



ECASTAT TRUST FUND: SDG METADATA TRANSLATION PROJECT

Using **Open-Source Solutions**
to Accelerate **SDG Metadata** Translation
and Build **National Statistical Capacity**



WORLD BANK GROUP

April 27, 2021

Background



- Since establishment in 2012, ECASTAT TF has been supporting the development of statistical organizations in the Europe and Central Asia region through improving methodological, technical, and human capacity.
- Capacity building is necessary for all countries to prepare the data and statistics needed to meet the scope and ambitions of the 2030 Agenda.
- When it comes to the Sustainable Development Goals (SDGs) monitoring and reporting, countries and teams are still requesting help and support for translating the metadata into local languages.



Background (continued)

- Now more than ever, the transparency and accessibility of SDG data are essential for informing public and policymakers.
- SDG metadata (i.e., information on how to calculate and interpret SDG indicators) are not available languages other than English and Arabic. This has limited the understanding and implementation.
- By converting SDG metadata files into machine-readable format using open-source software, the team has developed an efficient and robust method for translation into different languages.



Project requirements

- Preparing such translations is extremely time consuming and costly. There are **247** indicators (231 unique), **257** metadata files @ ~7 pages each of technical language.
- Version control is a challenge. The indicators are refined and revised over time, and it is difficult for users to know what changed and when.
- The method would have to be scalable. Costs must be minimal, the tools must be easy to use, and a range of languages must be available.



Strategic collaborations

- The ECASTAT support enabled the **data science work** to build and evaluate the translation protocol.
- UNECE funded translation of the indicator metadata files into **Russian** with expert appointed by ROSSTAT.
- UNSD's SDMX and IAEG-SDGs teams consulted regarding the **mapping of metadata concepts** in the preparation of machine-readable files.
- Additional collaboration and agreement were setup. Statistics Canada is preparing **French** and ECLAC with IDB has started the **Spanish** translation from the English machine-readable files.



Three step approach

1. To make **machine-readable, SDMX compliant** SDG metadata files to speed and reduce costs of the translation process and aid version control.



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2. To translate machine-readable metadata with computer-assisted translation software. A human translator with statistical expertise selects or edits the best translation for each metadata component.
3. To **post resulting translations** on the public website using open-source software. All files and documentation are available. This facilitates translation into additional languages by partners the reducing time and cost.



Word file access

SDG tier 1 indicator files are accessed from UNSD Metadata Repository.

The screenshot shows the website unstats.un.org/sdgs/metadata/. The page has a header with "World Bank", "UNECE", and "UNSC" logos. On the left, there is a "Search" sidebar with a text input field labeled "Enter Text", two dropdown menus labeled "Select Goal" and "Select Target", and three buttons: "Filter", "Clear", and "Back". The main content area displays "Goal 1. End poverty in all its forms everywhere". Under this goal, there are three targets:

- Target 1.1:** By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day
 - Indicator 1.1.1:** Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural)
 - See Metadata : (1)
 - See Metadata : (2)
- Target 1.2:** By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
 - Indicator 1.2.1:** Proportion of population living below the national poverty line, by sex and age
 - See Metadata :
 - Indicator 1.2.2:** Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
 - See Metadata :
- Target 1.3:** Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable



Mapping of concepts

Team mapped the **SDMX metadata concepts** and the **IAEG-SDG metadata** into a machine-readable file, which allows automation.

Metadata Submission Form

Indicator information

Detailed concept name	Insert text, lists, tables, and images. See Tip .
i.a. Goal	Goal 5: End poverty in all its forms everywhere
i.b. Target	Target 5.1: By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day
i.c. Indicator	Indicator 5.1.1: Proportion of the population living below the international poverty line by sex, age, employment status and geographic location (rural/total)
i.d. Series	
i.e. Metadata update	Last updated: 05 July 2016
i.f. Related indicators	
i.g. International organization(s) responsible for global monitoring	
i.h. International organization(s) responsible for global monitoring	Institutional information

1. Data reporter

Detailed concept name	Insert text, lists, tables, and images. See Tip .
1.a. Organization	
1.b. Contact person(s)	
1.c. Contact organization unit	
1.d. Contact person function	
1.e. Contact phone	
1.f. Contact mail	
1.g. Contact email	

