

STRIDE

Strategies for achieving Equity and Inclusion in Education, Training and Learning in Democratic Europe

STRIDE Map User Guide

A step-by-step guide for exploring educational indicators and policy reforms visualised in STRIDE Map



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UK Research
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List of abbreviations

PISA	Programme for International Student Assessment
TIMSS	Trends in International Mathematics and Science Study
PIRLS	Progress in International Reading Literacy Study
ICCS	International Civic and Citizenship Education Study
EU	European Union
WP	Work Package

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1. Introduction

STRIDE Map is an interactive visual analytics platform, designed to support the exploration of educational inequalities and education policy reforms across Europe. The platform combines quantitative educational inequalities indicators, derived from large-scale international assessment surveys, with a curated database of policy reforms.

Its central purpose is to help users examine educational outcomes, compare countries, inspect subgroup inequalities, and consider how policy reforms are distributed across time, countries, and educational levels. A detailed presentation of the data and the method of STRIDE interactive map is given in Symeonaki and Filandrianos (2025).

The specific objectives of STRIDE's interactive map are to:

- Highlight convergences and divergences among European countries regarding educational equity.
- Provide users with quick and efficient access to relevant educational inequality indicators and information on policy reforms.
- Identify areas off target in cross-country comparisons and evaluate the potential impact of reforms.
- Enable users to track the evolution of indicators over time for each country.
- Serve as a major source of information for researchers and stakeholders, and
- Offer downloadable information for further analysis and research.

The platform at a glance

STRIDE Map is organised around two main user-facing pages the Indicators Page and the Reforms Page along with the About STRIDE Map and Terms of Use Pages.

- **Indicators Page:** the main analytical environment for exploring educational inequality indicators.
- **Reforms Page:** the policy reform environment for filtering and visualising reforms.
- **About STRIDE Map Page:** an explanatory page describing the platform and its data sources.
- **Terms of Use Page:** a responsible-use page covering citation, acknowledgement, verification, and misuse prevention.

The platform also includes shared elements across pages, including the STRIDE navigation bar, footer, credits modal, map interactions, data-download functions, and contextual help modals.

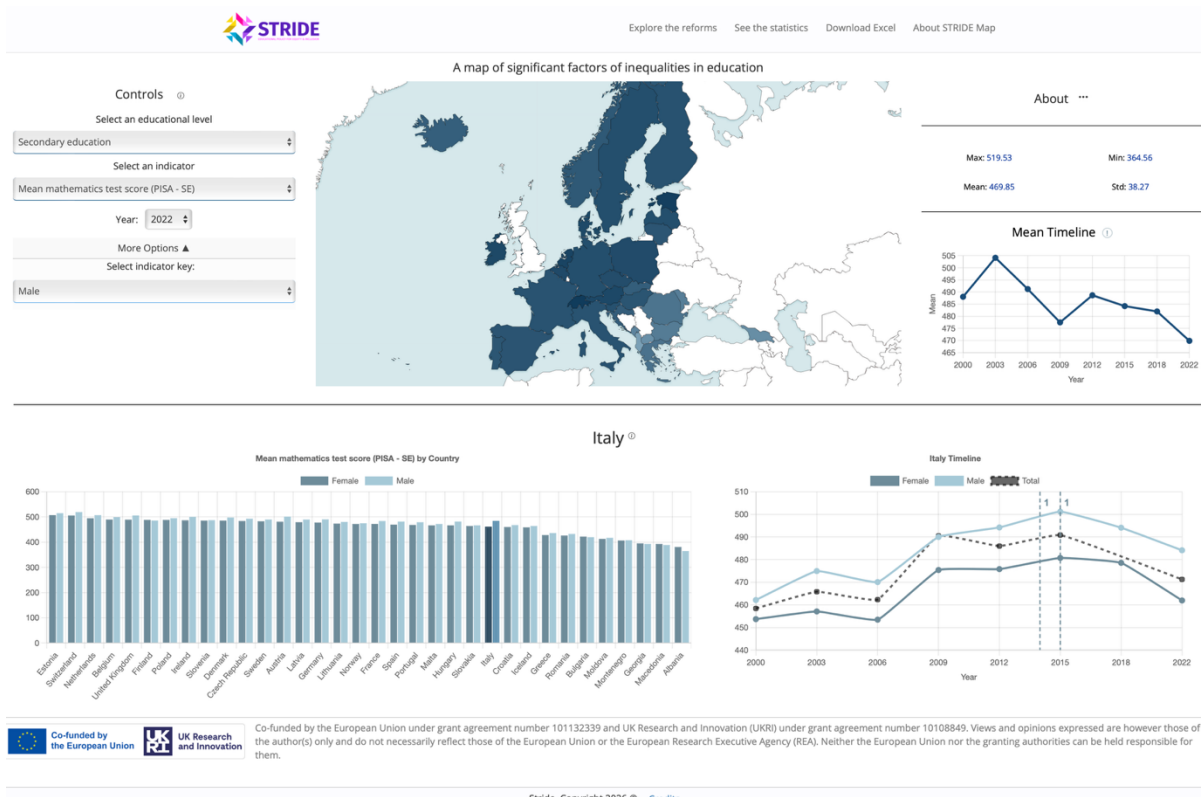


Figure 1. General platform overview

2. Indicators Page

The Indicators page is the default page of STRIDE Map. It is intended for users who wish to explore educational inequality indicators by educational level, indicator type, year, country, and subgroup breakdown. A detailed presentation of the methodology and the indicators visualised on the map is given in Steinmann et al. (2025).

The interface combines four main areas: the control panel, the interactive map, the statistics panel, and the chart section. Its basic features are exhibited in Figure 2.

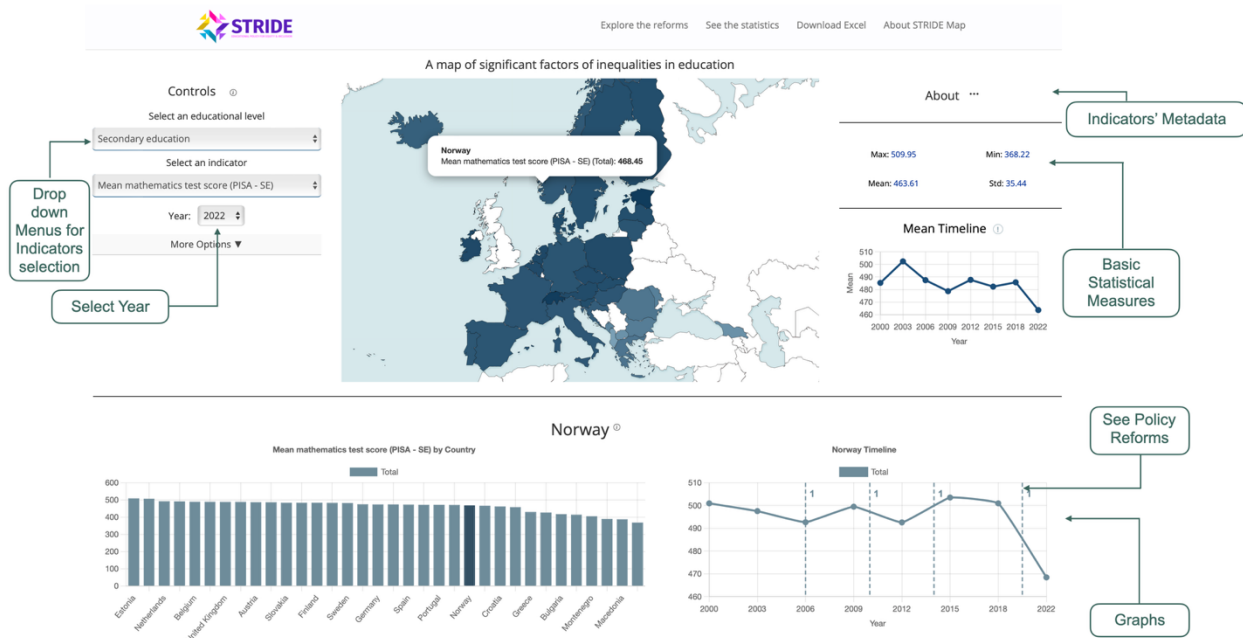


Figure 2. Basic functionalities of Indicators Page

2.1. Navigation Bar

At the top of the Indicators page, the navigation bar provides access to the main platform functions.

- Explore the reforms opens the Reforms page.

- See the statistics scrolls the user down to the country-specific chart and statistics section.
- Download Excel downloads the currently selected indicator dataset after the user confirms agreement with the STRIDE Terms of Use.
- About STRIDE Map opens the About page.

Figure 3. Indicators Page navigation bar

2.2. Controls Panel

The controls panel (Figure 4) determines which data are depicted on the map, in the statistics panel, and in the charts.

1. Select an educational level. The interface offers Pre-school, Primary education, and Secondary education. The loaded dataset currently contains indicators for Primary and Secondary education; if a selected level has no available indicator data, the indicator dropdown will not display usable options.
2. Select an indicator. The indicator dropdown is searchable, helping users locate long indicator names efficiently. Indicator names usually include the data source and educational stage in parentheses, such as PISA, PIRLS, TIMSS, or ICCS.
3. Select a year. The year dropdown is generated dynamically according to the selected indicator and breakdown. If an indicator does not contain longitudinal data, the year dropdown is disabled.
4. Open More Options to select an indicator key or breakdown. These breakdowns represent subgroup dimensions such as total population, gender, parental socio-economic status, migration background, or school location, depending on the selected indicator.

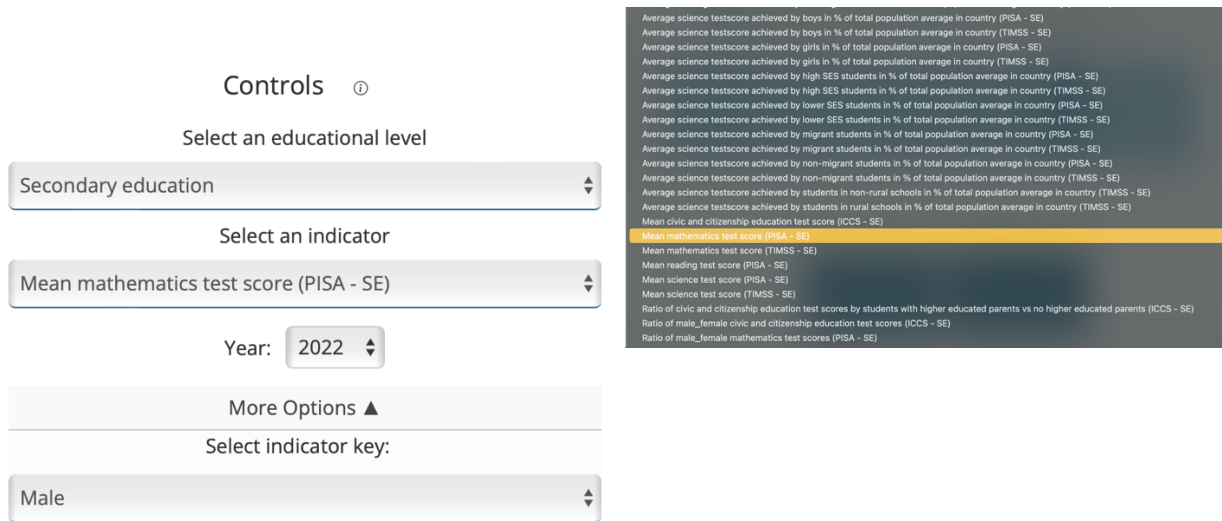


Figure 4. Indicators controls panel¹

2.3. Quick Help

The information icon next to the Controls heading opens a Quick Help modal. This modal summarises the basic workflow for first-time users.

