USER MANUAL

Health Equity Assessment Toolkit (HEAT)

BUILT-IN DATABASE EDITION, VERSION 6.1

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Suggested Citation

Health Equity Assessment Toolkit (HEAT): Software for exploring and comparing health inequalities in countries. Built-in database edition. Version 6.1. Geneva, World Health Organization, 2024.

Contents

1 Introduction

Equity is at the heart of the United Nations 2030 Agenda for Sustainable Development, which aims to "leave no one behind". This commitment is reflected throughout the 17 Sustainable Development Goals (SDGs) that Member States have pledged to achieve by 2030.

Monitoring inequalities (observable differences across population subgroups) is essential for tackling inequities (differences that are deemed unfair, avoidable or remediable): it allows identifying vulnerable population subgroups that are left behind and helps inform equity-oriented policies, programmes and practices that can close existing gaps.

The World Health Organization (WHO) is committed to achieving equity in health and has developed a number of tools and resources for monitoring health inequalities, including the Health Equity Assessment Toolkit.

The **Health Equity Assessment Toolkit** is a free and open-source software application that facilitates the exploration, analysis and reporting of health inequalities. Through innovative and interactive data visualizations, the software makes it easy to assess and communicate data about health inequalities. Disaggregated data and summary measures are visualized in a variety of graphs and tables that can be customized according to users' needs. Results can be exported to communicate findings to different audiences and inform evidence-based decision making.

The software is available in **two editions**:

HEAT (built-in database edition), which contains datasets of disaggregated data from the WHO Health Inequality Data Repository,

HEAT Plus (upload database edition), which allows users to upload their own datasets of disaggregated data.

Together, HEAT and HEAT Plus are powerful tools that help make data about inequalities accessible and bring key messages to decision-makers to tackle inequities and achieve the SDGs.

This **HEAT user manual** accompanies the built-in database edition of the toolkit and provides detailed information about the features and functionalities of HEAT. Information on how to access HEAT are provided in Section 2, followed by an overview on how to use HEAT in Section 3 (including a quick guide to getting started, instructions on how to navigate the tool and a list of resources to learn more about the software). Section 4 (Explore inequality) and Section 5 (Compare inequality) provide more details about the different views and visualizations available in HEAT. Throughout the user manual, blue boxes highlight links to further resources and practical tips for using HEAT.

You may want to read this user manual sequentially and in its entirety, or consult different sections as required. You are also encouraged to consult the other documents that accompany HEAT, including the technical notes and indicator metadata, which provide detailed information about the data displayed in HEAT. Moreover, you may want to supplement these resources with materials that provide further information on the theoretical and/or practical steps of health inequality monitoring, such as the WHO's *Handbook on health inequality monitoring* and *National health inequality monitoring: a step-by-step manual*.

LINKS

- WHO Health Inequality Monitor
- WHO Health Inequality Data Repository
- WHO Health Equity Assessment Toolkit

2 How to access HEAT

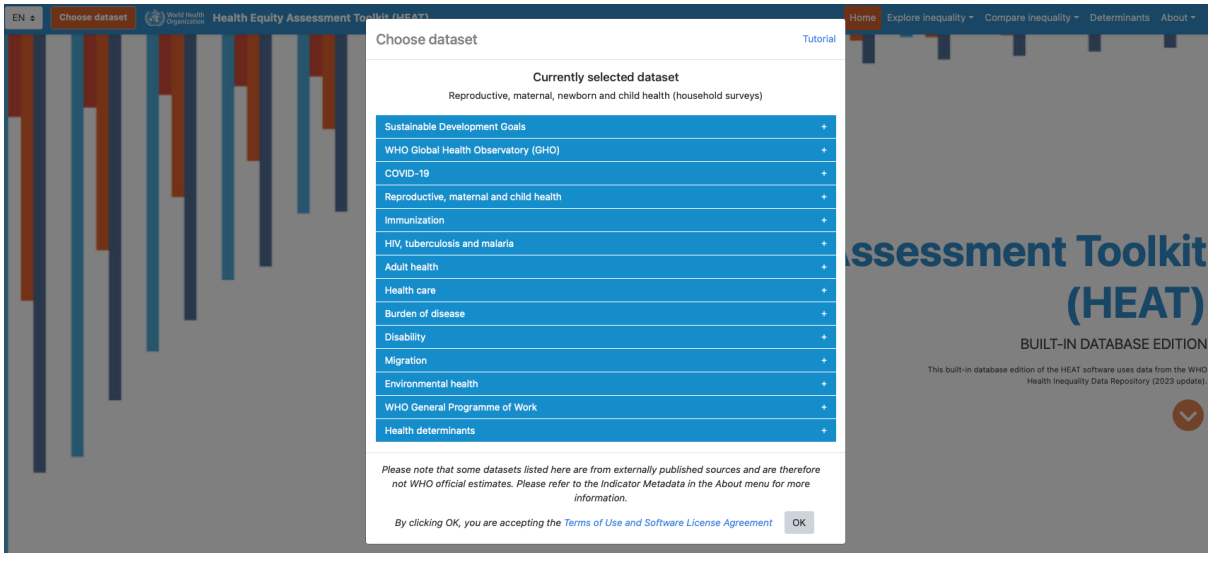
HEAT is available as an online version. This version does not require any installation and can be accessed in any web browser and on all desktop or laptop computers and mobile devices (minimum screen size of 7.9 inches recommended)[1]. The latest version of HEAT is available at: https://www.who.int/data/inequality-monitor/assessment_toolkit.

3 How to use HEAT

3.1 Getting started

3.1.1 Choose dataset

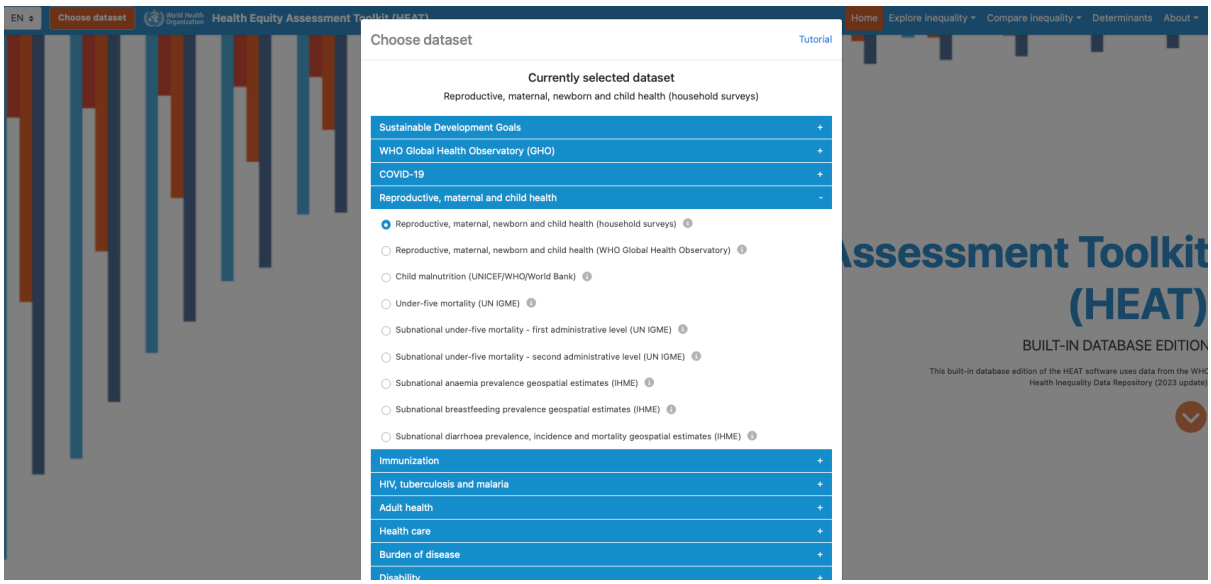
In order to use HEAT, you first need to **choose your desired dataset**.



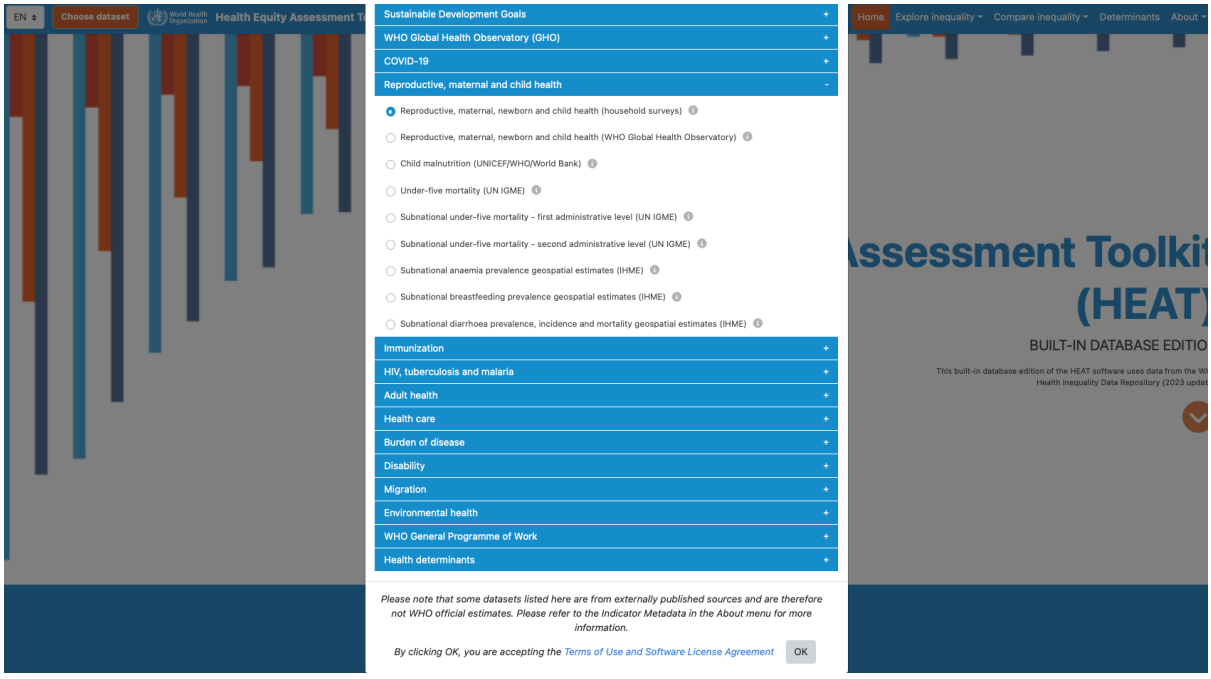
Expand the categories to view the available datasets. More information about the contents and original data sources of each dataset is provided in the information button. Note that more detailed

[1] Please note that Internet Explorer is not currently supported.

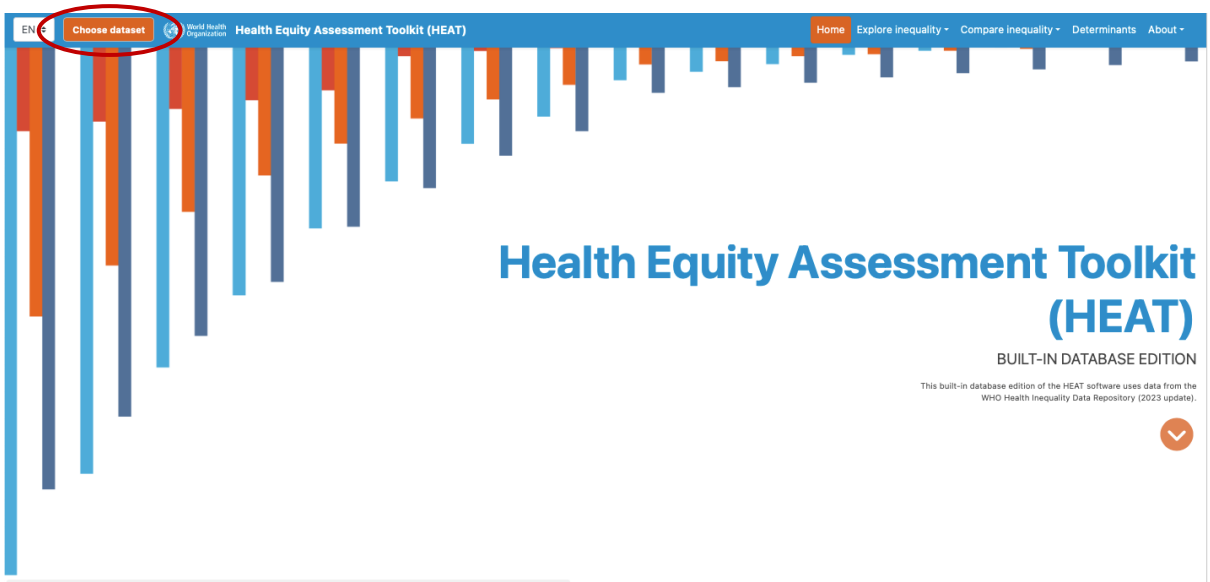
information about the sources and indicators for each dataset can be found in the Indicator Metadata under the About menu.



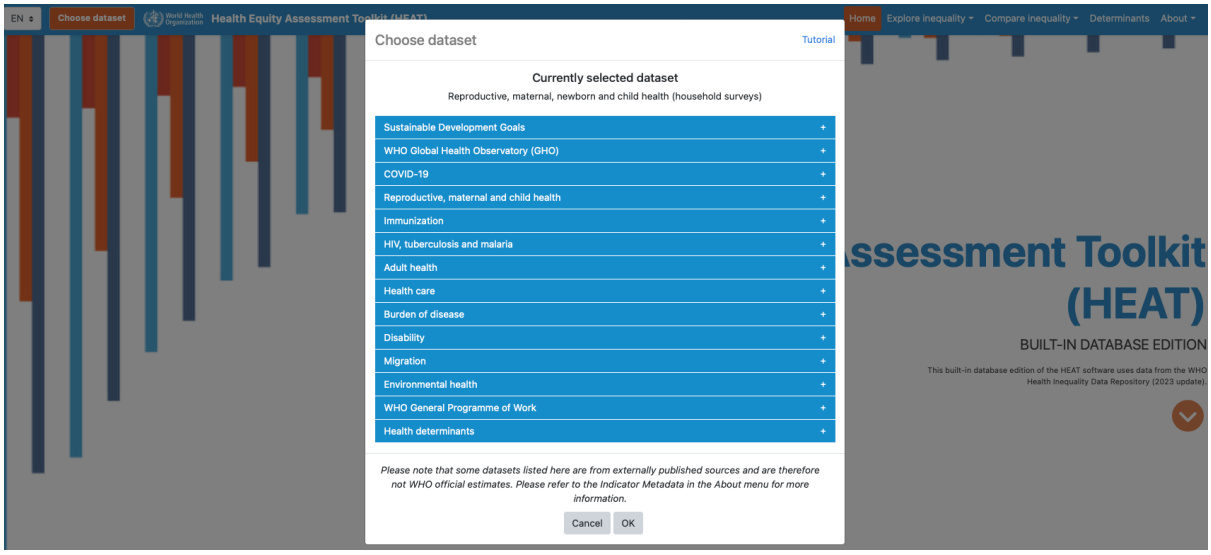
Once you have selected your desired dataset, click the 'OK' button to proceed. Note that by clicking OK, you agree to the **terms of use and software license agreement**.