2. Definition, concepts, and classifications

Detailed concept name	Insert text, lists, tables, and images. See Tip .
2.a. Definition and concepts	Concepts and definitions
2.b. Unit of measure	
2.c. Classifications	
2.d. Data sources	
2.e. Data collection method	
2.f. Data release calendar	
2.g. Data providers	
2.h. Data compilers	
2.i. Institutional mandate	
2.j. Rationale	
2.k. Comment and limitations	
2.l. Method of computation	
2.m. Validation	

Institutional information

Organization(s):
World Bank (WB)

Concepts and definitions

Definition:
The indicator "Proportion of the population living below the international poverty line" is defined as the percentage of the population living on less than \$1.25 a day at 2011 international prices. The international poverty line is currently set at \$1.90 a day at 2011 international prices.

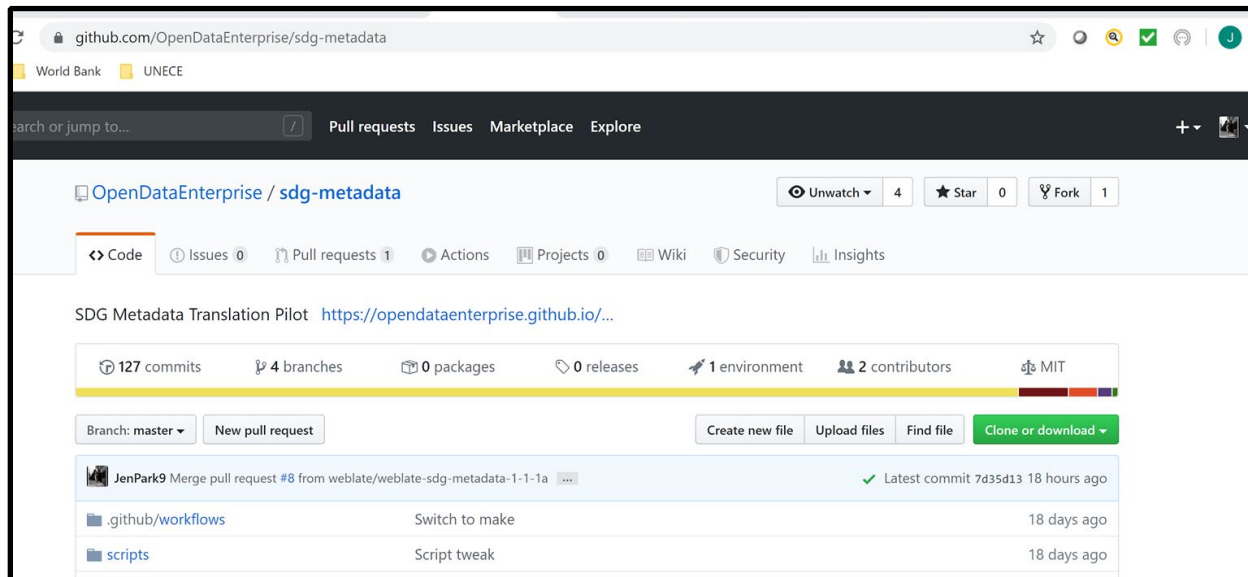
Rationale:
Reducing poverty is important to the global development agenda as well as to the national development agenda of many countries. The World Bank produced its first global poverty estimates for developing countries for World Development Report 1990 (World Bank 1990) using household survey data for 50 countries (Dagoberto 2015) and set at \$1.90 (WB). Since then there has been considerable expansion in the number of countries that have household income and expenditure surveys. The World Bank's Development Research Group compiles a database that is updated annually as new survey data become available (and that may contain more recent data or revisions) and conducts a major re-evaluation of poverty against poverty every year. (Dagoberto) is an interactive, computerized statistical platform for replicating these internationally comparable \$1.90 and \$2.00 a day global, regional and country-level poverty estimates, and for comparing poverty measures for various country groupings and the different poverty lines.

Examples:
In assessing poverty in a given country, and how best to reduce poverty, one naturally focuses on a poverty line that is considered appropriate for that country. But how do we set meaningful goals?