1. Select an indicator.
2. Select an available year.
3. Select a breakdown from the options menu.

¹ To improve user experience when browsing the large number of indicators available, the map now includes an enhanced navigation feature. Users can begin typing to automatically jump to the matching indicator, for example, typing “civ” takes the user directly to “Civic...”. Although the typed letters are not visible on screen (as the function operates in the background), this greatly facilitates faster access to specific indicators.

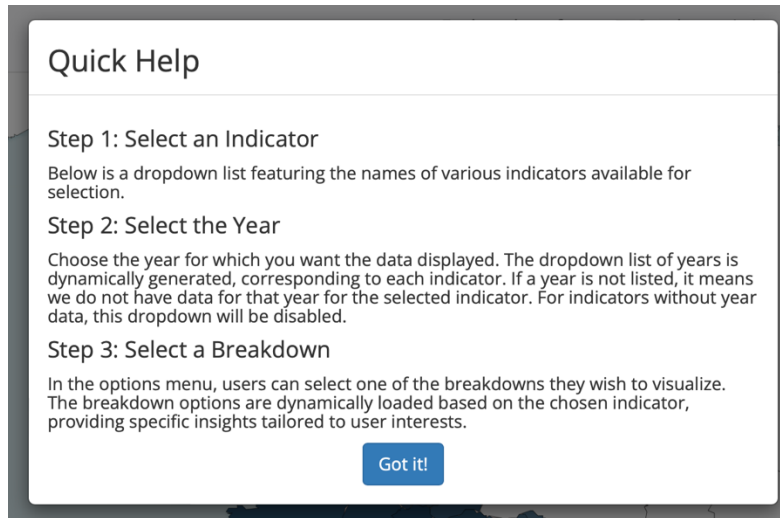


Figure 5. Quick Help modal

2.4. Indicators' Interactive Map

The Indicators map visualises the selected indicator across available countries. Countries with available numerical data are shaded on a blue colour scale. Darker colours indicate higher values for the selected indicator and breakdown. Countries with no available value, missing data, or zero values are depicted in white.

When the user hovers over a country with data, a popup displays the country name, selected indicator, selected breakdown, and numerical value.

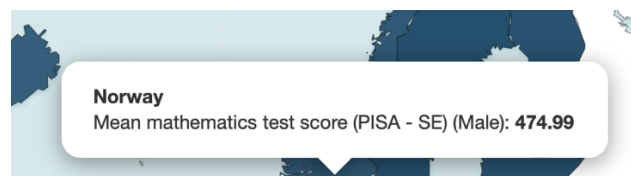


Figure 6. Hover Popup

When the user clicks a country with available data, that country becomes the active country of interest. This selection updates the country heading and the charts below the map (Figure 7).

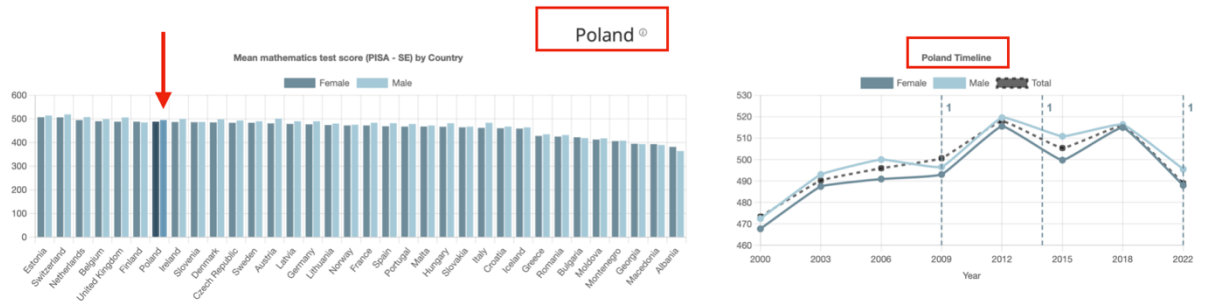
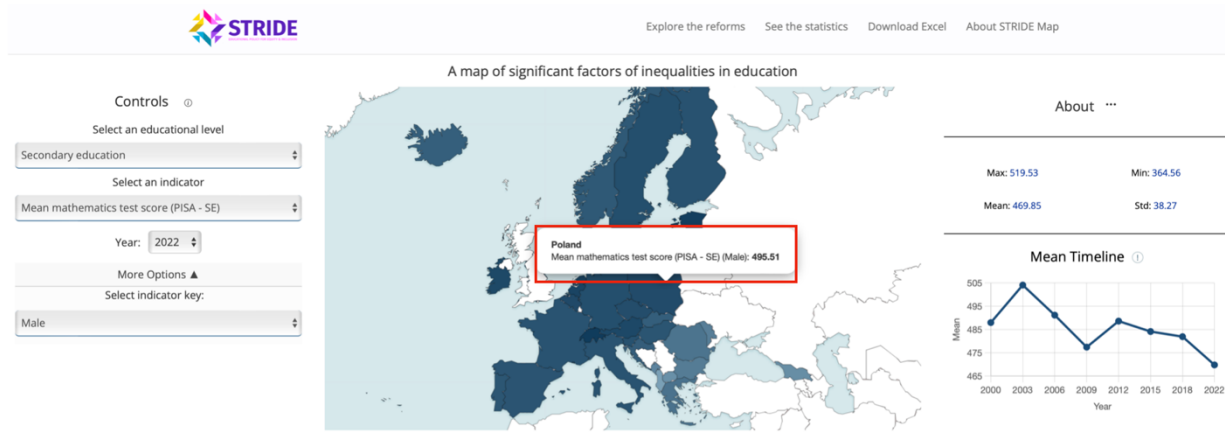


Figure 7. Country specific Graphs (Poland)

Users can click on any option available at the legend of the bar chart to adjust the graph's appearance according to their preferred visualisation (Figure 8).

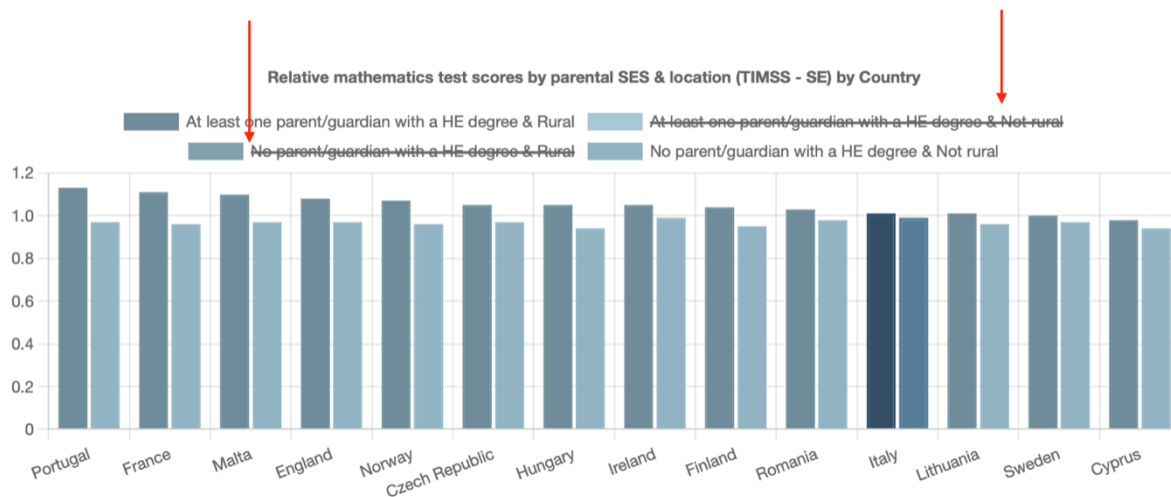


Figure 8. Graph customisation options

Map interpretation tip

Use the map to compare countries and explore their results. Focus on the colours, country popups, and linked charts to understand differences and trends, rather than using zooming or dragging as the main way to interact with the map.

2.5. Statistics Panel

The statistics panel on the right-hand side provides aggregate statistics for the selected indicator, breakdown, and year.

- Max: the highest available value among countries.
- Min: the lowest available value among countries.
- Mean: the average value among countries with available data.
- Std: the standard deviation among countries with available data.

If the selected indicator includes multiple years, the panel also displays a Mean Timeline. This line chart shows the mean value across available countries for each year. Users should interpret this chart carefully because the set of countries may differ from year to year (Figure 9).

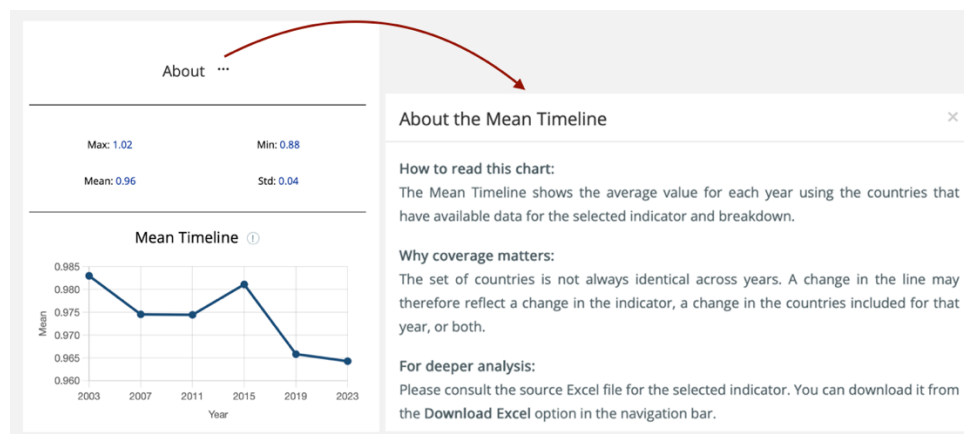


Figure 9. Statistics panel and Mean Timeline

2.6 Indicator Metadata

The About section in the statistics panel includes a three-dot button. Clicking this button opens a modal with metadata for the currently selected indicator and breakdown. This information may include the indicator description (what exactly does the indicator measure), available years, available breakdowns, available countries, and notes. The available breakdowns include the following: Gender (male/female), Socio-economic Status (SES) (at least one parent/guardian with a higher education degree/no parent/guardian with a higher education degree), migration background (students born in country/students not born in country), and school location (rural/not rural).