To change datasets, click the orange 'Choose dataset' button in the top left corner.



This will bring up the pop-up window that allows you to select another dataset. Once you have selected your desired dataset, click the 'OK' button to proceed. Click the 'Cancel' button to return to your previous selection.

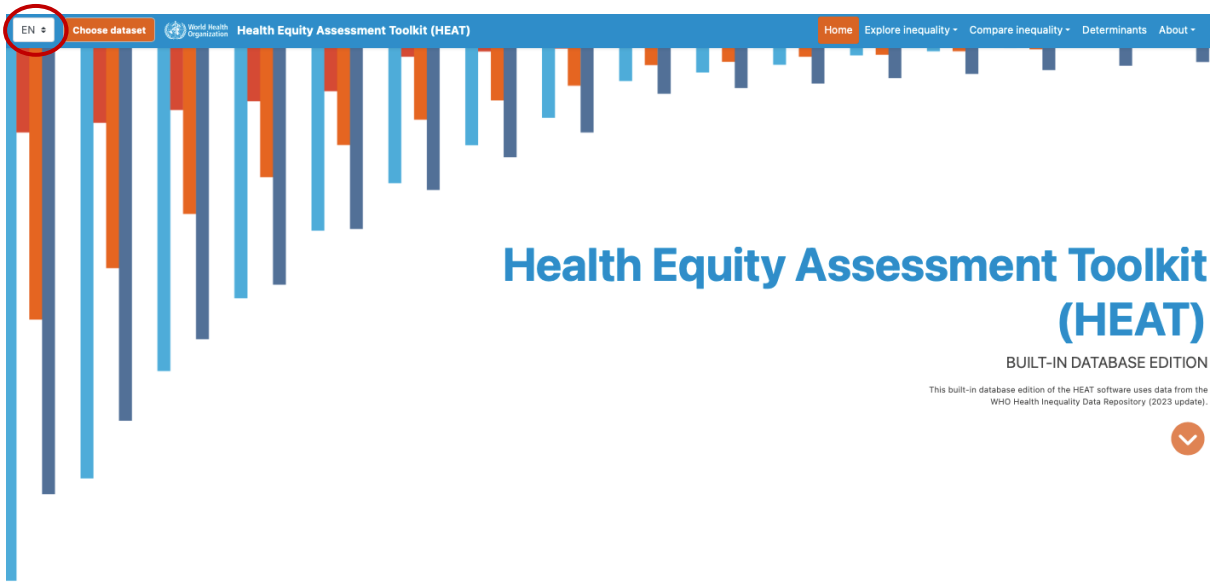


TIPS for getting started

The 'Choose dataset' pop-up window includes a link to a short video tutorial. Click the 'Tutorial' link in the top right corner to view a short introductory video on how to use HEAT.

3.1.2 Choose language

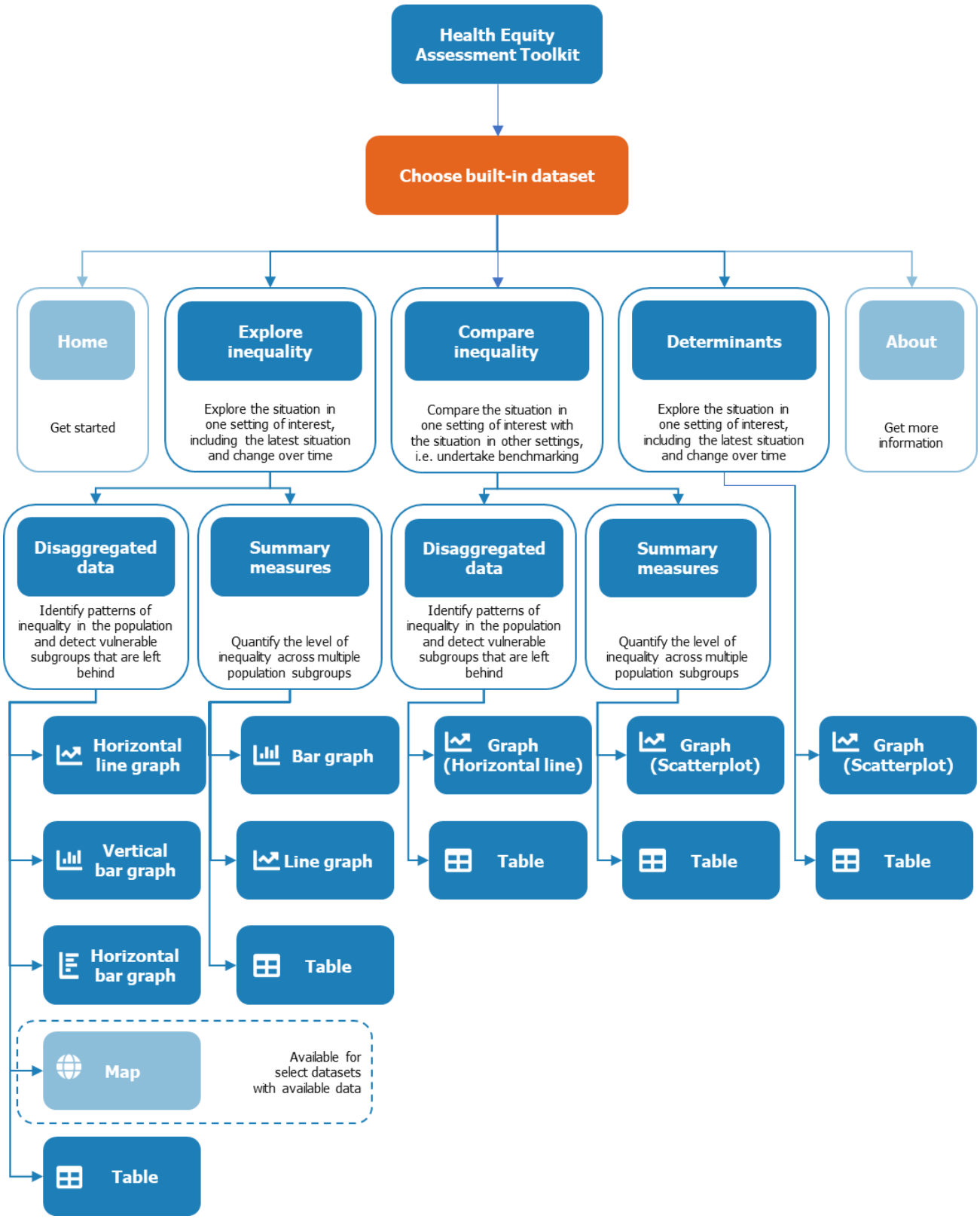
To view the tool in another language, click the language menu in the top left corner (English (EN) by default) and select your language of choice (French (FR), Portuguese (PT) or Spanish (ES)).



3.1.3 HEAT structure

Figure 1 provides an overview of the structure of HEAT. Please refer to Section 3.2 for instructions on how to navigate HEAT and Section 3.3 for a list of resources to learn more about HEAT. Section 4 and Section 5 provide detailed descriptions of the views and visualizations available in HEAT.

Figure 1 HEAT structure



TIPS for getting started

To get started, go to **Explore inequality** and assess the situation in your setting of interest, first using 'Disaggregated data' and then 'Summary measures'.

Once you have explored the situation in one setting, go to **Compare Inequality** to compare the situation in that setting with the situation in other settings, using both 'Disaggregated data' and 'Summary measures'.

You can also explore the association of a given health indicator (setting average) with a determinant indicator in various settings using the **Determinants** component.

3.2 Navigating HEAT

3.2.1 Navigation menu

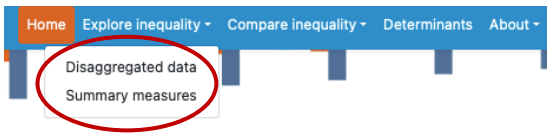
Use the navigation menu, located in the top-right corner of the software, to navigate to the different sections of the software. The active section will always be highlighted in orange, such as 'Home' while you are on the home page.

The software is organized around three main components:

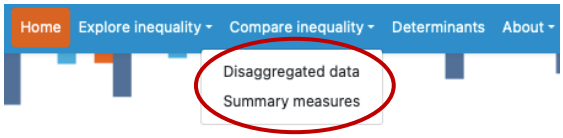
- **Explore inequality** allows you to explore the situation in one setting of interest, including the latest situation of inequality and the change in inequality over time.
- **Compare inequality** enables you to compare the situation in one setting of interest with the situation in other settings, i.e. undertake benchmarking.
- **Determinants** allows you to explore the association of the health indicator of interest with a determinant indicator in multiple settings.

Additionally, when hovering over 'Explore inequality' or 'Compare inequality', you can choose between two different subcomponents:

- **Disaggregated data** show the situation by population subgroups. They are important to identify patterns of inequality in the population and identify vulnerable subgroups that are being left behind.



- **Summary measures** quantify the level of inequality across multiple population subgroups. They are useful to compare the situation between different indicators and inequality dimensions and assess changes in inequality over time.



3.2.2 Views

Click 'Disaggregated data' or 'Summary measures' under 'Explore inequality', 'Compare inequality' or `Determinants'to access different views. Each view has the same layout:

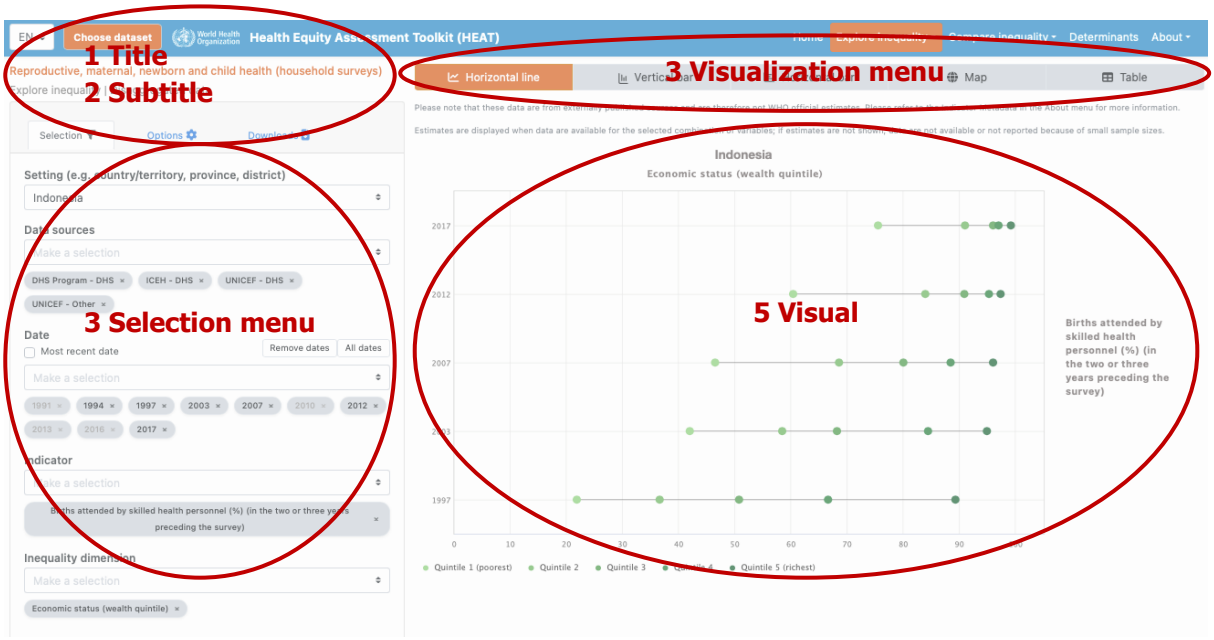
1 The **title** in the top-left corner shows the chosen dataset.

2 The **subtitle** in the top-left corner indicates the component and subcomponent you are looking at, such as 'Explore inequality' and 'Disaggregated data'.

3 The **visualization menu** across the top allows you to navigate between different visualization types, including bar graphs, line graphs, maps and tables.

4 The **selection menu** on the left enables further customization of your view, for example you can select your data, use different options to modify your view and download results.

5 The **visual** at the centre shows your results.



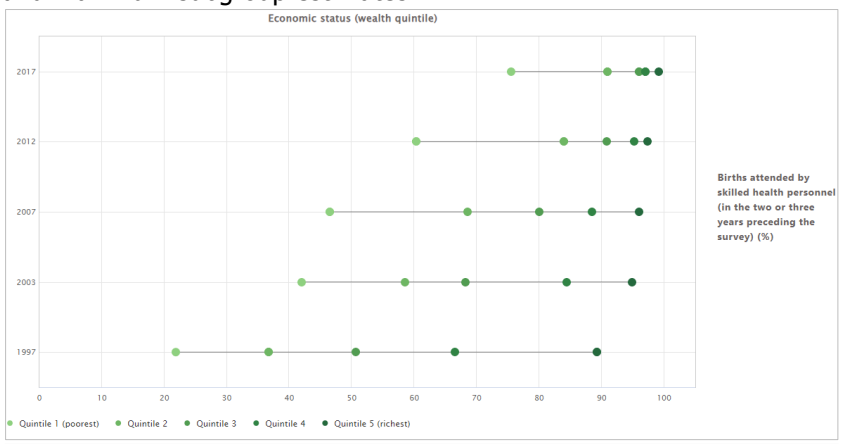
3.2.3 Visualization menu

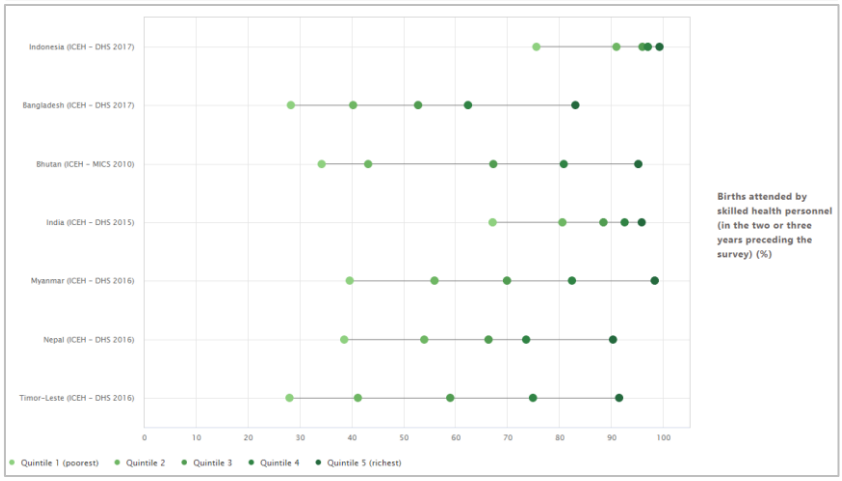
The visualization menu across the top of each view allows you to navigate between different visualizations types. Table 1 lists the visualization types available in HEAT.

