond. In terms of workshop quality, 78% of the respondents found the workshop quality excellent and 13% gave a good rating, 4% gave an adequate rating and 4% did not respond. Regarding meeting the objectives of the workshop, 83% of the participants gave an excellent rating and 9% gave a very good rating, 4% gave an adequate rating and 4% did not respond. Regarding the presenters' input, 87% of respondents rated the presentations as excellent and 13% rated the presentations as good. Finally, 70% of the participants

rated the logistics and organization of the workshop as excellent, 22% as good, and 4% as adequate, and 4% did not respond.

12. Further useful resources and links to past workshops:

- ESCWA SDMX Converter for SDGs
- Data Exchange using the ESCWA SDMX Converter for SDGs: A Handbook
- Guidelines for the Global DSD for SDGs
- Guidelines for the Customization of the Global DSD
- SDG Dataflows and Content Constraints
- SDMX SDG Page
- SDMX Global Registry
- SDG Data Matrix v 1.20
- Metadata Online Converter
- Tutorial & Materials
- SDMX Crash Course I
- SDMX Crash Course II
- SDMX Crash Course III
- SDMX Series of Trainings
- SDG Metadata Template
- SDMX Desktop Converter
- Europa SDMX Online Converter
- SDMX Tools
- SDMX Converter Error Messages
- SDMX User Forum

13. Group photo