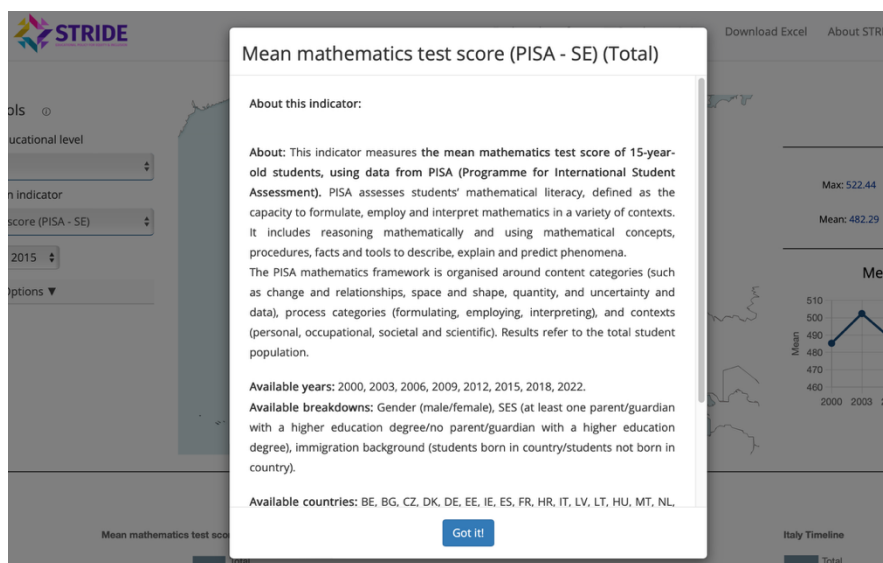


Figure 10. Indicator metadata modal

Recommended check

Consult the metadata before interpreting visualisations, especially when comparing indicators across countries or years.

2.7 Country-Level Charts

Below the map, the Indicators page provides country-level analytical charts (Figure 11). The country heading identifies the active country. The user can change the country of interest by clicking on a different country on the map.

The first chart is a comparative bar chart. It ranks or displays countries according to the selected indicator and breakdown. The selected country is highlighted in a darker colour, allowing users to see its position relative to other countries.

If longitudinal data exist, a second chart appears as a country timeline. This line chart displays the selected country's values across available years. When a total-population series exists, it may be visualised as an additional dashed line, enabling comparison between the selected subgroup and the total population.

The timeline may also display vertical markers for policy reforms (see sub-section 2.9) in the selected country and educational level. The number beside a marker indicates how many reforms are associated with that year. Clicking a reform marker opens a searchable modal listing the relevant reforms.

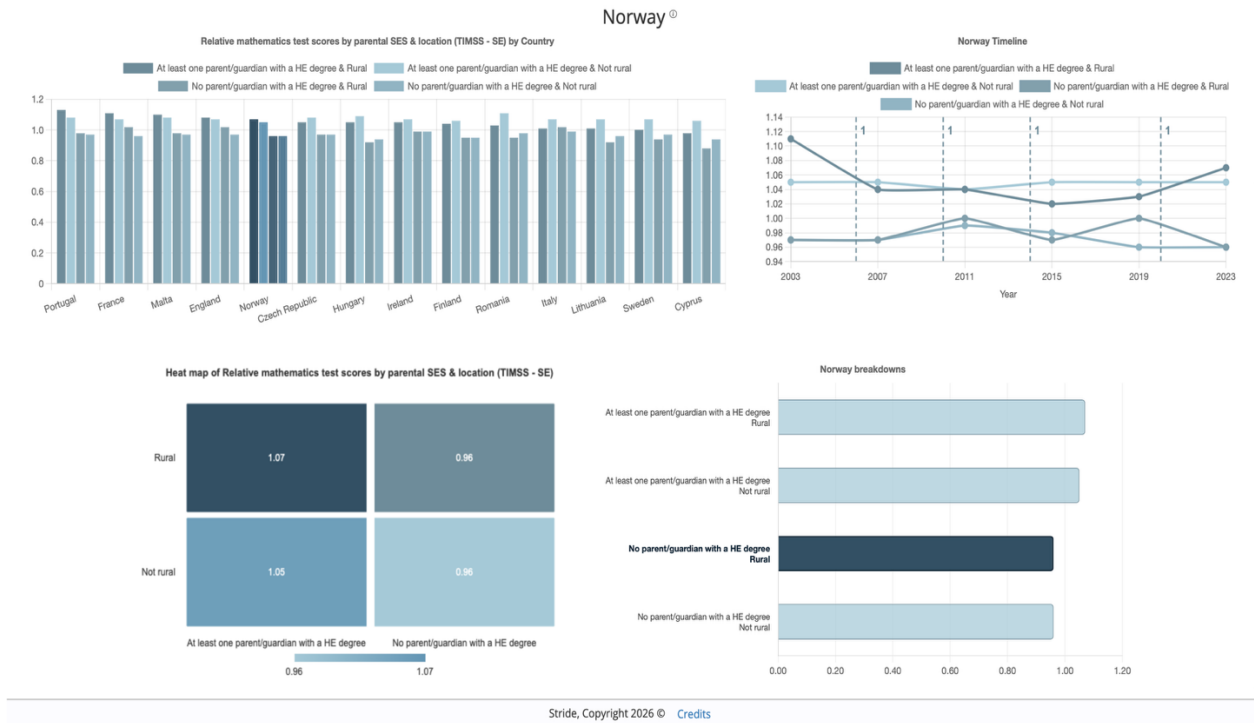


Figure 11. Country comparison chart

2.8 Breakdown Detail Charts

For indicators with two-dimensional breakdowns (Figure 12), for example socioeconomic status (SES) and location, or gender and migration background, a heatmap is displayed to help users quickly identify patterns, disparities, and intersections between groups.

The heatmap displays the selected country's values for the relevant subgroup combinations. Cells with available data are coloured and labelled with their values. Cells without data are marked as unavailable.

In these cases, an additional fourth chart appears in the bottom right-hand side corner of the interface. This chart highlights the category selected by the user in a darker shade, making it easier to distinguish and compare against the other categories shown. This coordinated highlighting supports faster interpretation and helps users maintain visual focus while exploring the data.

2.9 Reform Timeline Modal from Indicators Page

When the selected country timeline contains reform markers, clicking a marker opens a modal listing reforms for the selected country, educational level, and year. The modal includes a search field that can filter reforms by title, key actions, aim, status, country, evaluation, educational level, kind/type, coverage, and reform number. Available information per reform (Figure 12):

- Title of the reform
- Year it was implemented
- Country
- Educational level targeted
- Kind/Type of reform
- Coverage
- Status
- Evaluation
- Key actions of reform
- Aim of reform, and
- Evaluation reference.

Important interpretation note

This feature links indicator trends with reform events. **It should be used for exploratory contextual analysis, not as direct evidence of causal impact.**

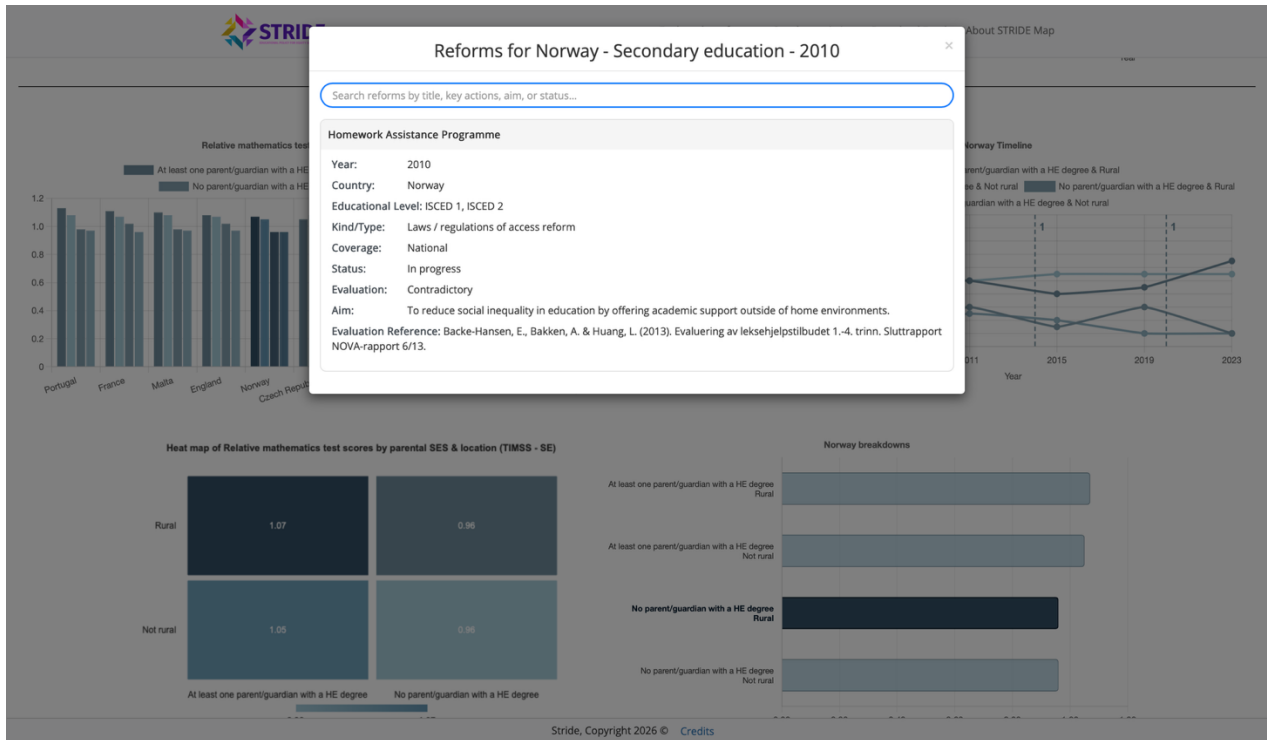


Figure 12. Reform marker modal

2.10 Downloading Indicator Data

To download the currently selected indicator dataset, the user selects Download Excel from the navigation bar. A modal asks the user to confirm agreement with the STRIDE Terms of Use. The Download button becomes active only after the agreement checkbox is selected (see Section 5).

The downloaded Excel file corresponds to the selected indicator. Users should consult the file directly when conducting formal analysis, preparing publications, or verifying country/year coverage.

2.11 Reopening a Specific Indicator View

The Indicators page updates the browser address as the user changes the main analytical state. The URL can include the selected educational level, indicator, breakdown, year, and country. When the link is opened again, the page attempts to

restore the same view (e.g.

https://apps.islab.ntua.gr/stride/?school_level=Secondary+education&indicator=Mean+mathematics+test+score+%28PISA+SE%29&inequality=Male&year=2022&country=Greece).

This makes the page suitable for reproducible visual inspection. For example, a researcher may configure an indicator, select a country, copy the browser address, and later return to the same map and chart configuration.

3. Policy Reform Page

The Reforms page (Figure 13) is designed for exploring education policy reforms across countries, years, educational levels, reform types, coverage categories, and evaluation categories. Instead of showing indicator values, the map displays the number of reforms that match the current filters. A detailed analysis of the methodology and the reforms visualised on the map is presented in Ślusarczyk et al. (2026).