Table 1 Visualization types

Visualization type	Description
Horizontal line graph	Disaggregated data are presented in horizontal line graphs (also called equiplots). Data are shown by date (under 'Explore inequality') or setting (under 'Compare inequality'). For each date/setting (displayed on the y-axis), there are multiple coloured data points – one for each population

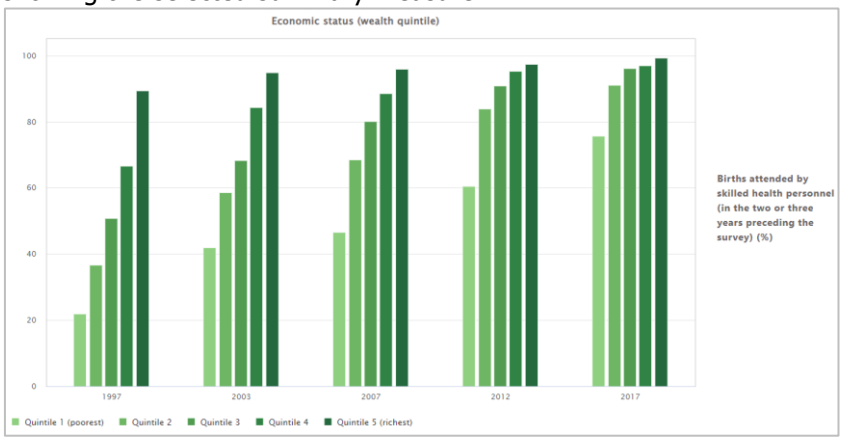
subgroup. Black horizontal lines indicate the difference between minimum and maximum subgroup estimates.

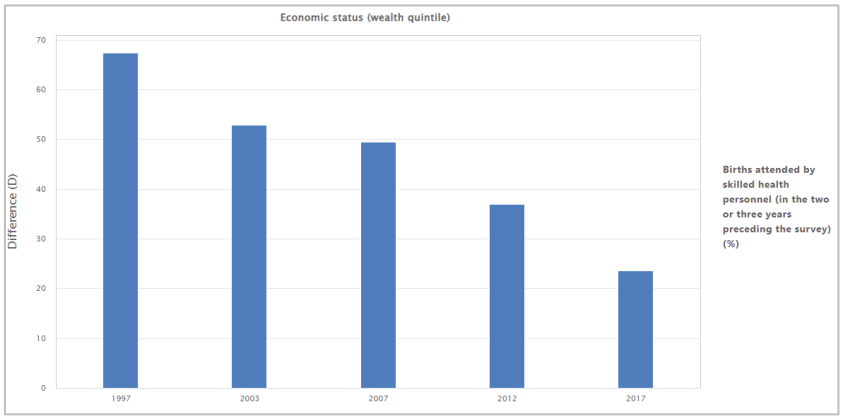




Vertical bar graph

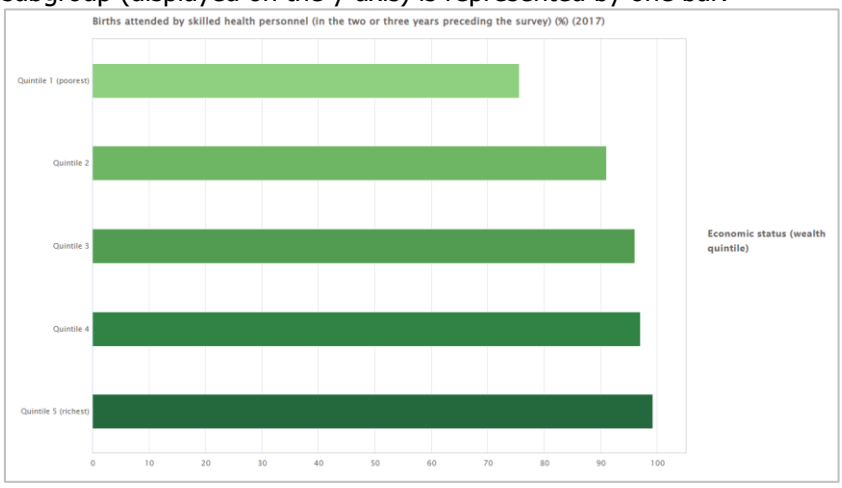
Disaggregated data and summary measures are presented in vertical bar graphs. For each date (displayed on the x-axis), there are one or more coloured bars: for disaggregated data, there are multiple bars – one for each population subgroup; for summary measures there is one bar showing the selected summary measure.





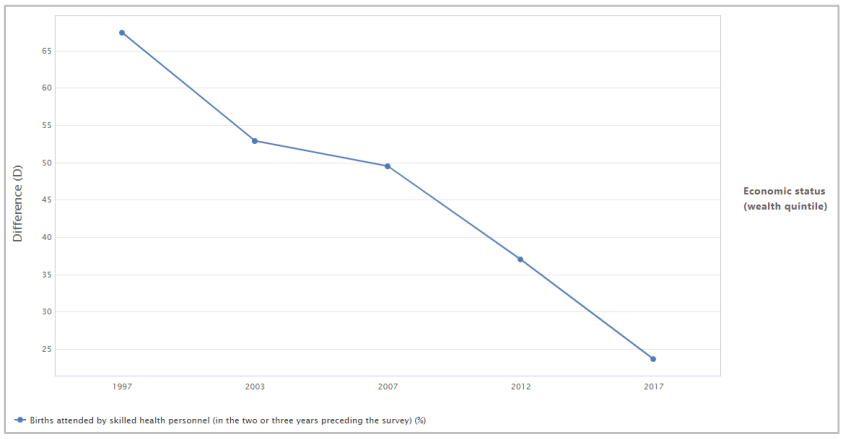
Horizontal bar graph

Disaggregated data are shown in horizontal bar graphs. Each population subgroup (displayed on the y-axis) is represented by one bar.



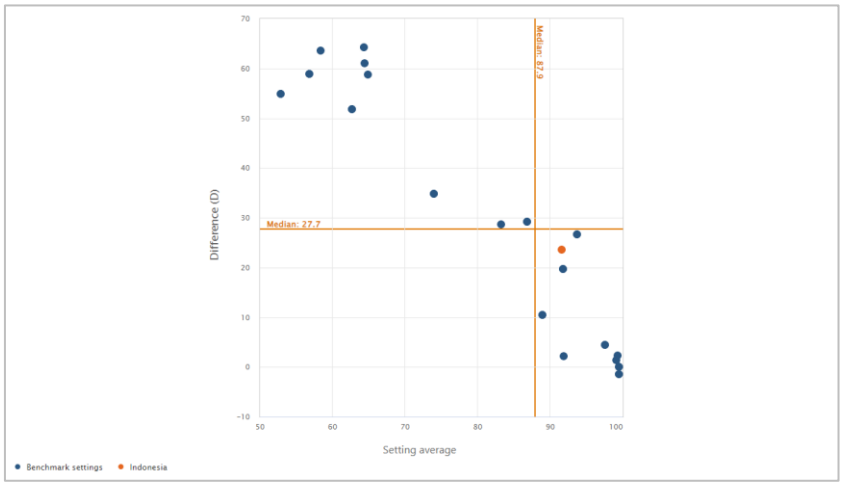
Line graph

Summary measures are shown in line graphs. For each date (displayed on the x-axis), there is one data point showing the selected summary measure. Data points are connected by lines. Lines are coloured by indicator.

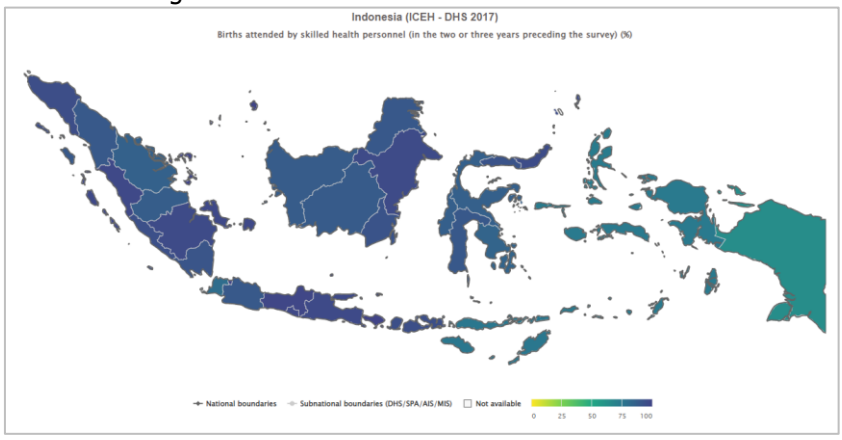


Scatterplot

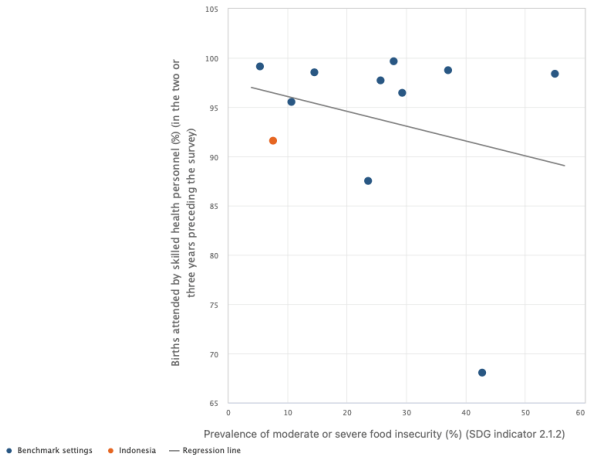
Scatterplots show setting average (on the x-axis) and within-setting inequality as measured by a selected summary measure (on the y-axis). Each setting is represented by one coloured circle: benchmark settings are displayed in blue, and the setting of interest is highlighted in orange.



Map	Data disaggregated by subnational region are displayed in maps. Maps show the value of the indicator for each region, ranging from low (displayed in yellow) to high (displayed in dark blue). Note that this visualization type is only available for one dataset showing reproductive, maternal, newborn and child health indicators from household surveys. In addition, maps are only available for data disaggregated by subnational region and only for data from DHS with available boundaries of subnational regions that match the data.



Scatterplot with regression line	Scatterplots showing setting average (on the x-axis) for a specified determinant and setting average (on the y-axis) for a health indicator of interest, including a linear regression line. Each setting is represented by one coloured circle: benchmark settings are displayed in blue, and the setting of interest is highlighted in orange.



Table

Disaggregated data and summary measures are displayed in tables and provide detailed information about the data points.

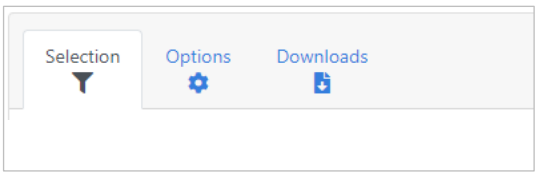
Setting	Year	Indicator name	Dimension	Subgroup	Estimate	Population share
Indonesia	2012	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status	Quintile 1 (poorest)	60.4	21.5
Indonesia	2012	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status	Quintile 2	84.0	19.8
Indonesia	2012	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status	Quintile 3	90.9	19.7
Indonesia	2012	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status	Quintile 4	95.3	20.6
Indonesia	2012	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status	Quintile 5 (richest)	97.4	18.3

Setting	Year	Indicator name	Dimension	Summary measure name	Estimate
Indonesia	2012	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status	Difference (D)	37.0
Indonesia	2007	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status	Difference (D)	49.5
Indonesia	2002	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status	Difference (D)	52.9
Indonesia	1997	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status	Difference (D)	67.4

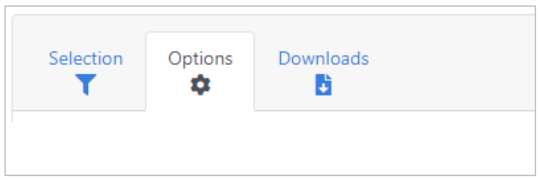
3.2.4 Selection menu

The selection menu on the left of each view allows you to customize the results displayed in the visual. The selection menu comprises three or four tabs, depending on the view you are looking at.

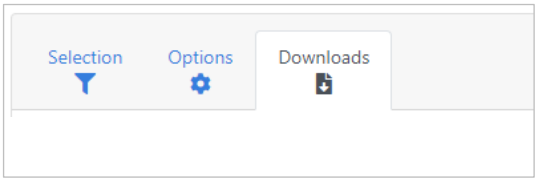
- **Selection** Select the data displayed in the visual, including your setting of interest, data source(s), date(s), indicator(s), inequality dimension(s) and summary measure(s), if applicable.



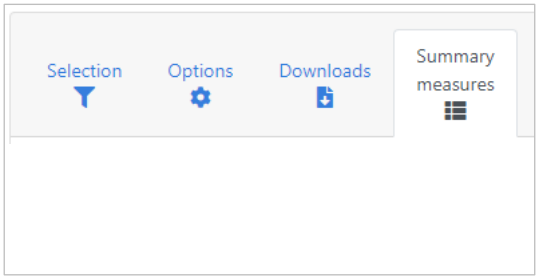
- **Options** Use different options to modify your visual, such as selecting axis ranges and adding titles. The options that are available vary from view to view, depending on what data and visualization type you are looking at.



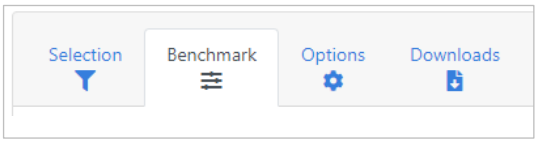
- **Downloads** Download the results displayed in the visual, including the graph (as png or jpg images or pdf) and/or the data (as comma or tab separated text files). Note that in table views, you are only able to download the data (i.e. no graph).



- **Summary measures** See specific summary measure calculations. Note that this tab is only available under the 'Explore inequality' component for 'Disaggregated data' displayed in 'Horizontal bar graphs'. Specific difference and ratio measures are calculated for inequality dimensions with more than 30 population subgroups (such as subnational regions in some countries).

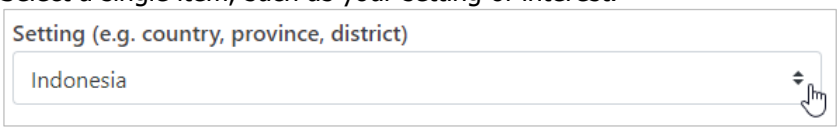


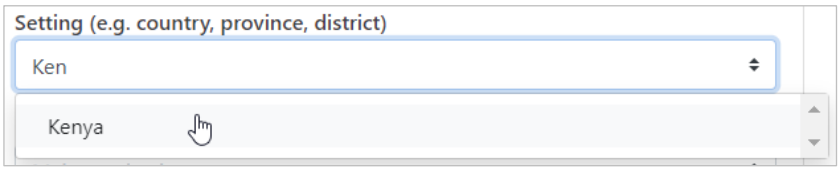
- **Benchmarks** Choose the comparison settings for benchmarking. This tab is only available in views under the 'Compare inequality' component of the tool.



Each tab of the selection menu comprises multiple selectors that allow you to modify the data displayed in the visual. To facilitate navigation, the different selector types are described in Table 2.

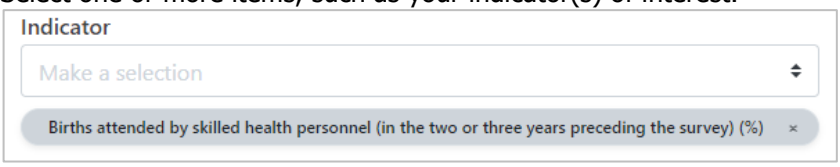
Table 2 Selector types

Selector type	Navigation
Dropdown menu (single select)	Select a single item, such as your setting of interest.  Click the box to see all the available settings and make your selection.  Alternatively, replace an already chosen setting by clicking the box and typing (part of) the name of the setting you are looking for.