Transfer to Github

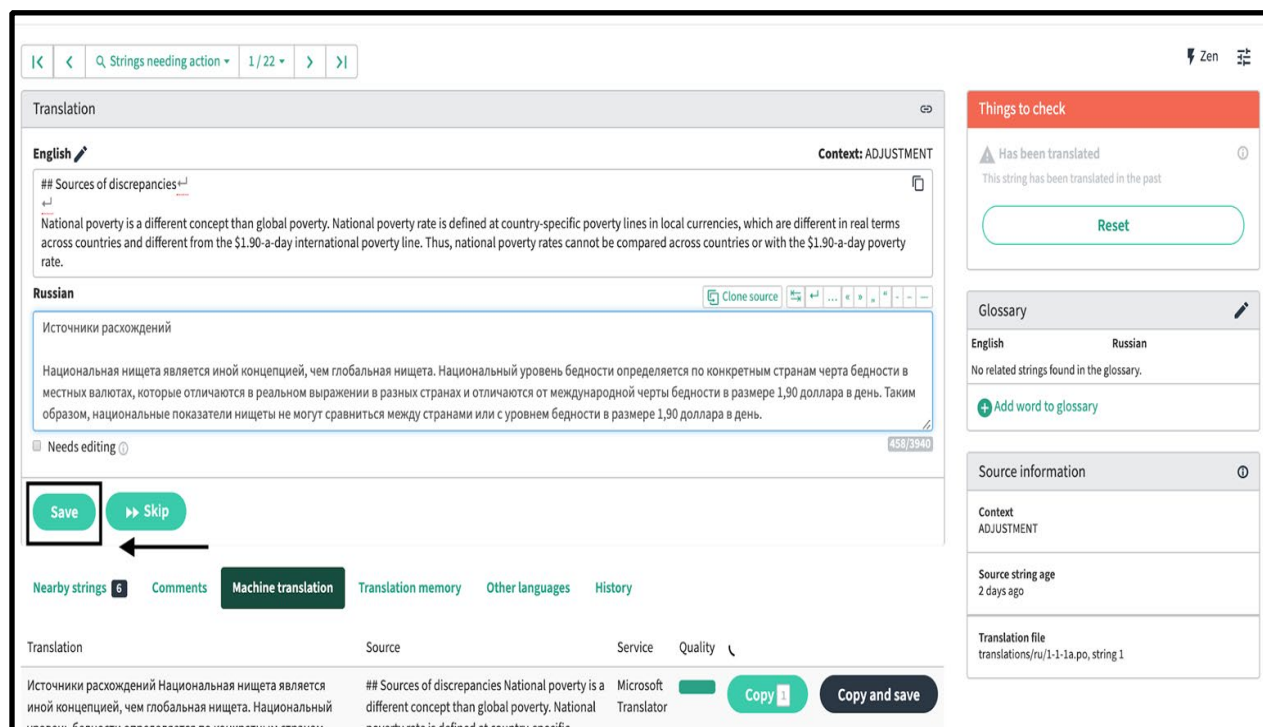
- Machine-readable metadata file are uploaded into **Github**, an open-source development platform.
- It is **free** for anyone to manage and share files.



Easy, Open Source Translation Tools



- The human translator uses Weblate to **translate** metadata.
- S/he can **select from many translations and edit**.
- Add preferred translations to the **glossary**, improving efficiency.





Revise Files Easily

- Text to be **changed** is **flagged** for translators.

SDG Metadata / Site / Russian / Translate

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4 / 4

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Translated strings ▾ state:>=translated

Position and priority ▾ ⚙

Translation GD

Source change

Praesent sit amet facilisis metus, vel gravida ante. ~~Quisque interdum massa id leo varius posuere~~ **Proin cursus sapien quis molestie volutpat.** Maecenas tincidunt ornare odio ac tempor. Integer eros ligula, convallis et vestibulum sit amet, maximus sit amet lacus. Nam rutrum augue sapien, a tristique nisi eleifend vitae. Integer malesuada sem tristique urna feugiat posuere. Donec ullamcorper sit amet justo at mollis. Nam odio elit, vehicula sed nisl at, vulputate viverra elit.

English

Key TESTING

Praesent sit amet facilisis metus, vel gravida ante. Proin cursus sapien quis molestie volutpat. Maecenas tincidunt ornare odio ac tempor. Integer eros ligula, convallis et vestibulum sit amet, maximus sit amet lacus. Nam rutrum augue sapien, a tristique nisi eleifend vitae. Integer malesuada sem tristique urna feugiat posuere. Donec ullamcorper sit amet justo at mollis. Nam odio elit, vehicula sed nisl at, vulputate viverra elit.