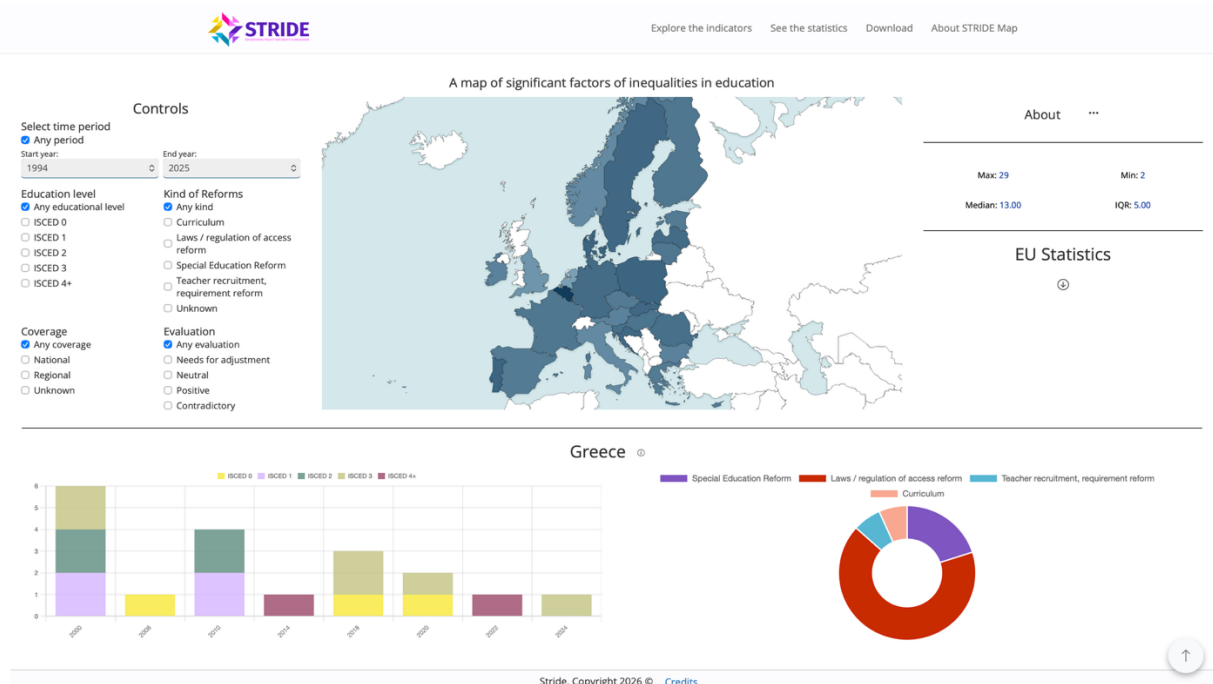


Figure 13. Reforms Page overview

3.1 Reforms Navigation Bar

The Reforms navigation bar (Figure 14) provides the following options.

- Explore the indicators returns to the Indicators page.
- See the statistics scrolls to the chart and statistics area.
- Download opens a dropdown with a PDF download option.
- About STRIDE Map opens the About STRIDE Map page.
- The STRIDE logo returns to the main platform route.



[Explore the indicators](#) [See the statistics](#) [Download](#) [About STRIDE Map](#)

Figure 14. Reforms Navigation Bar

3.2 Reforms Filters Panel

The filters panel (Figure 15) controls which reforms are included in the map and charts.

The Select time period section includes an Any period checkbox. When this option is selected, the start and end year dropdowns are disabled and all years are included.

When it is deselected, the user can define a specific start year and end year. The interface prevents the end year from being earlier than the start year.

The Education level section allows filtering by ISCED level. If Any educational level is selected, the individual ISCED checkboxes are disabled. If it is deselected, users can select one or more levels, including ISCED 0, ISCED 1, ISCED 2, ISCED 3, and ISCED 4+.

The Kind of Reforms section allows filtering by reform category. Available options include curriculum reforms, laws or regulation of access reforms, special education reforms, teacher recruitment or requirement reforms, and unknown reforms.

More specifically, the types of reforms include:

- **Curriculum reforms:** changes to curriculum content, learning objectives, or educational programmes.
- **Laws / regulations of access reforms:** reforms aimed at changing the educational system or increasing access to education.
- **System of evaluation / exams reforms:** reforms targeting assessment systems, final examinations, or admission procedures.
- **Special education reforms:** reforms focused on students with special educational needs and inclusive education measures.
- **Teacher education or employment reforms:** reforms concerning teacher preparation, recruitment, qualifications, or employment conditions.
- **Unspecified reforms:** reforms that were not sufficiently described in the databases to allow clear categorisation.

The Coverage section allows filtering by national, regional, or unknown coverage. The Evaluation section allows filtering by evaluation category, including needs for adjustment, neutral, positive, and contradictory. An additional feature has been introduced, allowing users to filter policy reforms by time period rather than solely by year. The interface provides Start Date and End Date selectors enabling users to define a specific timeframe of interest (Figure 15).

Whenever a filter changes, the map, statistics panel, country charts, Europe charts, summary charts, and URL state are updated.

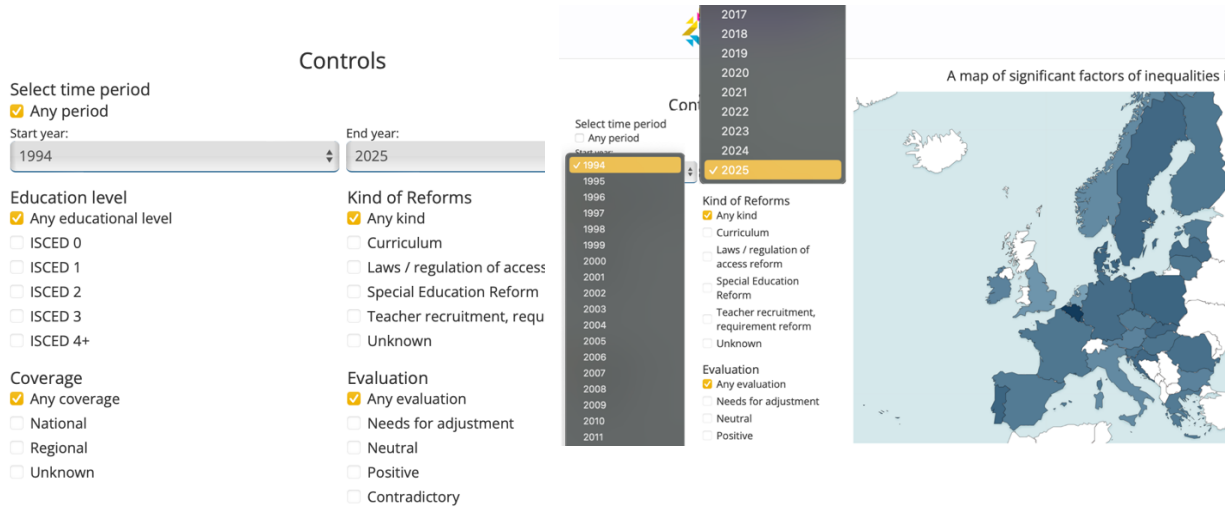


Figure 15. Custom reform filters (Year)

3.3 Reforms Map

The Reforms map displays the number of reforms matching the selected filters for each country. Countries with higher counts appear darker; countries with no matching reforms are shown in white.

Hovering over a country displays a popup with the country name and number of reforms (Figure 16). Clicking a country sets it as the active country and updates the country-specific chart section.

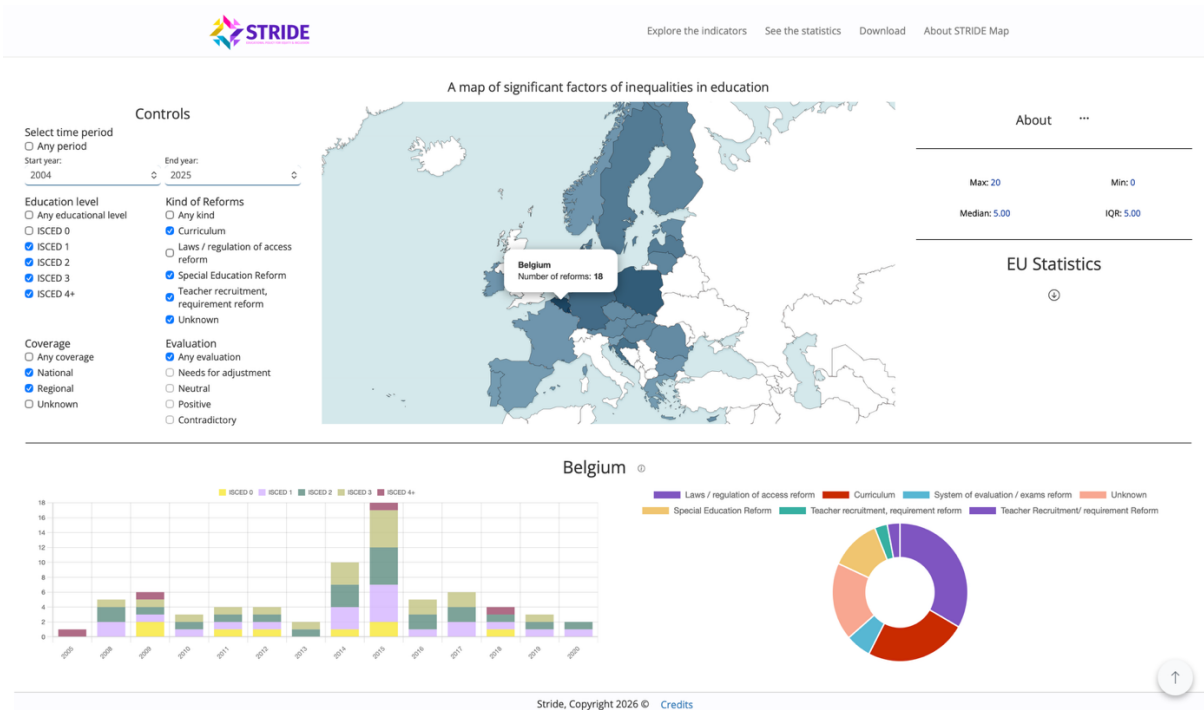


Figure 16. Reforms map popup

3.4 Reforms Statistics Panel

The reforms statistics panel summarises the distribution of reform counts across countries after the current filters are applied.

- Max: the highest country-level reform count.
- Min: the lowest country-level reform count.
- Median: the median country-level reform count.
- IQR: the interquartile range of country-level reform counts.

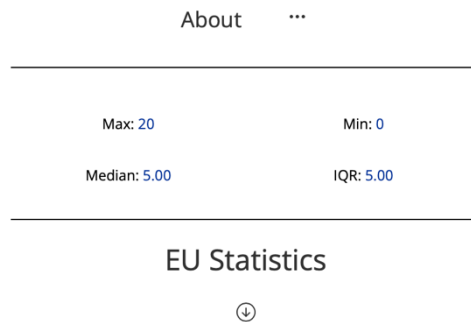



Figure 17. Reforms statistics panel

The EU Statistics button scrolls the user toward the Europe-level section. A floating back-to-top button appears after the user scrolls down the page .

3.5 Country-Level Reform Charts

The country section is headed by the active country name. The user can change the active country by clicking a country on the map. The charts depicted are:

- A stacked bar chart showing reforms by educational level and year.
- A doughnut chart showing the distribution of reforms by kind/type.
- A pie chart showing the distribution of reforms by coverage.
- A stacked bar chart showing reforms by kind/type and year.