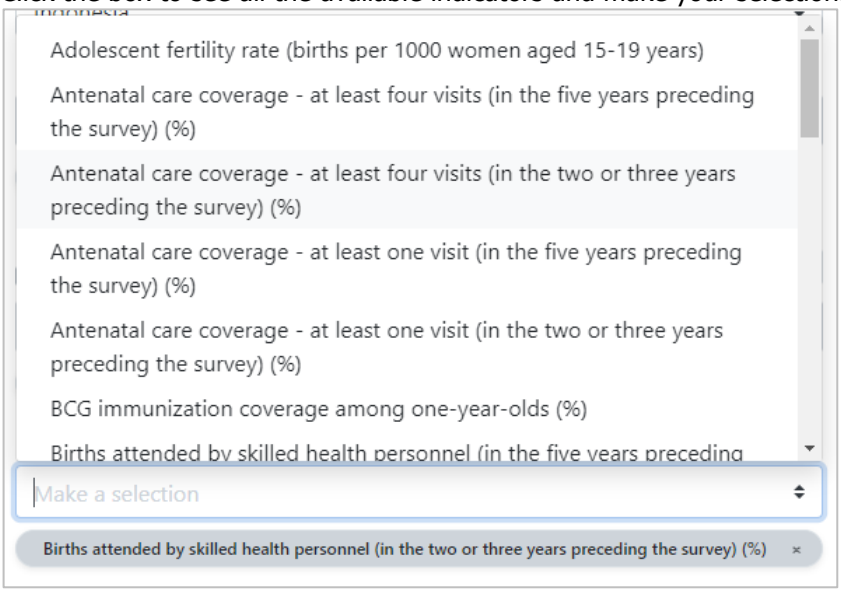


Dropdown menu (multi-select)

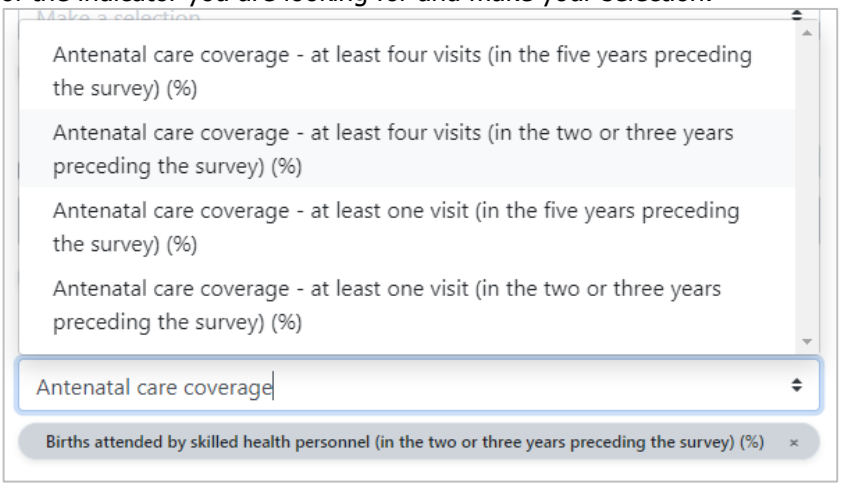
Select one or more items, such as your indicator(s) of interest.



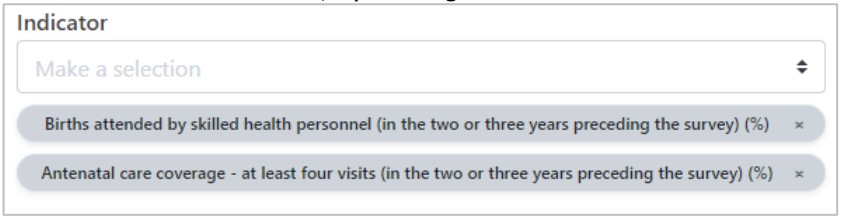
Click the box to see all the available indicators and make your selection.



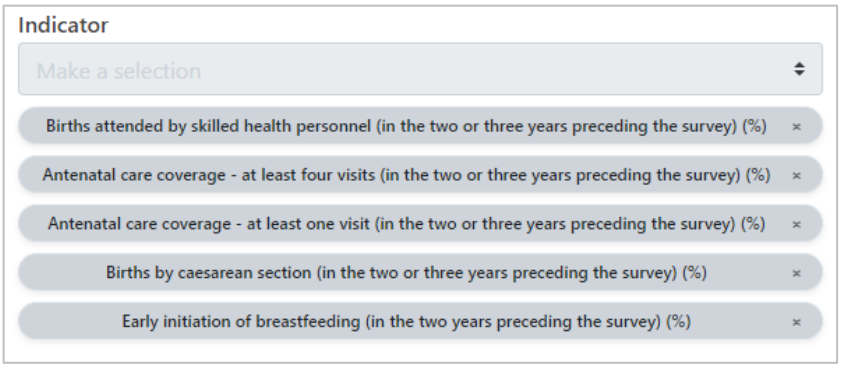
Alternatively, search for a specific indicator by typing (part of) the name of the indicator you are looking for and make your selection.



Remove selected indicators, by clicking on the indicator name.

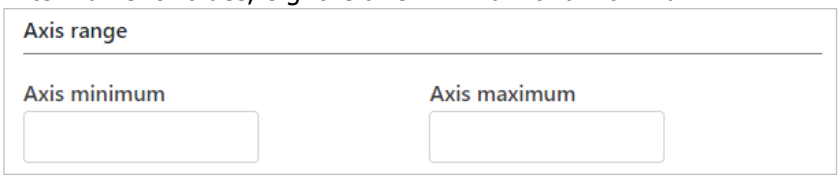


Note that often there is a limit to the number of items that you can display in the visual. For example, in most graphs, you can only show up to five indicators simultaneously. Once you have selected the maximum number of items, the selector will become grey and irresponsive. To make further changes, first remove selected items and then continue add new ones.

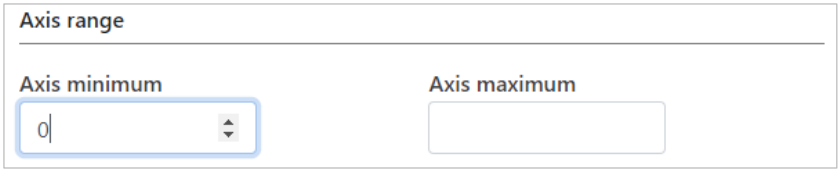


Numeric input

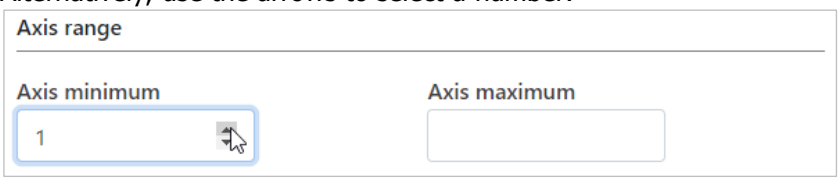
Enter numeric values, e.g. the axis minimum and maximum.



Click inside the box and enter a number.

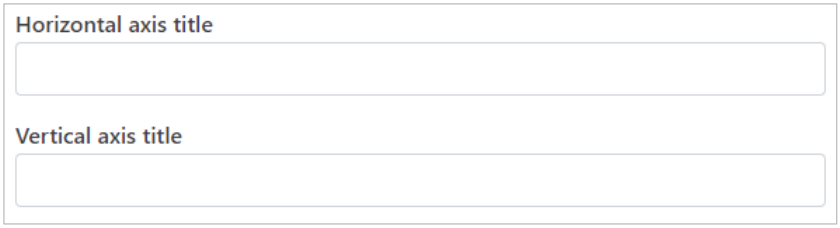


Alternatively, use the arrows to select a number.

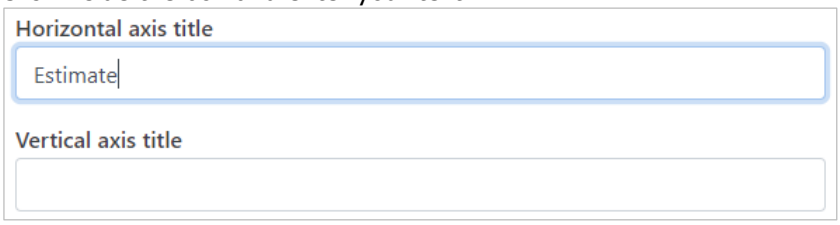


Text input (empty)

Enter information, such as horizontal and vertical axis titles.



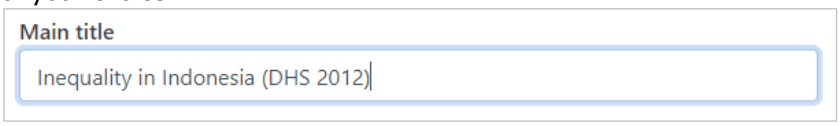
Click inside the box and enter your text.



Text input (pre-filled)

Modify existing information, such as the main title (by default, the main title includes information about the setting, data source(s) and year(s) displayed in the visual).

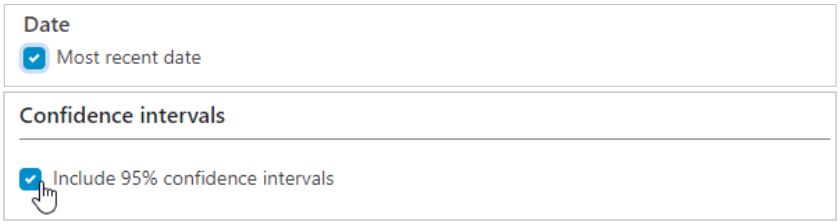
Click inside the box and delete, alter or replace the main title with the text of your choice.



Checkbox

Limit the view, e.g. to the most recent date, or include information, such as 95% confidence intervals.

Check the box to limit the view to the most recent year or include 95% confidence intervals.



Radio button

Choose between different options, such as the sort order of your data.

Click the sort order of your choice to rearrange data in ascending or descending order.

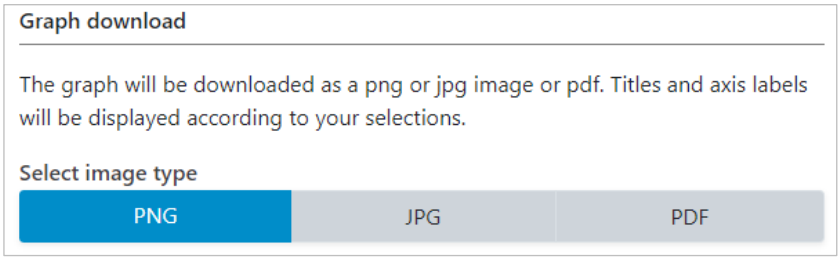
Switch button

Switch an item on or off, such as reference lines in graphs.

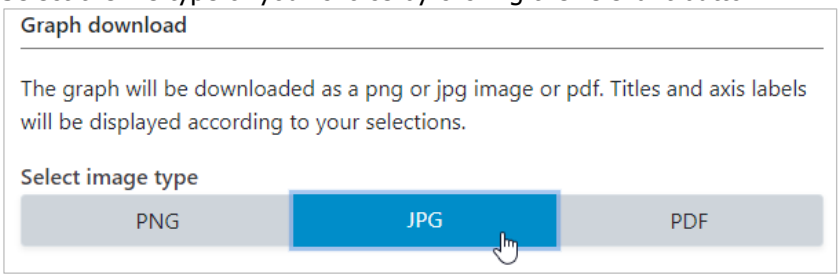
Click the switch to display setting average and/or median lines.

Toggle button

Toggle between different options, such as the file type for graph downloads.

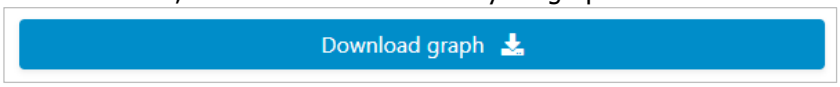


Select the file type of your choice by clicking the relevant button.

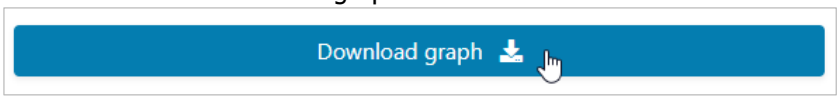


Action button

Launch actions, such as the download of your graph.



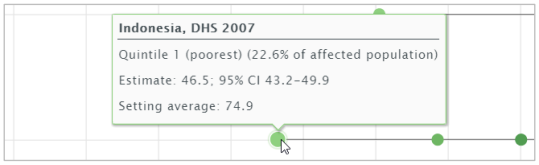
Click the button to start the graph download.



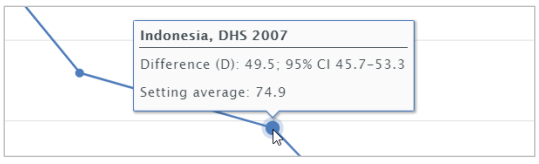
3.2.5 Tooltips

Hover over data points in graphs to see a tooltip with additional information about the data point.

For **disaggregated data**, the tooltip will show information about the setting, source, date, subgroup name and population share, subgroup estimate and 95% confidence interval, as well as the setting average, if available.



For **summary measures**, the tooltip includes information about the setting, source and date as well as the summary measure estimate and 95% confidence interval, as well as the setting average, if available.



For `**Determinants'**, there are two types of tooltips, the first includes information about the setting, health indicator, determinant indicator, sources as well as the setting average for each indicator.

The second tooltip comes from the regression line that shows the regression equation, coefficients, R-squared and P-value.

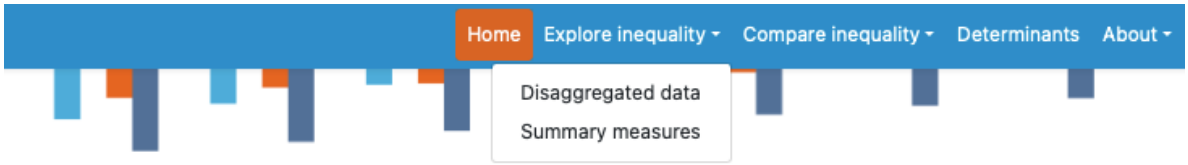
3.3 Learning more

Further information about HEAT are provided in the **About pages** of the software. These can be accessed by hovering over 'About' in the navigation menu in the top-right corner of the software.

- This **user manual** details all features and functionalities of HEAT.
- The **technical notes** provides detailed information about the data displayed in HEAT, including the disaggregated data and summary measures.
- The **indicator metadata** contains detailed information about the datasets shown in HEAT.
- **Training** links to a short, free eLearning course on how to use HEAT and HEAT Plus.
- **Software** provides information about the software used to develop HEAT.
- **Versions** shows the history of the different versions of HEAT.
- **License** contains the terms of use and software license agreement.
- **Feedback** gives instructions on how to provide feedback about the software.
- **Acknowledgements** lists the contributions of our colleagues, collaborators, contractors and partners to developing this software.

4 Explore inequality

Under 'Explore inequality', you can **explore the situation in one setting of interest**. Inequalities can be assessed using disaggregated data and summary measures that are visualized in a variety of different graphs, maps and tables. To access the visualizations, hover over 'Explore inequality' in the navigation menu at the top and click 'Disaggregated data' or 'Summary measures'.