Russian

Clone source

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NBS

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Morbi non enim dapibus, scelerisque leo non, finibus dolor. Nulla non turpis quis tortor tempus viverra nec vel metus. Integer ut tristique turpis. Nam tincidunt lobortis ipsum vel tempus. Pellentesque venenatis leo cursus, ultricies leo quis, interdum purus. Vivamus feugiat nisl sed tortor vulputate, eget interdum sapien accumsan. Phasellus sollicitudin euismod porta. Donec efficitur ornare commodo. Praesent tincidunt leo non consectetur malesuada.

Review state

453/4340 · 434

☒ Needs editing

☐ Waiting for review

☐ Approved



Workflow Summary

- English metadata is entered into a **Word template**
- Word template is uploaded to the **Github repository**
- Github converts template to a **Gettext translation file**
- **Weblate pulls** the translation file from Github
- Translators **translate** the file into other languages
- **Weblate pushes** the translation files to Github
- Github updates the website to reflect the translations

Results



- With Rosstat and UNECE, the pilot study found reduced translation time by **40 percent**.
- StatCan and ECLAC/IDB were able to use this method to produce French and Spanish translations, with **minimal training** needed.
- Process improvements are further **streamlining translation work** and **version control**.
- The project protocols, all machine-readable files in ENG, their translations, and training materials are available on the **public website** at <https://worldbank.github.io/sdg-metadata/>.

Translations Are Available to Anyone



- Posted on the **website** as they are completed.

Концепции SDMX метаданных
[0.a. Цель](#)
[0.b. Задача](#)
[0.c. Показатель](#)
[0.g. Международные организации, ответственные за глобальный мониторинг](#)
[2.a. Определение и понятия](#)
[4.a. Обоснование](#)
[4.b. Комментарии и ограничения](#)
[4.c. Метод расчета](#)
[4.f. Обработка отсутствующих](#)

Показатель: 1.1.1a

[Скачать PDF](#)[Revision history](#)

Цель 1: Повсеместная ликвидация нищеты во всех ее формах

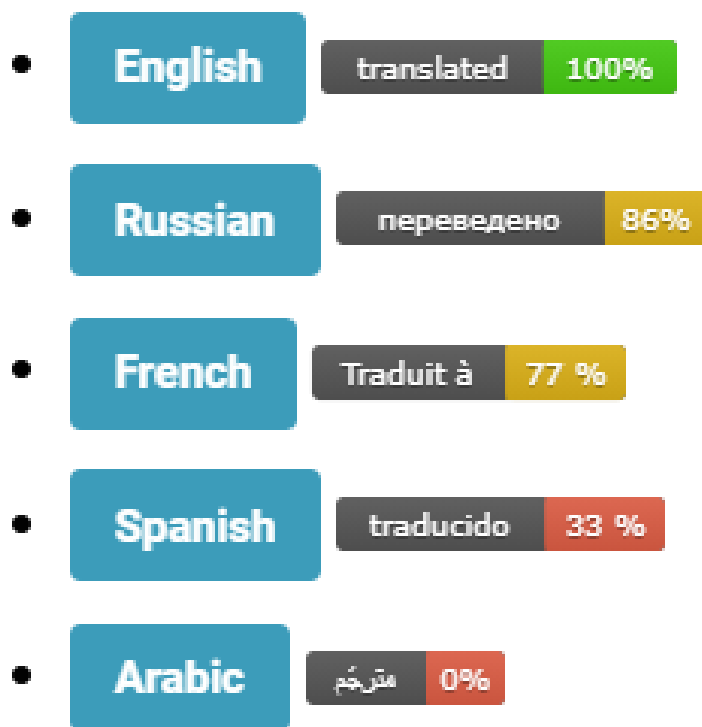
Задача 1.1: К 2030 году ликвидировать крайнюю нищету для всех людей во всем мире (в настоящее время крайняя нищета определяется как проживание на сумму менее чем 1,25 долл. США в день)

Показатель 1.1.1: Доля населения, живущего за международной чертой бедности, в разбивке по полу,

Translations are Available in Several Languages



- Multiple translators can **work at their own pace**.





Other Translators Can Use Project Process



- **Use the guides** to translate into hundreds of **other languages**.

SDG Indicator Metadata Translation Project

Step by Step Instructions

Step 3: Instructions for Human Translator

Updated December, 2020

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