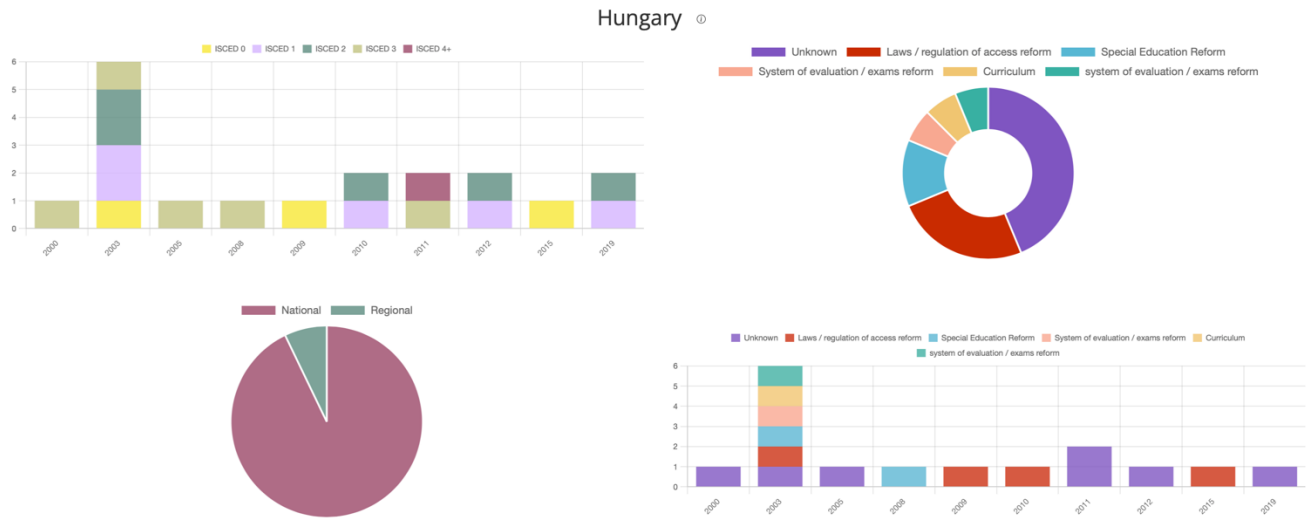


Figure 18. Country-level reform charts

3.6 Country Reform Details Modal

The information icon next to the active country heading opens a modal listing reform records for the selected country and current filters (Figure 19). The modal includes a search field that filters reform records by title, key actions, aim, status, country, evaluation, educational level, kind/type, coverage, and reform number.

Each reform entry may include the title, year, country, educational level, kind/type, coverage, evaluation, key actions, aim, and evaluation reference. If the evaluation reference is a URL, it is displayed as a clickable link (see also Figure 24).

The modal also includes a PDF button. This exports the visible reform records to a PDF report. If the modal search filter is active, the exported PDF reflects the currently visible records.

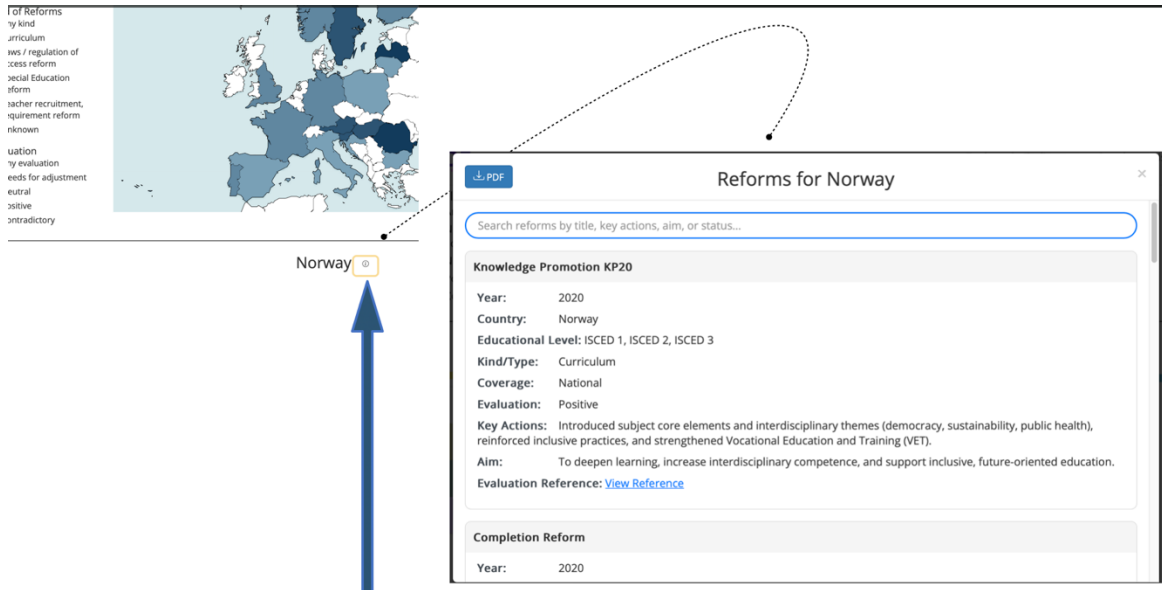


Figure 19. Country reform details modal

3.7 Downloading Reform PDF Reports

Users can download a PDF report from the country reform modal or from the Reforms page navigation dropdown. The report includes the selected country, generation date, STRIDE attribution, the total number of included reforms, and the reform details that match the current filters.

This export is useful for creating country-specific reform summaries, documenting search results, or preparing supporting material for policy analysis. Thus by selecting 'PDF' or 'Download' from the main menu, users can obtain a summary of all reforms that meet their selected criteria in PDF format (Figure 20).

PDF

Reforms for Norway

Download

Search reforms by title, key actions, aim, or status...

Knowledge Promotion KP20

Year: 2020

Country: Norway

Educational Level: ISCED 1, ISCED 2, ISCED 3

Kind/Type: Curriculum

Coverage: National

Evaluation: Positive

Key Actions: Introduced subject core elements and interdisciplinary themes (democracy, sustainability, public health), reinforced inclusive practices, and strengthened Vocational Education and Training (VET).

Aim: To deepen learning, increase interdisciplinary competence, and support inclusive, future-oriented education.

Evaluation Reference: [View Reference](#)

Figure 20. Download options enabling users to obtain a PDF summary of reforms

An example of the reports including the reforms for Denmark is exhibited in Figure 21.

Reforms for Denmark

Report automatically generated by STRIDE on: 30/05/2026, 17:36:31
<https://apps.islab.ntua.gr/stride>

Total reforms: 18

Government green paper to ensure more skilled workers in the healthcare system and elderly care, 2024

Year: 2024

Country: Denmark

Educational Level: ISCED 3

Kind/Type: Unknown

Coverage: National

Evaluation: Unknown

Key Actions: The reform proposes a permanent increase in funding for Basic Health Care Colleges offering social and health care training programs. These colleges will have the autonomy to allocate the additional funding based on local needs, such as introducing mentoring schemes, providing homework assistance for vulnerable students, investing in welfare technology, or enhancing the competencies of teachers.

Aim: The reform aims to address the increasing demand for qualified social and health care staff by improving the quality of training programs and ensuring a more sustainable workforce in healthcare and elderly care. It seeks to reduce the high drop-out rate and low application rates in social and health care training programs.

Room for diversity in the community - LGBTI action plan 2022-2025

Year: 2022

Country: Denmark

Educational Level: ISCED 1, ISCED 2

Kind/Type: Curriculum, Teacher recruitment, requirement reform

Coverage: National

Evaluation: Unknown

Key Actions: Survey of LGBT+ Students' Well-being, provide information, counselling, and support, and providing webinars aimed at educating pedagogical staff and teachers on rights, equal treatment, diversity, and anti-discrimination practices with a focus on gender and sexual orientation, to promote inclusive learning environments and enhance the well-being of LGBT+ students.

Action plan against anti-Semitism

Year: 2022

Country: Denmark

Educational Level: ISCED 3

Kind/Type: Curriculum, Teacher recruitment, requirement reform

Coverage: National

Evaluation: Unknown

Key Actions: The reform includes changes to the primary school history curriculum, making the teaching of the Holocaust compulsory alongside the August Uprising and the Jewish Action of 1943. Additionally, the history curriculum for upper secondary education will also be updated to ensure that the Holocaust and other genocides are taught as mandatory subjects.

Aim: The reform aims to equip Danish children and young people with the knowledge and awareness to speak out against anti-Semitism and all forms of intolerance. It emphasizes the importance of understanding the Holocaust and its connection to hate crimes, conflicts, and genocide, especially as firsthand accounts of these events will soon no longer be available.

Executive Order on Admission to Full-Time University Programmes

Year: 2022

Country: Denmark

Educational Level: ISCED 4+

Kind/Type: Laws / regulation of access reform

Coverage: National

Evaluation: Unknown

Key Actions: The measure allows educational institutions to provide special conditions or accommodations for entrance exams to applicants with disabilities or those who speak a language other than Danish, as long as these accommodations do not alter the core purpose or objectives of the exam.

Aim: The reform aims to ensure that applicants with physical or mental disabilities, as well as those whose mother tongue is not Danish, are provided with equal opportunities during entrance and admission examinations, ensuring fairness and inclusivity.

Figure 21. An excerpt of PDF summary displaying reform information for Denmark (first two pages)

It is also important to note that the addition of a search function in the country-reports tool allows users to locate specific types of reforms. For example, if one wishes to identify reforms targeting Roma students in Hungary, the search feature enables the quick retrieval and examination of all reforms that specifically refer to Roma inclusion (Figure 22).



↓ PDF Reforms for Hungary

Roma

Study halls funded from the state budget

Year: 2019
 Country: Hungary
 Educational Level: ISCED 1, ISCED 2
 Kind/Type: Unknown
 Coverage: National
 Evaluation: Contradictory

Key Actions: The reform brought study halls under a formal, state-supported framework within the Human National Social Inclusion Strategy (HNSIS), transitioning them from grassroots civil initiatives into a more standardized, project-based, state-funded model. Although the study halls had existed since the mid-1990s, the 2019 reform marked a significant shift by providing public funding directly from the state budget. The Ministry of Human Capacities cooperated with the Tanodaplatform network to develop a system of project-based state funding. Despite this, the model retained many features of the earlier EU-funded projects, including short, one-year funding cycles. Study halls operated by churches were reportedly granted more autonomy in developing methodologies than those managed by civil society organizations (CSOs).

Aim: The primary aim of this reform was to combat social exclusion and educational inequalities by supporting extracurricular development for marginalized students, especially Roma children, through the institutionalization and funding

Figure 22. The use of the search functionality for isolating specific policy reforms, here targeting at Roma students in Hungary

Users may also download a summary of the eight policy reforms in Hungary identified through their search, i.e., those targeting Roma students (Figure 23).