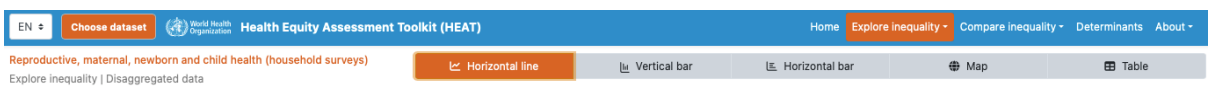


TIPS for exploring inequality

- ✓ Do start by selecting one indicator and one inequality dimension at a time, before looking at multiple indicators and dimensions simultaneously.
- ✗ It is not recommended to show favourable and adverse indicators together in one graph. The interpretation of these is different: for favourable indicators, such as skilled birth attendance, a high value is desirable (meaning high coverage), while for adverse indicators, such as under-five mortality rate, a low value is preferable (meaning low mortality).
- ✗ It is not recommended to compare changes in inequality over time if the number of subgroups differs from one time to another. For example, when looking at the situation by subnational/administrative region (such as provinces or districts), the number of regions may differ between different time points, e.g. because multiple regions are combined into one larger geographic area in one year but not in another (for sample size or other reasons). In this case, assessing changes in inequality over time may lead to false conclusions: Inherently, inequality tends to be lower in years with fewer regions. However, this may mask inequalities that exist between smaller geographic areas

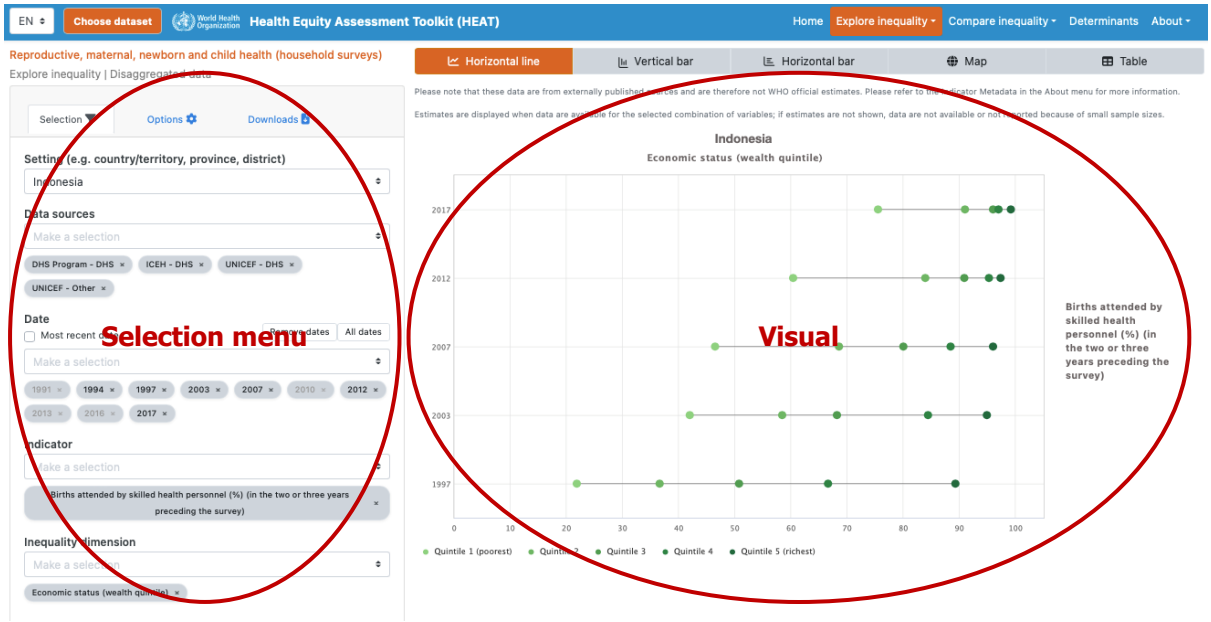
4.1 Disaggregated data

HEAT allows you to explore disaggregated data in different views. To access the different visualization types, click the tabs in the visualization menu across the top of the view. The selected visualization type will be highlighted in orange.



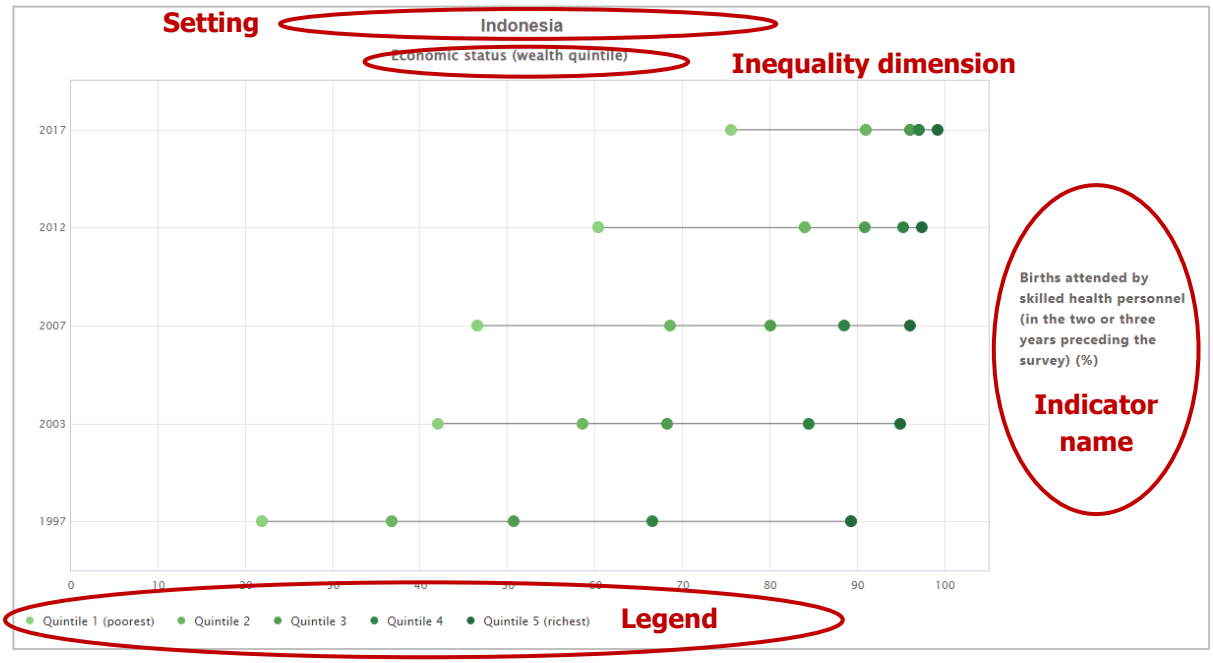
4.1.1 Horizontal line graph

In this view, disaggregated data are displayed in a horizontal line graph. The visual at the centre shows the graph; the selection menu on the left allows you to customize the visual.

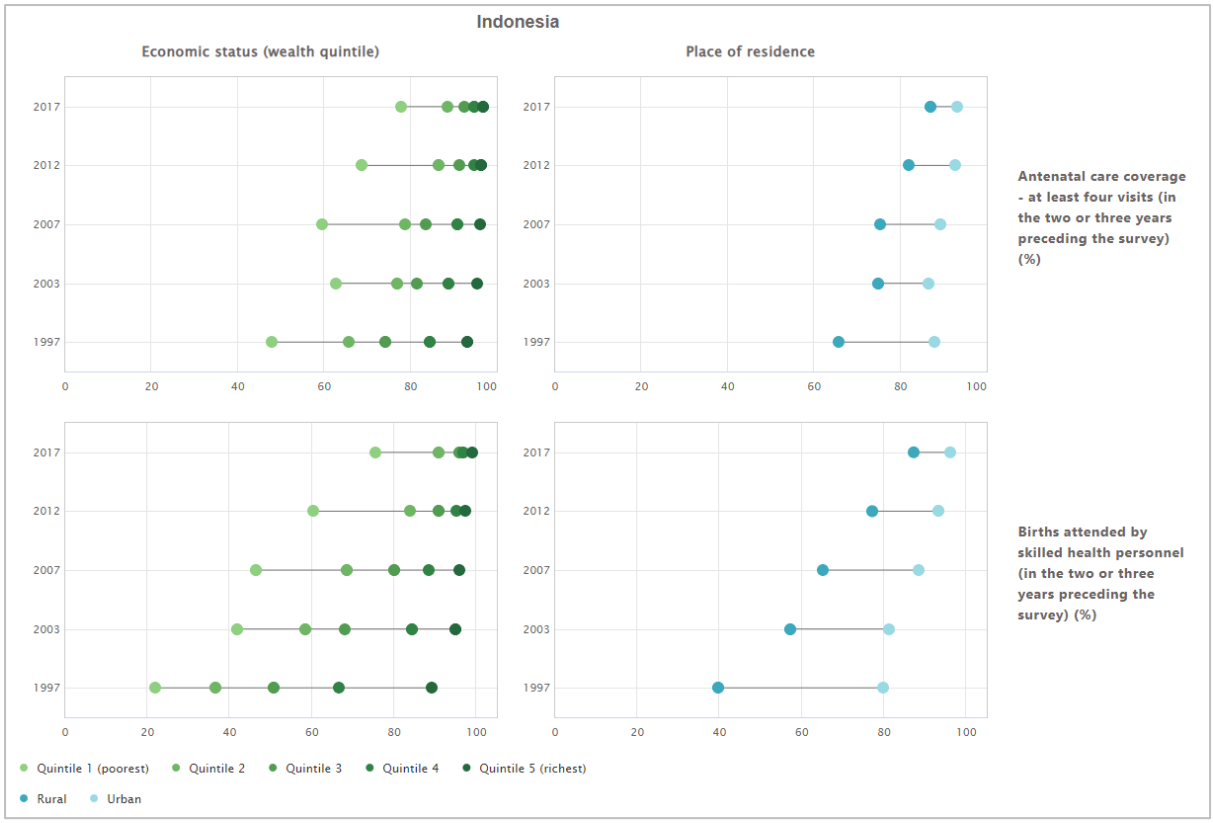


What you see

The visual shows a horizontal line graph (also called equiplot) presenting disaggregated data (displayed on the x-axis) for a selected setting of interest. For each date (displayed on the y-axis), multiple coloured circles are shown – one for each population subgroup. Black horizontal lines indicate the difference between minimum and maximum subgroup estimates.



If more than one indicator and/or inequality dimension are selected at the same time, multiple graphs are shown – one for each indicator and/or dimension. You can choose to show up to five indicators and five dimensions simultaneously.

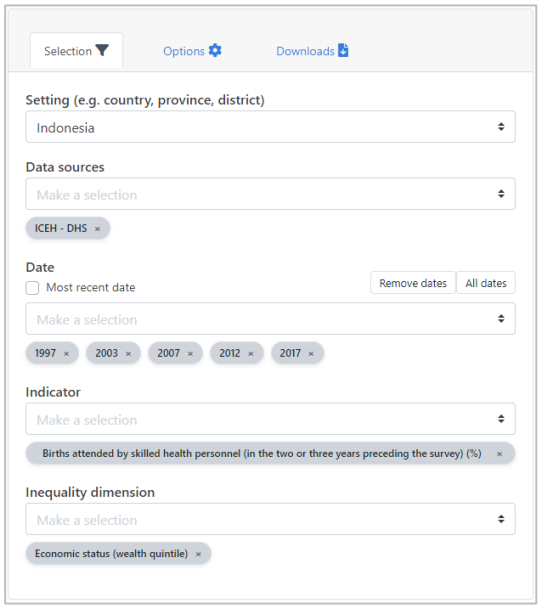
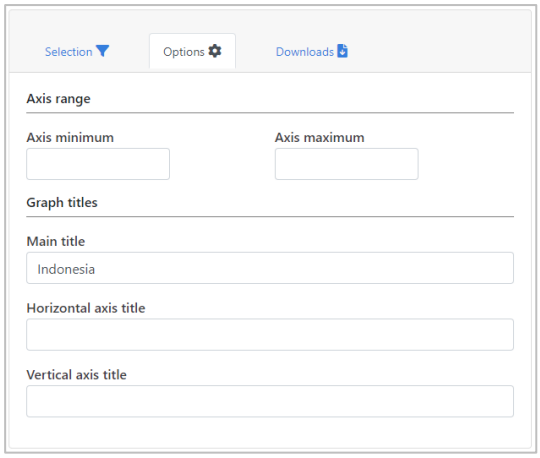
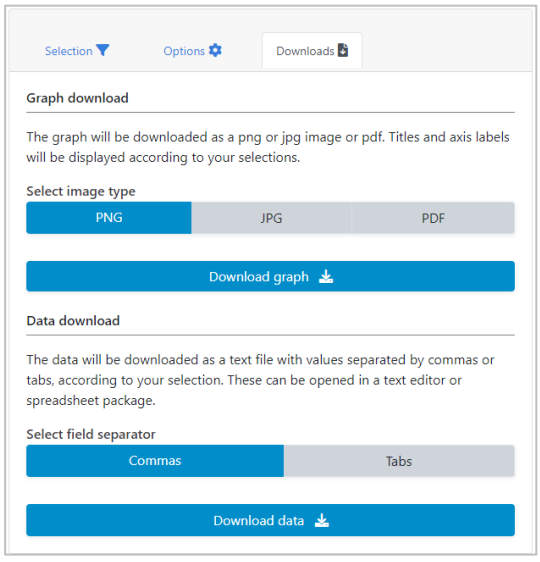


How to explore

The selection menu on the left allows you to customize the results displayed in the visual. Table 3 provides a description of the three tabs that comprise the selection menu: selection, options and downloads.

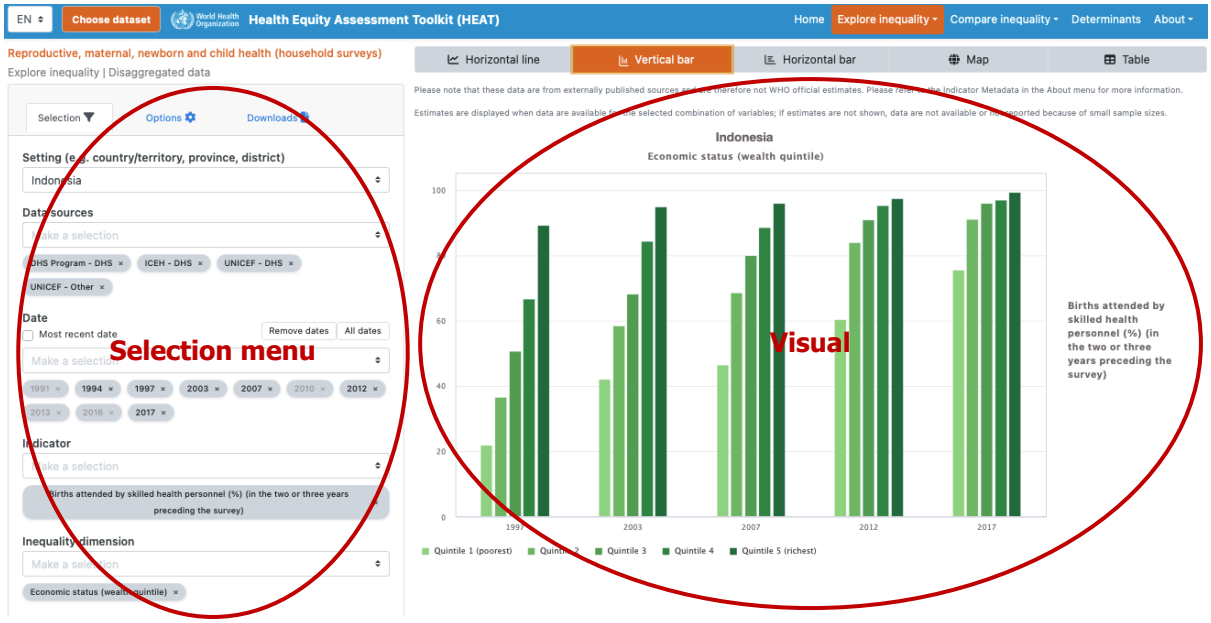
Table 3 Selection menu for the 'Horizontal line graph' showing 'Disaggregated data' under 'Explore inequality'

Tab	Description

Selection	Select the data displayed in the visual, including your setting of interest, data source(s), date(s), indicator(s) and inequality dimension(s).	
Options	Use different options to modify your view. You can choose custom axis ranges and graph titles.	
Downloads	Download the results displayed in the visual, including the graph (as png or jpg images or pdf) and/or the data (as comma or tab separated text files).	

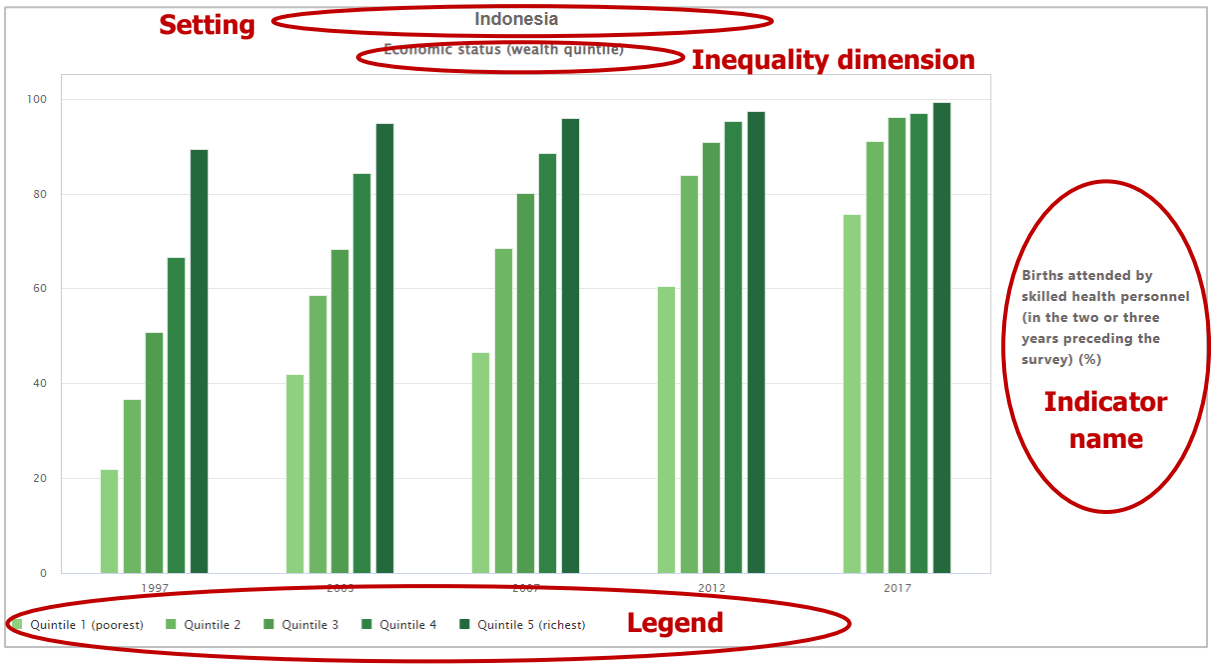
4.1.2 Vertical bar graph

In this view, disaggregated data are displayed in a vertical bar graph. The visual at the centre shows the graph; the selection menu on the left allows you to customize the visual.

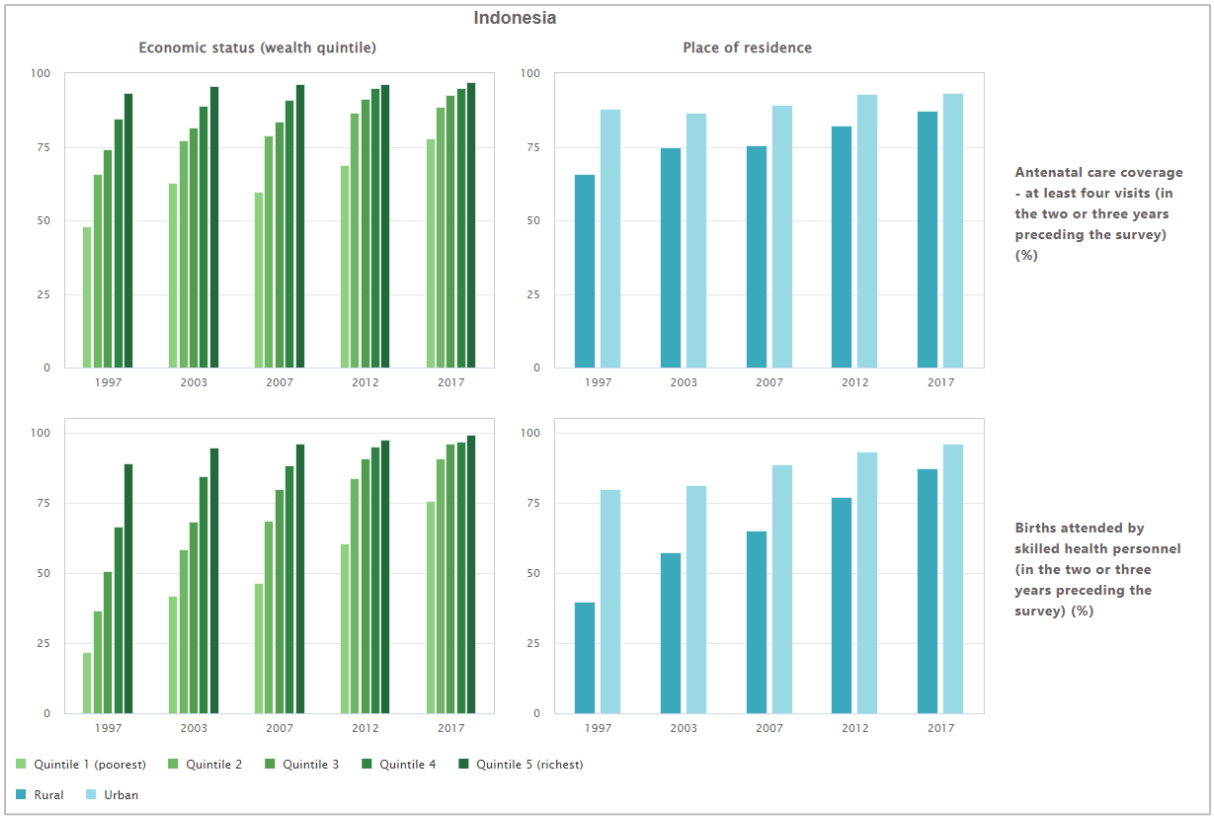


What you see

The visual shows a vertical bar graph presenting disaggregated data (displayed on the y-axis) in a selected setting of interest. For each date (displayed on the x-axis), multiple coloured bars are shown – one for each subgroup.



If more than one indicator and/or inequality dimension are selected at the same time, multiple graphs are shown – one for each indicator and/or dimension. You can select to show up to five indicators and five dimensions simultaneously.

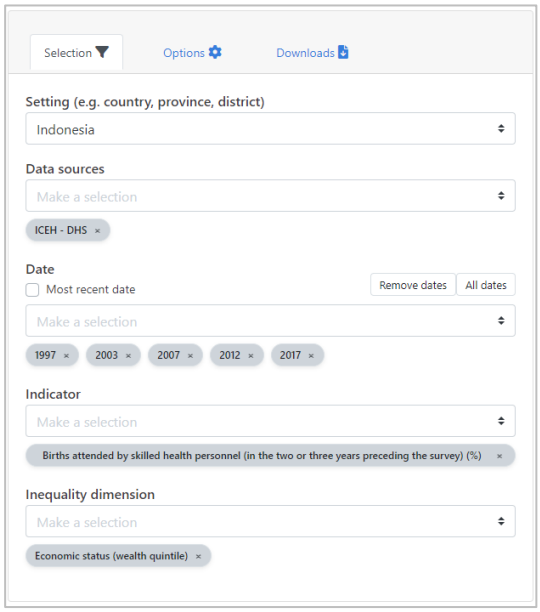
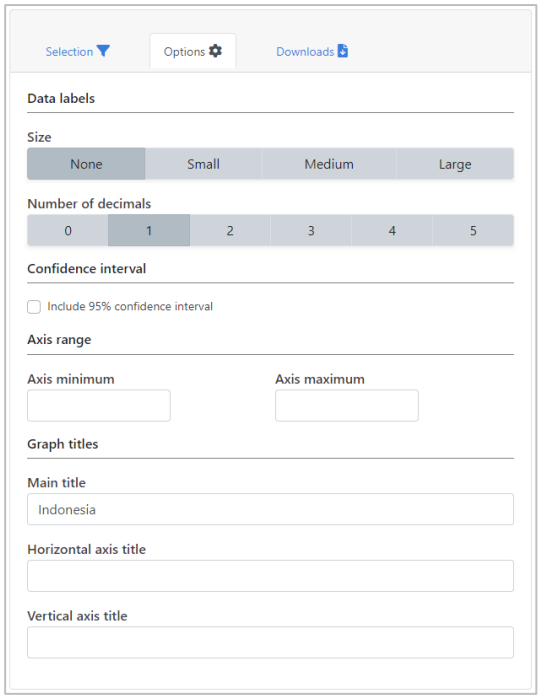


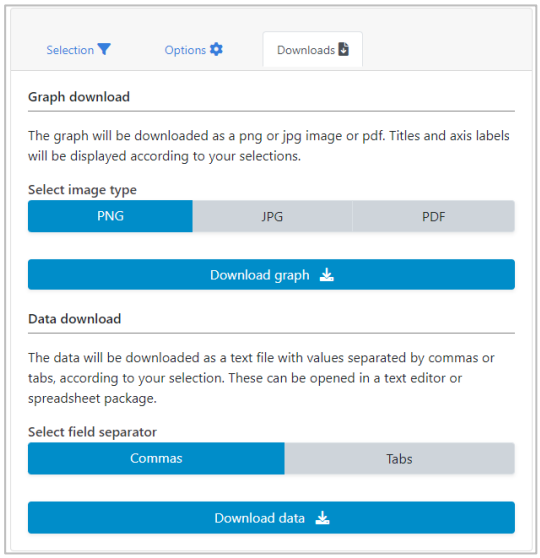
How to explore

The selection menu on the left allows you to customize the results displayed in the visual. Table 4 provides a description of the three tabs that comprise the selection menu: selection, options and downloads.

Table 4 Selection menu for the 'Vertical bar graph' showing 'Disaggregated data' under 'Explore inequality'

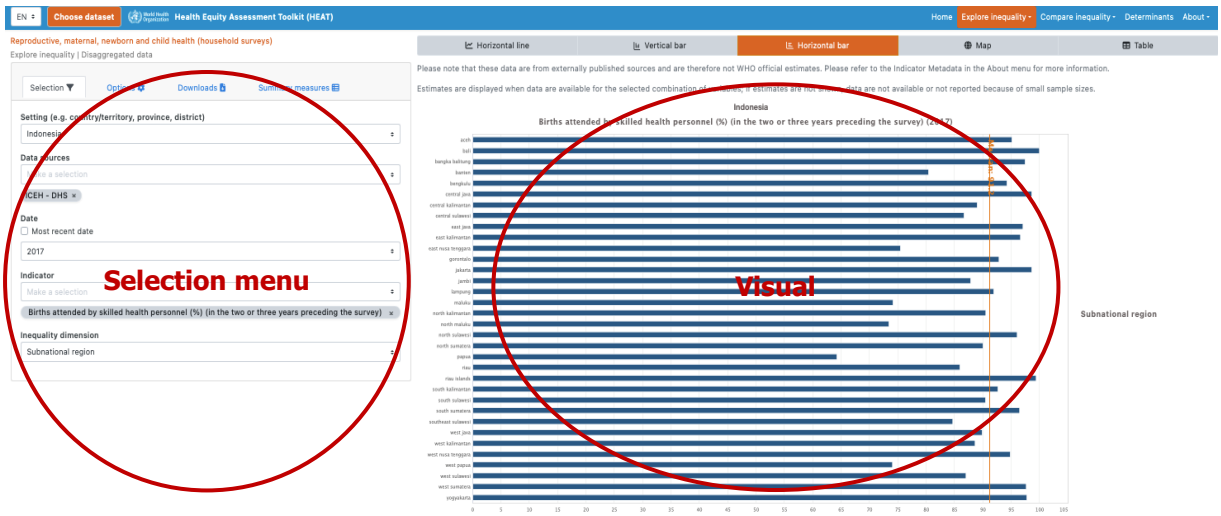
Tab	Description

Selection	Select the data displayed in the visual, including your setting of interest, data source(s), date(s), indicator(s) and inequality dimension(s).	
Options	Use different options to modify your view. You can choose to show data labels and confidence intervals, and select custom axis ranges and graph titles.	

Downloads	Download the results displayed in the visual, including the graph (as png or jpg images or pdf) and/or the data (as comma or tab separated text files).	