Reforms for Hungary

Report automatically generated by STRIDE on: 13/11/2025, 12:06:10

<https://apps.islab.ntua.gr/stride>

Filtered by: "roma"

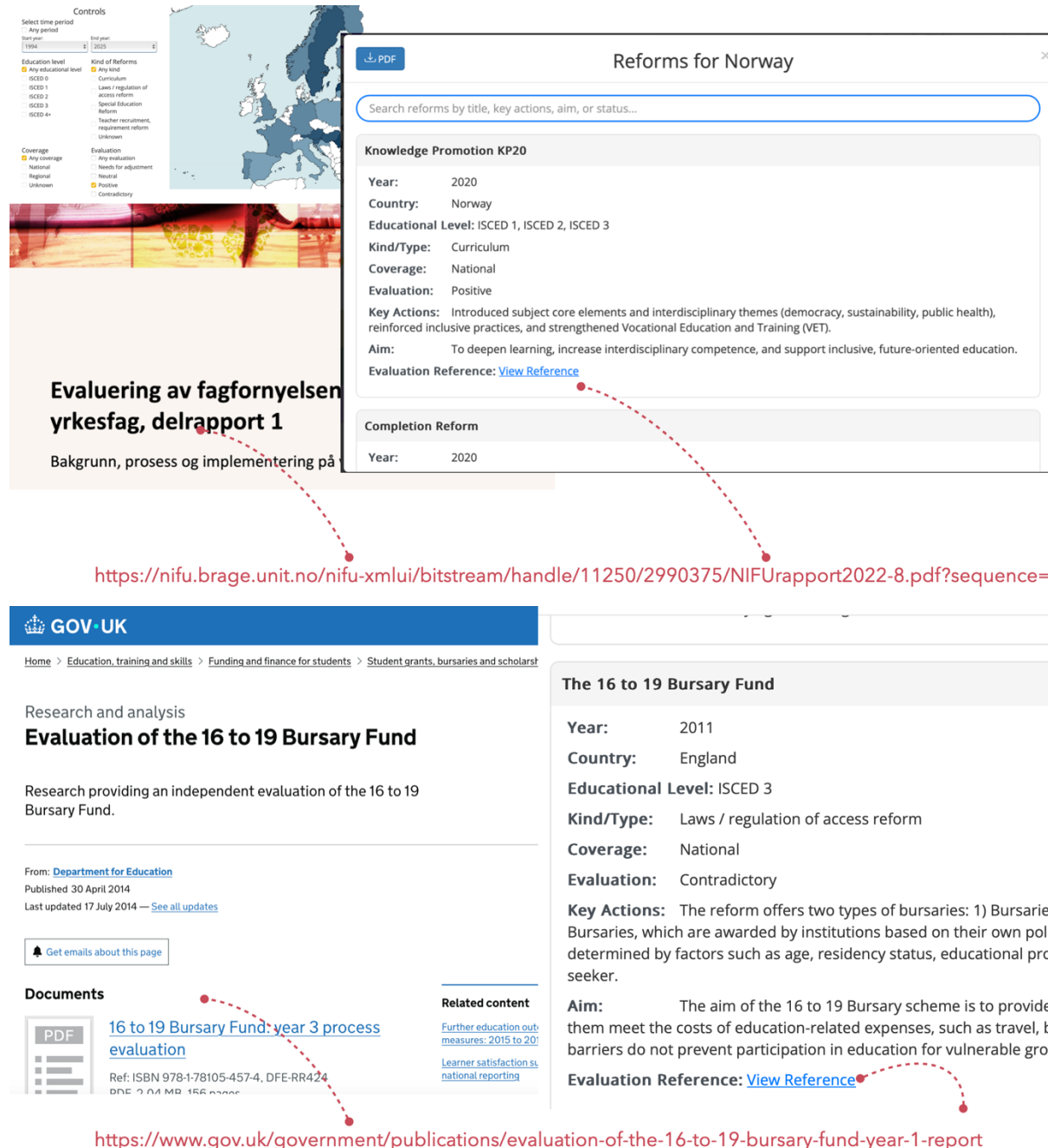
Total reforms: 8

Study halls funded from the state budget

Year:	2019
Country:	Hungary
Educational Level:	ISCED 1, ISCED 2
Kind/Type:	Unknown
Coverage:	National
Evaluation:	Contradictory
Key Actions:	The reform brought study halls under a formal, state-supported framework within the Human National Social Inclusion Strategy (HNSIS), transitioning them from grassroots civil initiatives into a more standardized, project-based, state-funded model. Although the study halls had existed since the mid-1990s, the 2019 reform marked a significant shift by providing public funding directly from the state budget. The Ministry of Human Capacities cooperated with the Tanodaplatform network to develop a system of project-based state funding. Despite this, the model retained many features of the earlier EU-funded projects, including short, one-year funding cycles. Study halls operated by churches were reportedly granted more autonomy in developing methodologies than those managed by civil society organizations (CSOs).
Aim:	The primary aim of this reform was to combat social exclusion and educational inequalities by supporting extracurricular development for marginalized students, especially Roma children, through the institutionalization and funding of "study halls" (Tanodák). These centers were designed to promote cognitive, social, psychological, and communal development, complementing formal education.

Figure 23. Summary of policy reforms in Hungary specifically targeting Roma students (first page)

Users can also click on the View Reference button to see the Evaluation Reports of the respective reform when available (Figure 24).



The screenshot displays two panels from the STRIDE platform. The top panel, titled 'Reforms for Norway', shows a search bar and a list of reforms. The selected reform is 'Knowledge Promotion KP20', with details: Year: 2020, Country: Norway, Educational Level: ISCED 1, ISCED 2, ISCED 3, Kind/Type: Curriculum, Coverage: National, Evaluation: Positive. The 'Key Actions' include introducing subject core elements and interdisciplinary themes, and reinforcing inclusive practices. The 'Aim' is to deepen learning and increase interdisciplinary competence. A 'View Reference' link is provided. Below this, a 'Completion Reform' for the same year is listed. A red dashed line connects the 'View Reference' link to a URL: <https://nifu.brage.unit.no/nifu-xmlui/bitstream/handle/11250/2990375/NIFUrapport2022-8.pdf?sequence=>

The bottom panel shows the 'GOV.UK' website for the 'Evaluation of the 16 to 19 Bursary Fund'. It includes a breadcrumb trail, a 'Research and analysis' section, and a 'Documents' section. A PDF document titled '16 to 19 Bursary Fund: year 3 process evaluation' is highlighted. A red dashed line connects this document to a URL: <https://www.gov.uk/government/publications/evaluation-of-the-16-to-19-bursary-fund-year-1-report>

Figure 24. Evaluation reports for education policy reforms a) Norway b) UK

3.8 Europe-Level Reform Charts

The Europe section aggregates reform data across all countries after the current filters are applied. It contains charts equivalent to the country-level section, but at European scale.

- Reforms by educational level and year.
- Reforms by kind/type.
- Reforms by coverage.
- Reforms by kind/type and year.

These charts help users move from a country-level view to a broader comparative view of reform patterns.

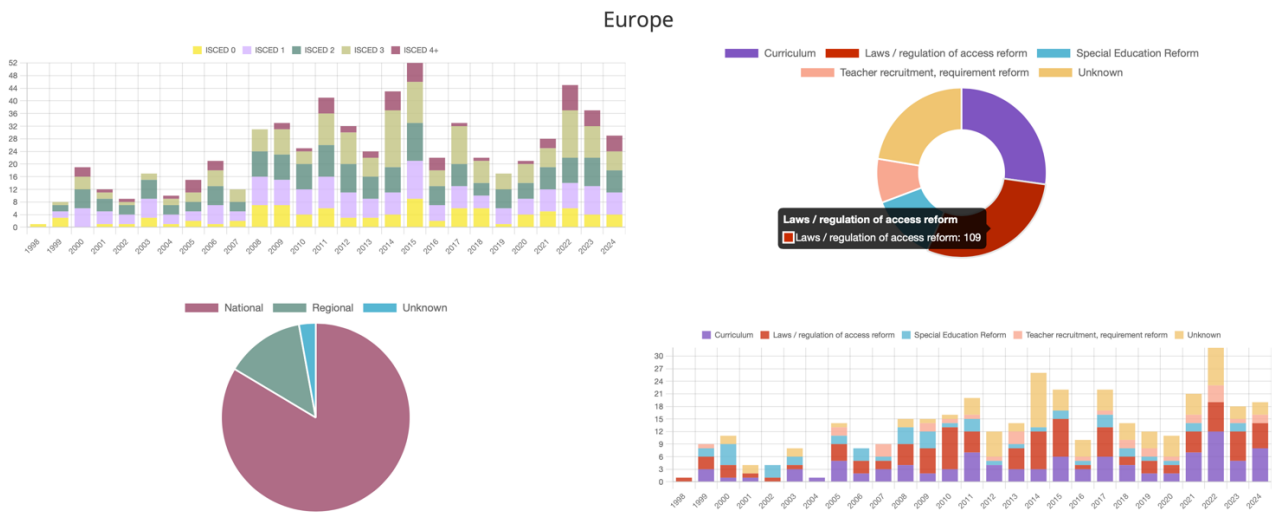
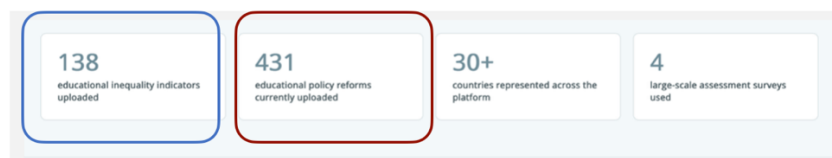


Figure 25. Europe-level reform charts

- A short platform introduction.
- Entry buttons for the Indicators and Reforms environments.
- Platform-level counts and data coverage information.
- A description of the two linked environments.
- Examples of reform categories.
- A data sources section linking to ICCS, PIRLS, PISA, and TIMSS with linking possibility to the respective surveys.
- A closing explanation of how outcomes and reform timelines support evidence-informed education policy analysis.

Moreover, by clicking the Indicators and Reforms button, users can view the full list of indicators and policy reforms, scroll through the list, and use the search function to find specific indicators and reforms.



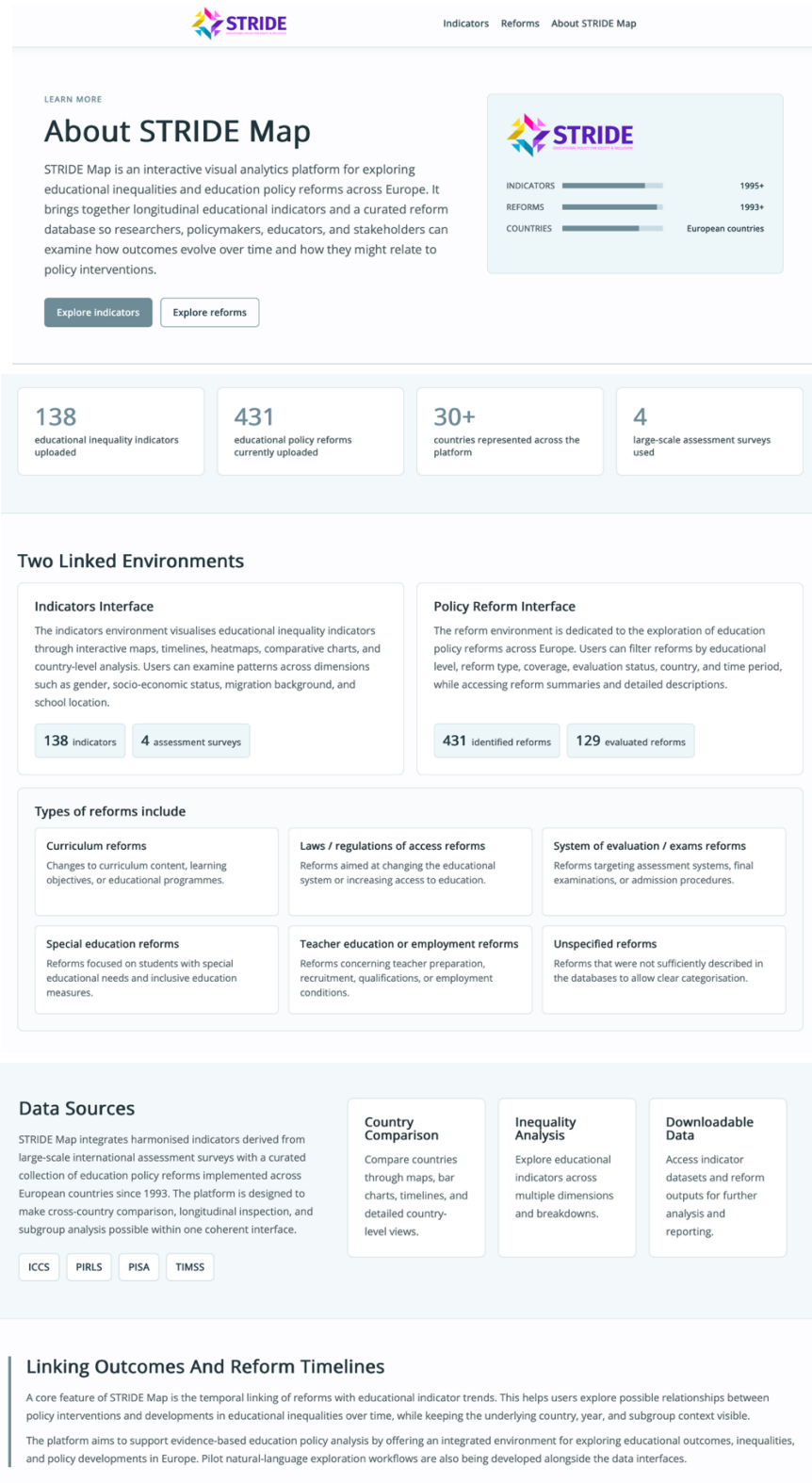


Figure 27. About page data foundations section

5. Terms of Use Page

The Terms of Use page explains the responsibilities associated with downloading and using STRIDE datasets. It covers responsible interpretation, citation and acknowledgement, prohibited misuse, and verification responsibilities.