4.1.3 Horizontal bar graph

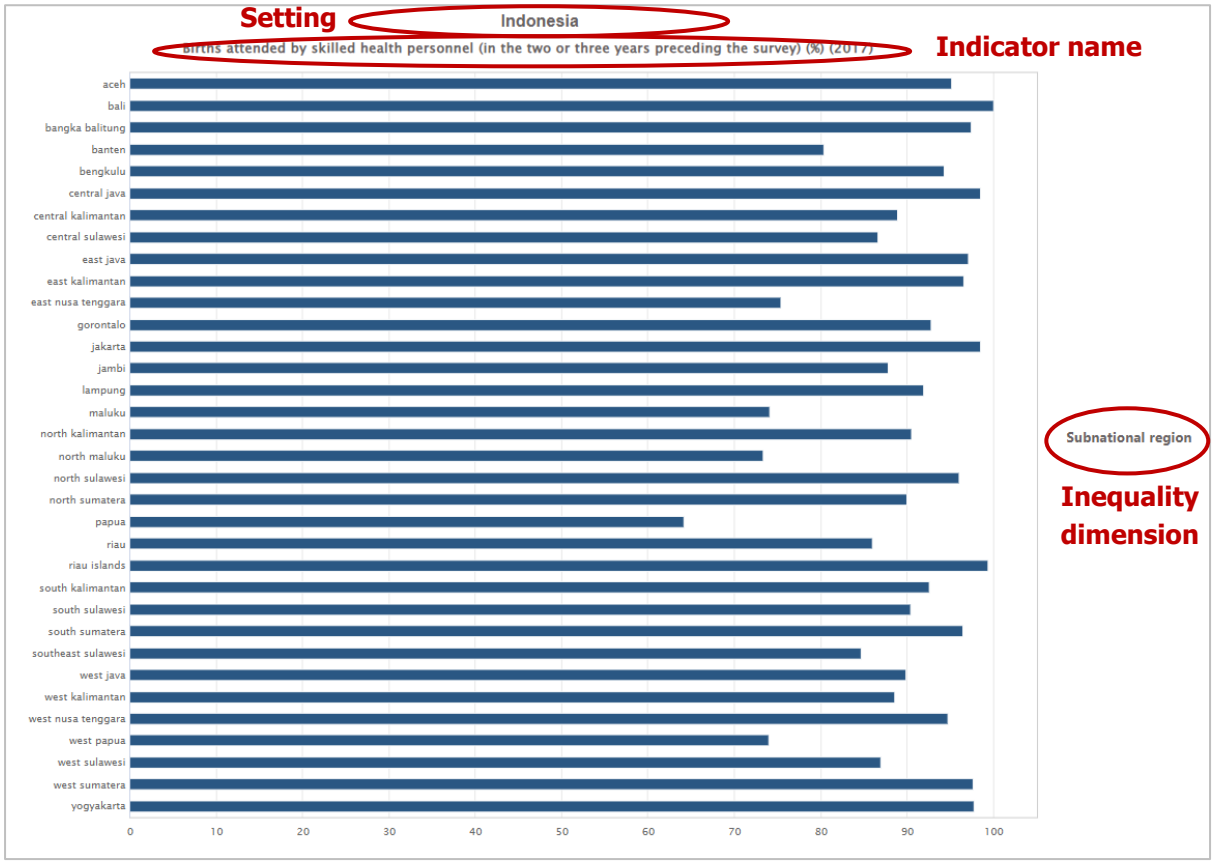
In this view, disaggregated data are displayed in a horizontal bar graph. The visual at the centre shows the graph; the selection menu on the left allows you to customize the visual.



Data are shown for one date at a time, allowing for a more in-depth assessment of inequalities in your setting of interest.

What you see

The visual shows a horizontal bar graph presenting disaggregated data disaggregated (displayed on the x-axis) in a selected setting of interest. The vertical orange line indicates the median value (the middle point of your data) across all subgroups.



If more than one indicator is selected at the same time, multiple graphs are shown – one for each indicator. You can select to show up to three indicators simultaneously.

How to explore

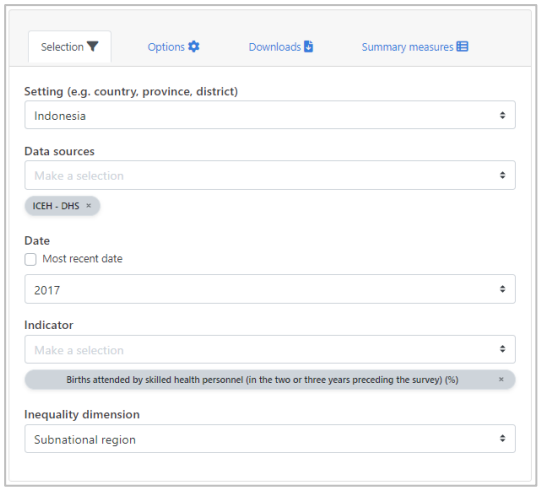
The selection menu on the left allows you to customize the results displayed in the visual. Table 5 provides a description of the four tabs that comprise the selection menu: selection, options, downloads and summary measures.

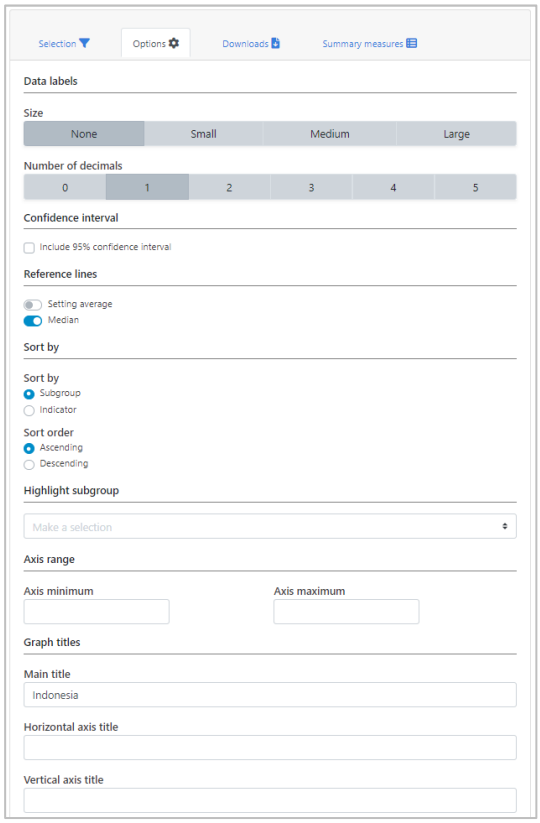
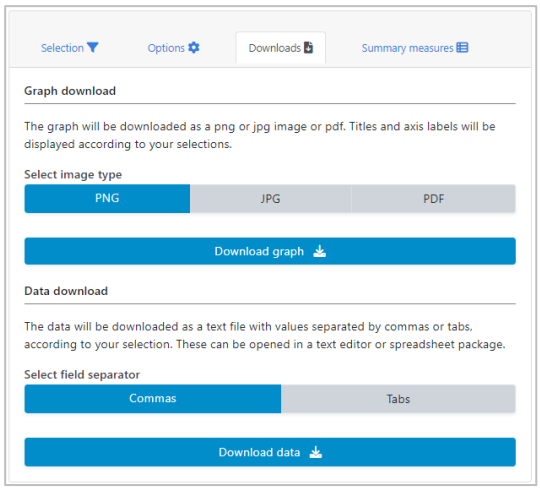
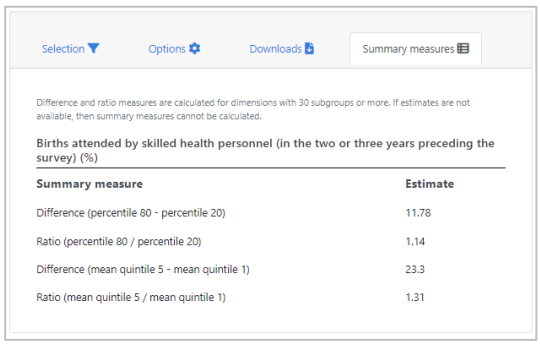
The additional 'Summary measures' tab was designed specifically to facilitate the assessment of inequalities for inequality dimensions with many subgroups, such as subnational regions. Specific difference and ratio measures are calculated for

- Dimensions with more than 30 subgroups:
  - Difference between percentile 80 and percentile 20
  - Ratio of percentile 80 to percentile 20
  - Difference between the mean estimates in quintile 5 and quintile 1
  - Ratio of the mean estimates in quintile 5 to quintile 1
- Dimensions with more than 60 subgroups:
  - Difference between percentile 90 and percentile 10
  - Ratio of percentile 90 to percentile 10
  - Difference between mean estimates in decile 10 and decile 1
  - Ratio of mean estimates in decile 10 to decile 1
- Dimensions with more than 100 subgroups:
  - Difference between percentile 95 and percentile 5
  - Ratio of percentile 95 to percentile 5
  - Difference between mean estimates in the top 5% and the bottom 5%
  - Ratio of mean estimates in the top 5% to the bottom 5%

These measures may be a more accurate reflection of the level of inequality in a setting than measuring the range between the maximum and minimum values using regular (range) difference and ratio measures, as they avoid using possible outlier values.

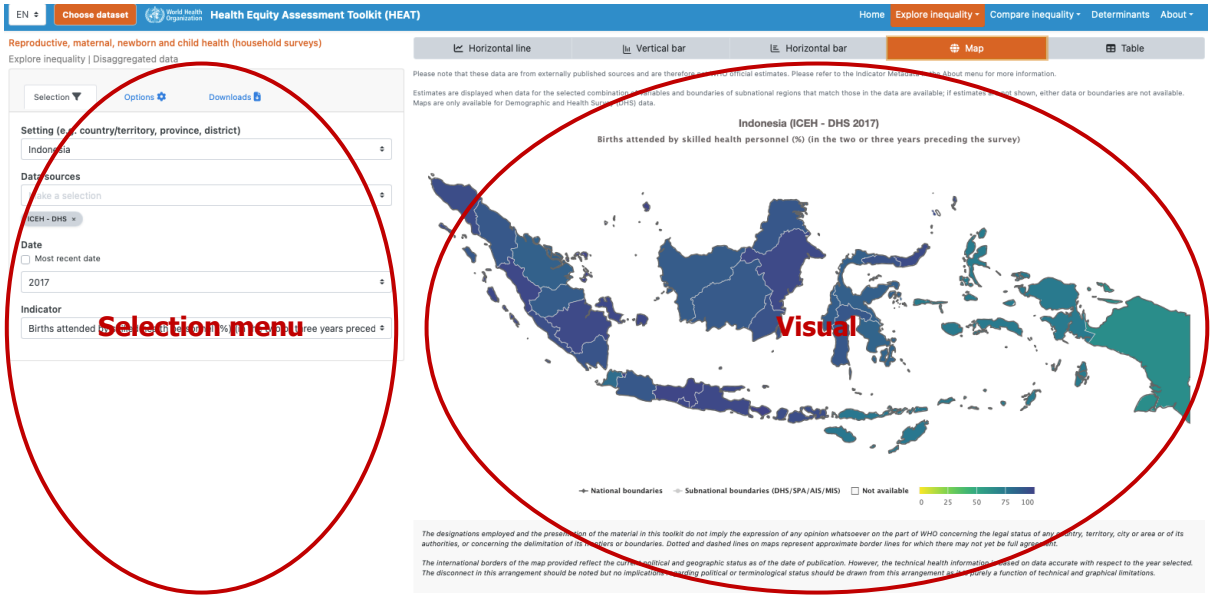
Table 5 Selection menu for the 'Horizontal bar graph' showing 'Disaggregated data' under 'Explore inequality'

Tab	Description	
Selection	Select the data displayed in the visual, including your setting of interest, data source(s), date and indicator(s).	

Options	Use different options to modify your view. You can choose to show data labels, confidence intervals and reference lines; change the sort order of your data; highlight selected subgroups; and select custom axis ranges and graph titles.	
Downloads	Download the results displayed in the visual, including the graph (as png or jpg images or pdf) and/or the data (as comma or tab separated text files).	
Summary measures	View specific summary measures calculations. Specific difference and ratio measures are calculated for inequality dimensions with more than 30 subgroups.	

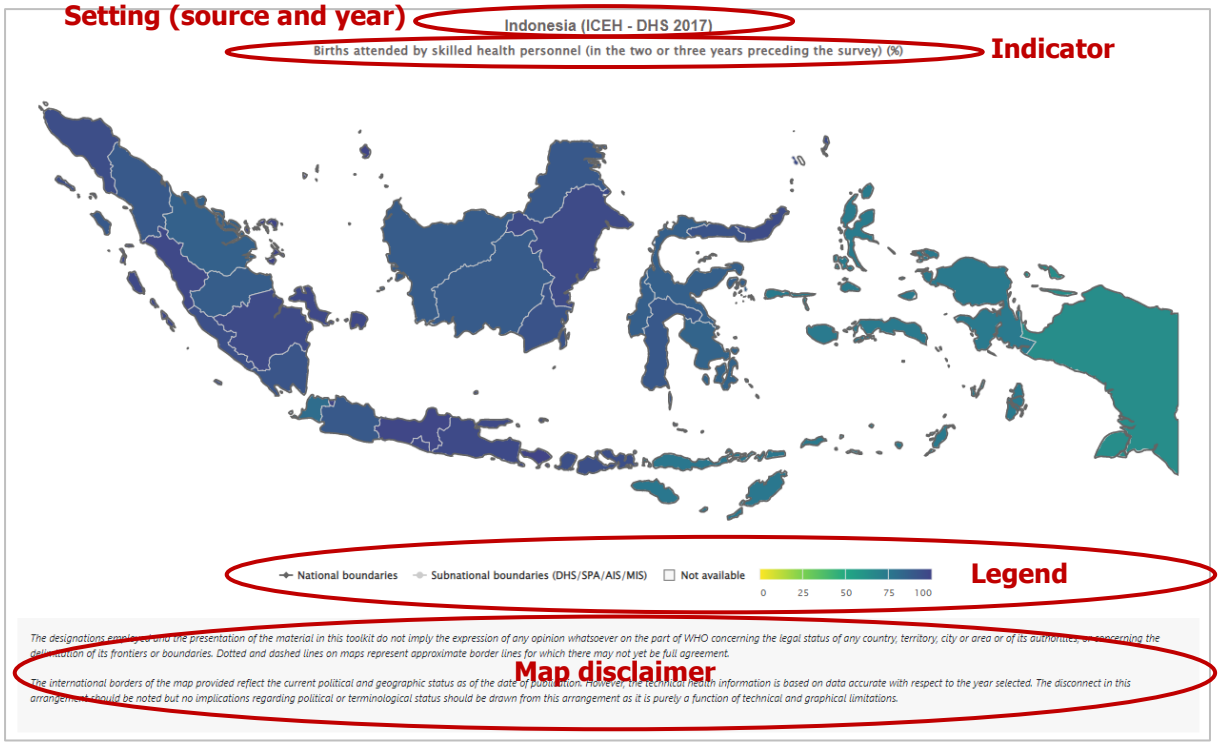
4.1.4 Map

In this view, data disaggregated by subnational region are displayed in a map. The visual at the centre shows the map; the selection menu on the left allows you to customize the visual. **Note that this visualization type is only available for one dataset showing reproductive, maternal, newborn and child health indicators from household surveys. In addition, maps are only available for data disaggregated by subnational region and only for data from DHS with available boundaries of subnational regions that match the data.** Note that there may be cases where data cannot be displayed on a map due to the unavailability of map shapefiles, or discrepancies between available shapefiles and the data.



What you see

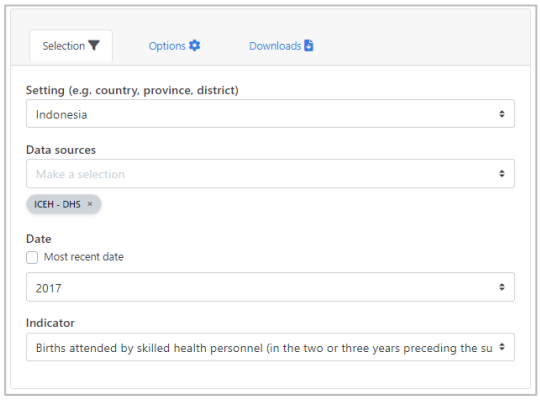
The visual shows a map presenting data disaggregated by subnational regions in a selected setting of interest. Coloured areas indicate subnational regions. Dark grey lines indicate national boundaries, reflecting the current political and geographic status as of the date of publication. Light grey lines indicate subnational boundaries as provided by the DHS Program.