Users encounter these terms directly when downloading indicator datasets. Before an indicator Excel file can be downloaded, the user must confirm agreement with the Terms of Use (Figure 28).

Please confirm that you agree with the STRIDE Terms of Use before downloading this indicator dataset.

I agree with the [Terms of Use](#).

STRIDE DATA ACCESS

Terms of Use

STRIDE datasets are provided to support responsible research, education policy analysis, and evidence-informed public discussion. By downloading data from the platform, users are expected to use the material carefully, cite it properly, and respect the limits of the underlying sources.

<p>Responsible Use</p> <p style="font-size: x-small;">Users should interpret STRIDE data with care and avoid claims that go beyond what the data can support. Comparisons across countries, years, indicators, and reform categories should consider data coverage, definitions, survey design, and context.</p>	<p>Citation And Acknowledgement</p> <p style="font-size: x-small;">Publications, reports, presentations, and derivative analyses should acknowledge STRIDE and cite the relevant underlying data sources, including international assessment datasets and the policy reform database where applicable.</p>
<p>No Misuse</p> <ul style="list-style-type: none"> Do not present downloaded data in a misleading or decontextualised way. Do not imply endorsement by STRIDE, the European Union, UKRI, or partner institutions unless explicitly agreed. Do not attempt to identify individuals or use the data for discriminatory, harmful, or unlawful purposes. 	<p>Verification</p> <p style="font-size: x-small;">Users remain responsible for checking their analyses, transformations, visualisations, and conclusions. STRIDE provides an integrated exploration environment, but downloaded data should be reviewed before use in formal outputs.</p>

Figure 28. Term of Use Page

6. Recommended User Workflow

6.1 Indicator-analysis workflow

1. Open the Indicators page.
2. Select the educational level.
3. Search for and select an indicator.
4. Open the indicator metadata modal to confirm definitions, coverage, and notes.
5. Select the year, if available.

6. Open More Options and select the desired breakdown.
7. Inspect the map to identify cross-country patterns.
8. Hover over countries to read exact values.
9. Click a country to update the country-level charts.
10. Review the statistics panel and Mean Timeline.
11. Review the respective policy reforms for this educational level and country.
12. Download the Excel dataset if formal analysis or verification is required.

Figure 29 visualises these twelve recommended steps.



Figure 29. Recommended User Workflow for Indicator-analysis

6.2 Reform-analysis workflow

1. Open the Reforms page.
2. Decide whether to analyse all years or a specific period.

3. Select relevant educational levels, reform kinds, coverage categories, and evaluation categories.
4. Inspect the map to compare reform counts across countries.
5. Click a country to update the country-level charts.
6. Open the country reform details modal to read individual reform records.
7. Use the search field to narrow the records.
8. Export a PDF report if a country-level reform summary is needed.
9. Scroll to the Europe section to compare the selected filters at aggregate level.
10. Use the Summary charts to identify high-activity countries and years.

Figure 30 depicts the ten recommended steps.



Figure 30. Recommended User Workflow for Policy Reform study

7. Interpretation Guidance

Users should treat STRIDE Map as an exploratory and analytical support tool. The platform makes comparison easier, but it does not remove the need for careful interpretation.

- Cross-country comparisons should be interpreted with care. The indicators are drawn from international large-scale assessments, including PISA, TIMSS, PIRLS, and ICCS, which apply harmonised frameworks, definitions, and survey methodologies across participating education systems. This supports comparability across countries. However, users should keep in mind that results may still be affected by differences in country participation across assessment cycles, response rates, and national education contexts.
- Longitudinal changes should be interpreted with attention to the availability of countries and years.
- Reform markers on indicator timelines provide contextual information; they should not be interpreted as proof of causal impact.
- Downloaded Excel files should be consulted before formal reporting, publication, or statistical modelling.
- The Terms of Use should guide all reuse of STRIDE data.

8. Use case scenarios

This section presents two use-case scenarios that demonstrate how the map can support different types of education research. The first scenario shows how the map can help explore relationships between student outcomes and a number of potential inequality factors, while the second illustrates how it can be used to examine education policy reforms within a specific national setting. These scenarios highlight the map's

potential to support evidence-informed analysis, provide country-level context, and guide the formulation of more targeted research questions.

8.1 Use case scenario 1: Examining the Role of SES in Mathematics Test Scores in Secondary Education in Poland

A user seeks to investigate whether socio-economic status (SES), proxied by parental education is associated with differences in mathematics outcomes among secondary education students in Poland using the STRIDE map. The platform provides access to comparative data on students' mathematics across countries and population groups.

Step 1: The user selects *Secondary education* and *Mean mathematics test scores* from the control panel (Figure 31).

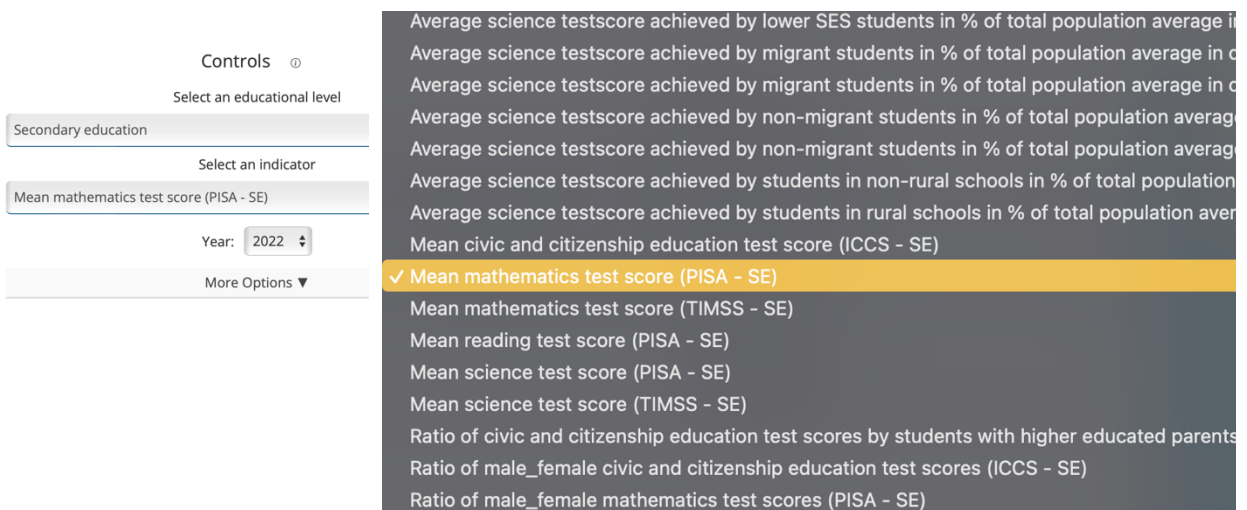


Figure 31. Step 1: Indicator selection

To ensure the appropriateness of the selected indicator, the user consults additional metadata via the About option (Figure 32).

Mean mathematics test score (PISA - SE) (Total)

About this indicator:

About: This indicator measures the mean mathematics test score of 15-year-old students, using data from PISA (Programme for International Student Assessment). PISA assesses students' mathematical literacy, defined as the capacity to formulate, employ and interpret mathematics in a variety of contexts. It includes reasoning mathematically and using mathematical concepts, procedures, facts and tools to describe, explain and predict phenomena.

The PISA mathematics framework is organised around content categories (such as change and relationships, space and shape, quantity, and uncertainty and data), process categories (formulating, employing, interpreting), and contexts (personal, occupational, societal and scientific). Results refer to the total student population.

Available years: 2000, 2003, 2006, 2009, 2012, 2015, 2018, 2022.

Available breakdowns: Gender (male/female), SES (at least one parent/guardian with a higher education degree/no parent/guardian with a higher education degree), immigration background (students born in country/students not born in country).

Available countries: BE, BG, CZ, DK, DE, EE, IE, ES, FR, HR, IT, LV, LT, HU, MT, NL, AT, PL, PT, RO, SI, SK, FI, SE, NO, AL, CH, GB, GE, GR, IS, MD, ME, MK.

Note: PISA assesses students aged between 15 years and 3 months and 16 years and 2 months at the time of testing, regardless of grade level. Data are not available for all countries across every year.

Got it!

Figure 32. Step 1: Indicator metadata

The user then selects the most recent year and, through the *More options* menu, filters the data by subgroup, choosing the category *At least one parent/guardian with a higher education degree*.

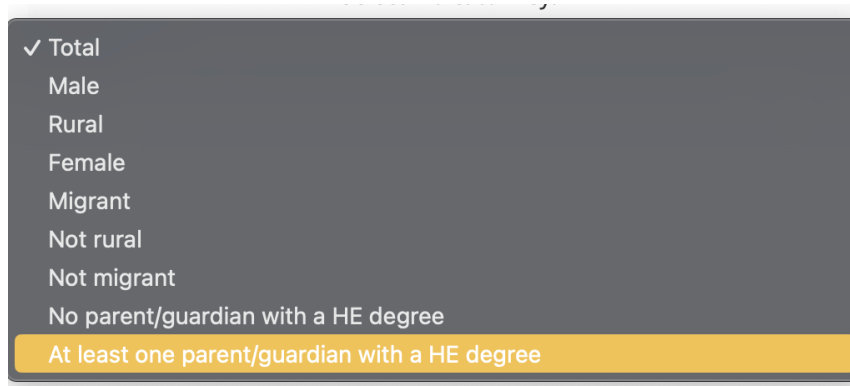


Figure 33. Step 1: Selecting breakdown category

The resulting patterns are visualised on the map (Figure 34), where the user can identify disparities across countries and select Poland for further analysis (by clicking on the country). Upon selection, detailed visualisations, including comparative bar charts and summary line graphs are displayed below the map, supporting closer examination of subgroup differences. According to the visualisation, students in Poland with at least one parent or guardian with higher education consistently outperform those without across all observed years.

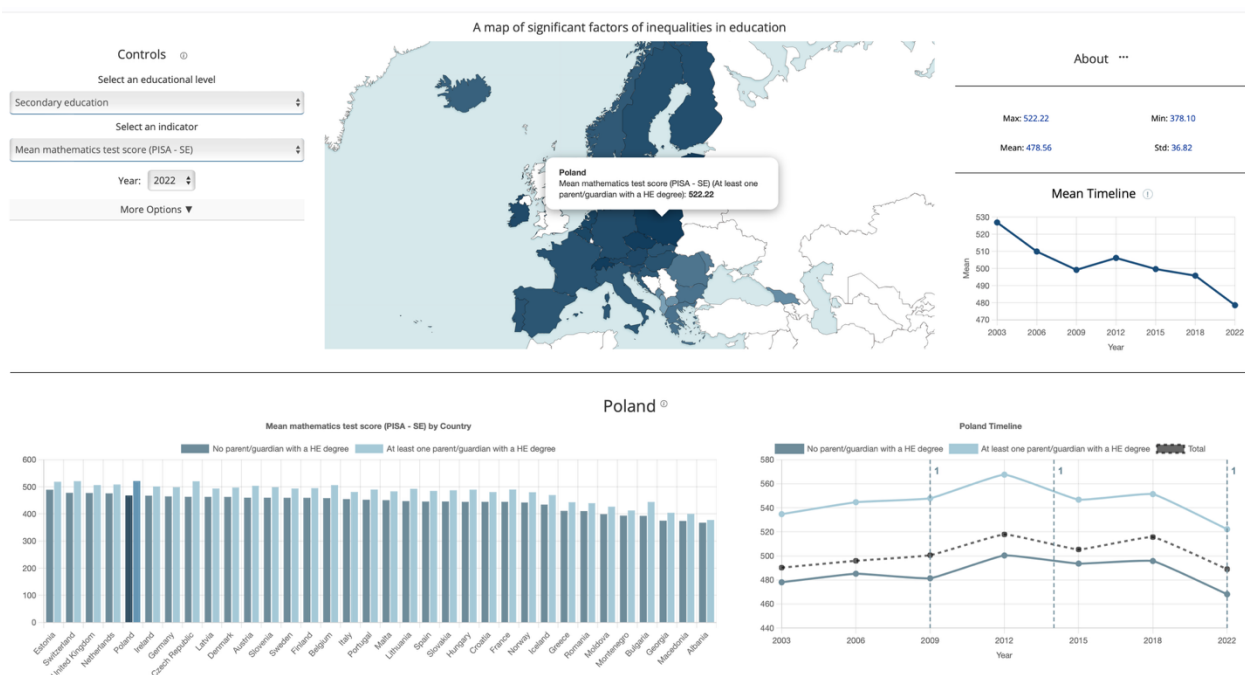


Figure 34. Visualisation of the user's choices

The gap between the two groups remains persistent over time, indicating a stable association between socio-economic status (SES) and mathematics outcomes. Both groups show gradual decline after 2018, but the relative difference between them does not substantially narrow. This allows the user to conclude that SES is potentially a persistent determinant of student mathematics performance in Poland, with students from higher-educated family backgrounds consistently achieving higher scores. The

stability of the gap over time suggests that improvements in overall performance, when they happen, do not necessarily translate into reduced educational inequality in mathematics performance.

Step 2: Cross-Country Comparison

The user expands the view to include multiple countries by examining the map and the bar chart. The system enables comparison of Poland's mathematics test scores with other countries understanding that the differences are pronounced, comparing to other countries such as Greece and Albania, where the gap between groups is smaller (Figure 34, bottom left-hand side bar chart). This comparison allows the user to assess how socio-economic inequalities in mathematics performance vary across national contexts.

Step 3: Linking Inequality Patterns to Reforms

The system overlays reforms occurring in the same period and the respective educational level aligned with the timeline.

The user can click on the reform lines to access details-on-demand (e.g., policy aim, coverage, etc.) Thus the user can assess whether specific reforms occurred that targeted disadvantaged groups (e.g., low-SES) and align with observed inequality patterns. While the platform highlights three policy initiatives in Poland for that educational level, such as the *Lower compulsory education from 7 to 6* (2009), the *Free Textbook* (2014) and *Laboratories of the Future* (2022) their stated aims focus primarily on access, financial support, and the development of future-oriented skills rather than directly addressing SES-based disparities.

[View Case Study on the Map](#)

8.2 Use case scenario 2: Examining Educational Policy Reforms in Hungary

A user seeks to explore educational policy reforms in Hungary using the STRIDE platform. Starting from the Explore the Indicators interface, the user clicks on Explore the reforms, which redirects them to the Policy Reforms interface. This environment enables users to analyse reforms across countries using multiple filters and interactive features.

Step 1: Exploring reforms through filtering

Within the Policy Reforms interface, the user selects Hungary and applies filters such as year, educational level, and evaluation outcome. These controls allow the user to explore how many reforms have taken place in Hungary, i.e. the frequency of reforms by type or period. By adjusting these filters, the user can identify patterns in reform activity, for example, focusing on specific educational levels (e.g., primary or secondary education) or narrowing the view to reforms with particular evaluation outcomes. When hovering over Hungary on the map, the interface displays the number of reforms corresponding to the selected criteria, providing an immediate overview of reform activity.

The user may also filter by positive evaluation to identify reforms that could serve as potential best practice examples.

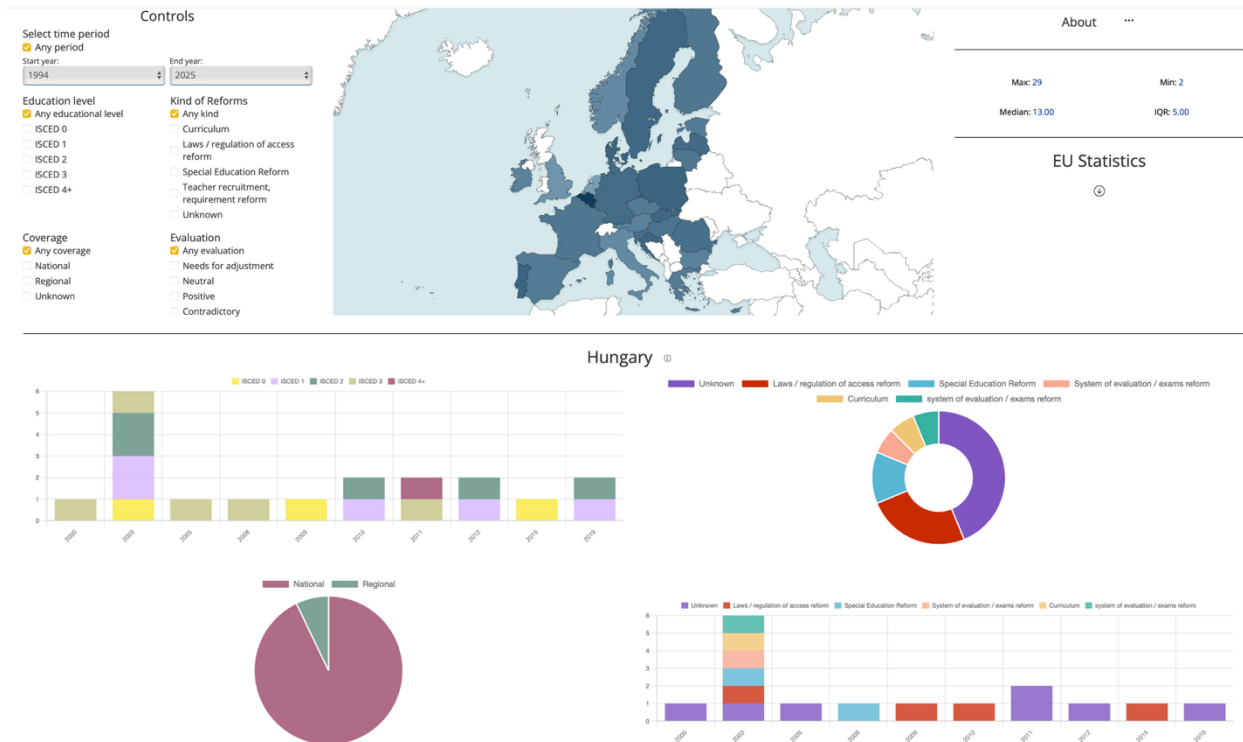


Figure 35. Visualisation of the user’s choices – Policy Reforms for Hungary

Step 2: Accessing detailed reform information

The user clicks on Hungary and selects the information icon, which opens a detailed modal displaying the country’s reforms. This includes all the reforms implemented and respective information such as the title, year, educational level, aim, key actions, and evaluation of each reform.

The interface allows the user to: Scroll through all available reforms, use the search functionality to locate specific reforms (e.g., those targeting particular groups such as Roma students, or specific educational level, e.g., ISCED level 0), and examine reforms across different time periods and policy areas.

This enables a structured and efficient exploration of Hungary’s reform landscape. The user can select the PDF or the Download option to export the list of reforms for Hungary. This generates a document containing detailed descriptions of the reforms, which can be used for further analysis or reporting.

This feature supports users who wish to compile, compare, or share reform information outside the platform.

Step 3: Country-level and European-level comparisons

Below the map, the platform provides country-level visualisations, summarising reform activity in Hungary. These visualisations allow the user to explore:

the number of reforms over time and the distribution of reforms by type and educational level.

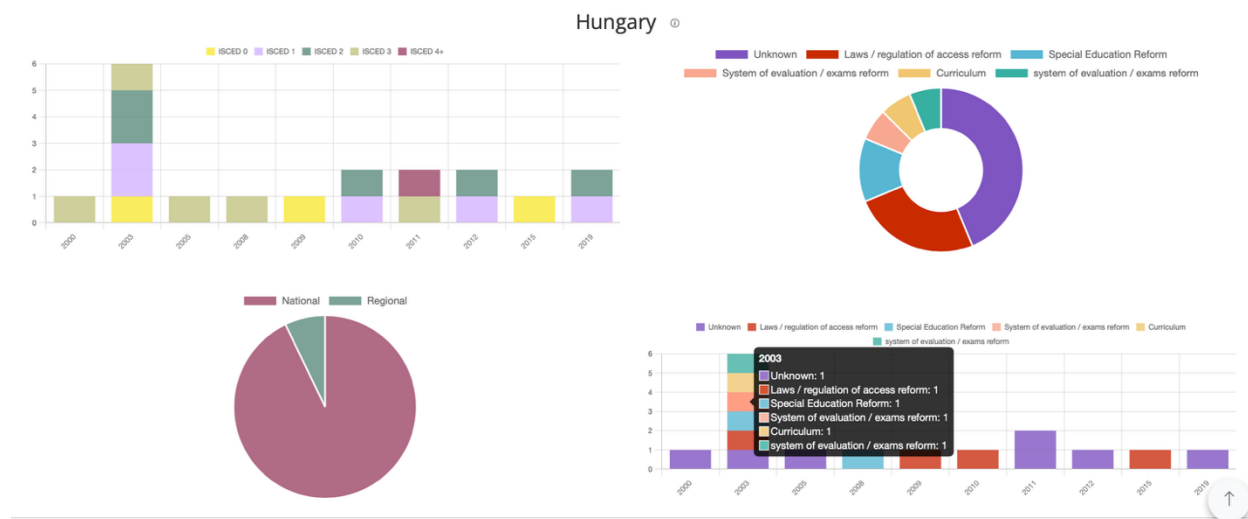


Figure 36. Country specific graphs

The platform offers a European-level overview, aggregating reform data across all countries. This enables users to: examine how reform activity is distributed across Europe, compare Hungary’s reform activity with other countries, identify broader trends.

[View Case Study on the Map](#)

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