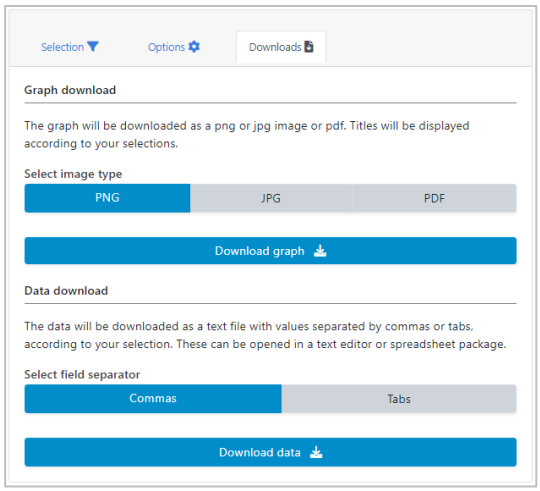


How to explore

The selection menu on the left allows you to customize the results displayed in the visual. Table 6 provides a description of the three tabs that comprise the selection menu: selection, options and downloads.

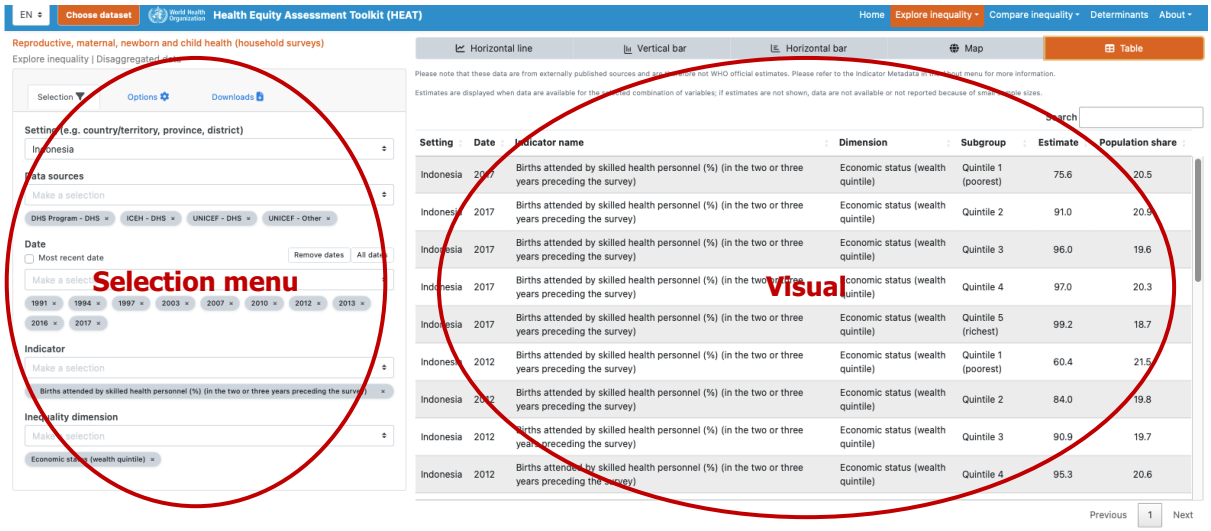
Table 6 Selection menu for the 'Map' showing 'Disaggregated data' under 'Explore inequality'

Tab	Description	
Selection	Select the data displayed in the visual, including your setting of interest, data source(s), date(s), indicator(s) and inequality dimension(s).	

Options	Use different options to modify your view. You can choose custom axis ranges and graph titles.	
Downloads	Download the results displayed in the visual, including the graph (as png or jpg images or pdf) and/or the data (as comma or tab separated text files).	

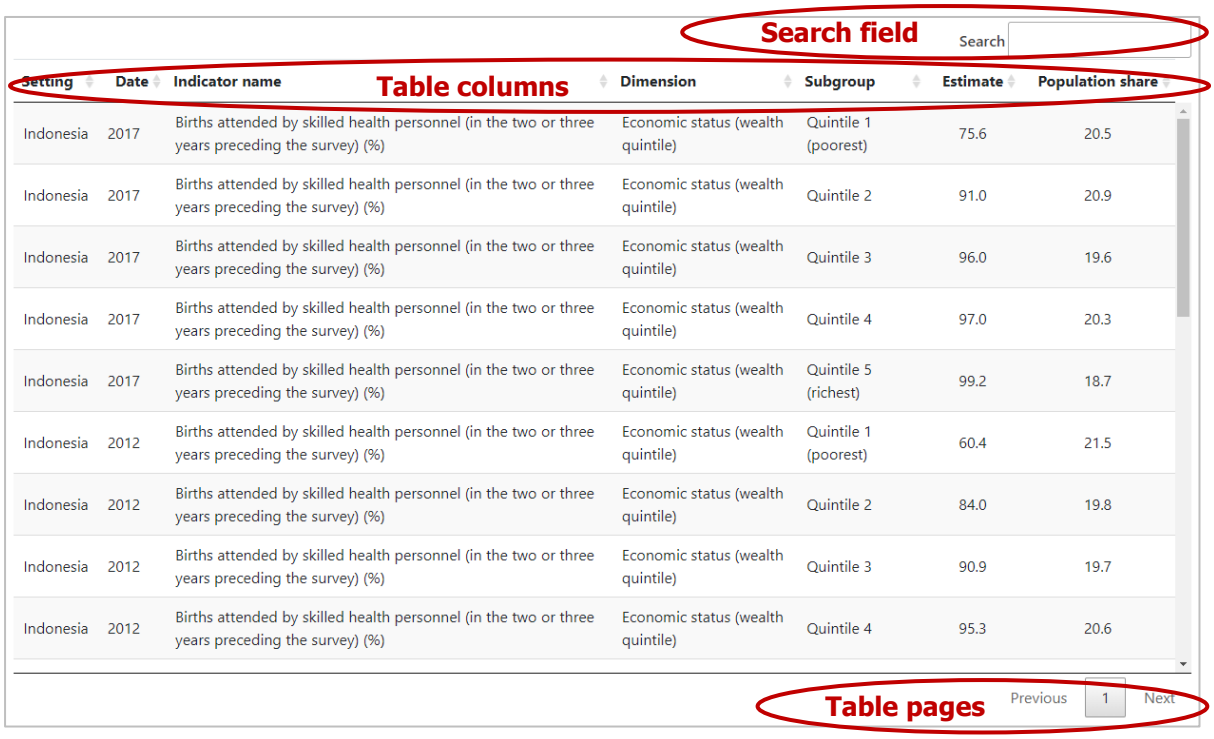
4.1.5 Table

In this view, disaggregated data are displayed in a table. The visual at the centre shows the table; the selection menu on the left allows you to customize the visual.



What you see

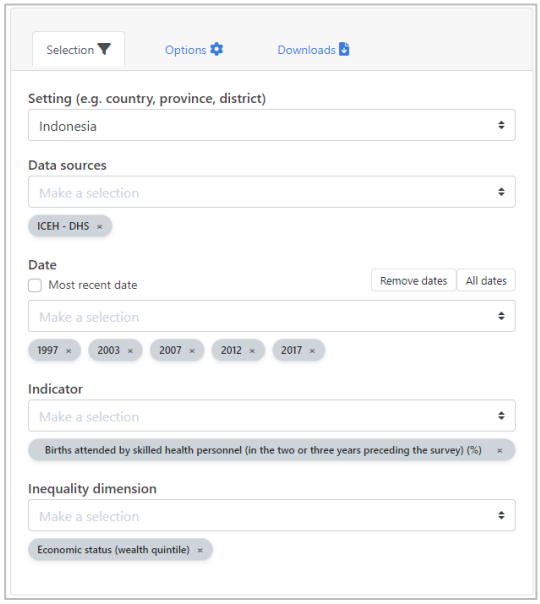
The visual shows a table presenting disaggregated data for a selected setting of interest. By default, the table displays information about the setting, date, indicator, inequality dimension, population subgroup, subgroup estimate and subgroup population share (these can be changed under 'Options' in the selection menu on the left).

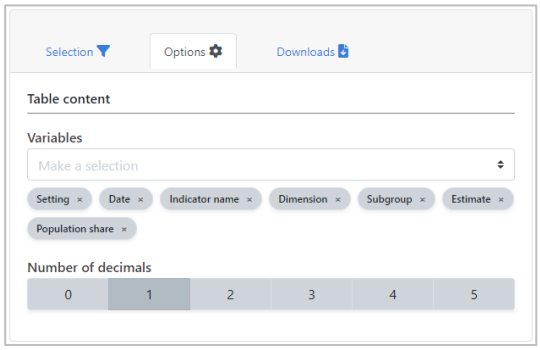
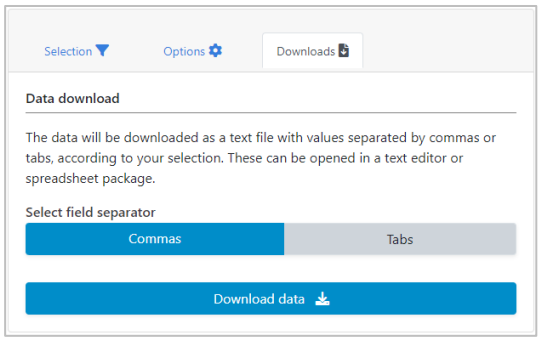


How to explore

The selection menu on the left allows you to customize the results displayed in the visual. Table 7 provides a description of the three tabs that comprise the selection menu: selection, options and downloads.

Table 7 Selection menu for the 'Table' showing 'Disaggregated data' under 'Explore inequality'

Tab	Description	
Selection	Select the data displayed in the visual, including your setting of interest, data source(s), date(s), indicator(s) and inequality dimension(s).	

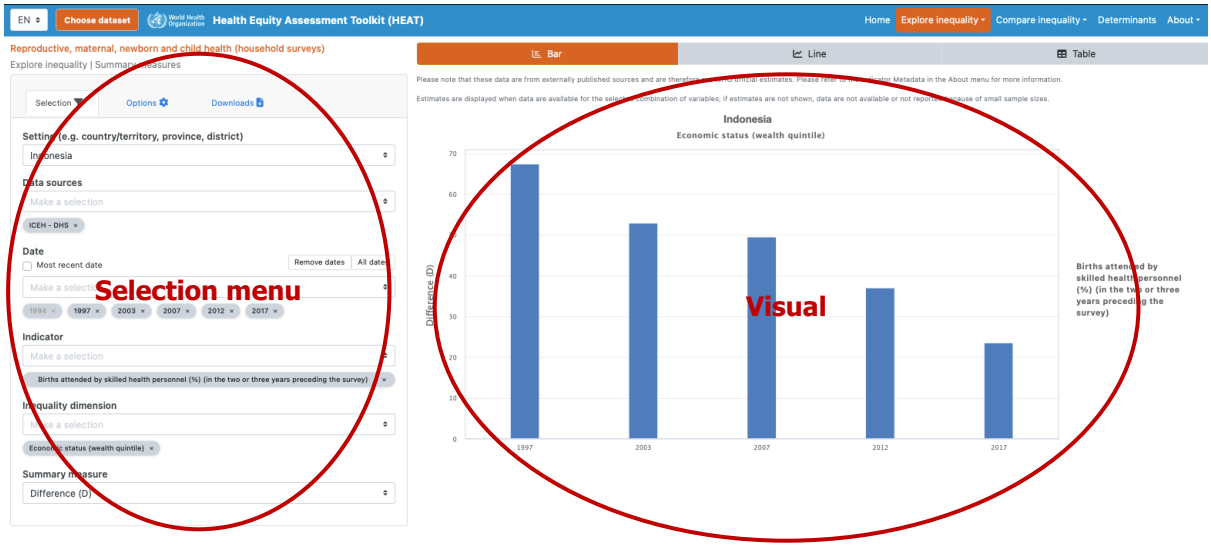
Options	Use different options to modify your view. You can add additional variables and determine the number of decimals for numeric values.	
Downloads	Download the data displayed in the visual (as comma or tab separated text files).	

4.2 Summary measures

HEAT allows you to explore summary measures in different views; data are visualized in bar graphs, line graphs and tables. To access the different visualizations, click the tabs in the visualization menu across the top of the view. The selected view will be highlighted in orange.

4.2.1 Bar graph

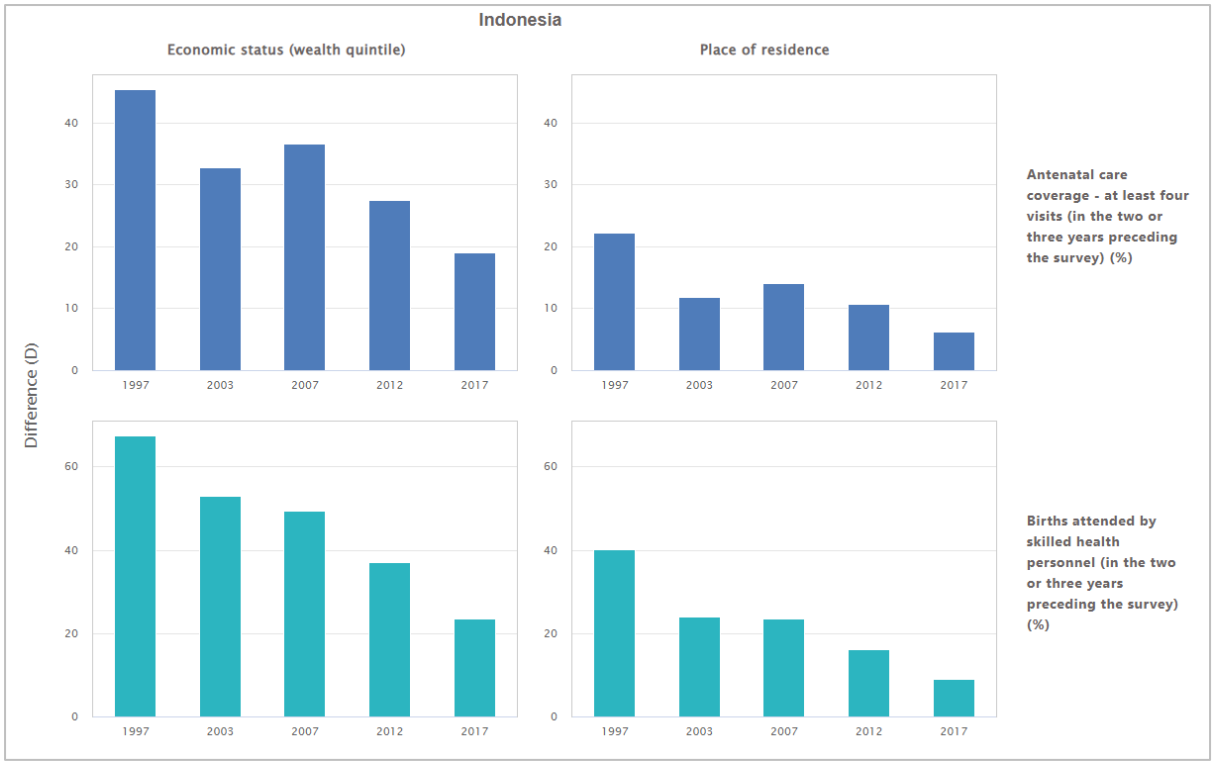
In this view, summary measures are displayed in a bar graph. The visual at the centre shows the graph; the selection menu on the left allows you to customize the visual.



What you see

The visual shows a bar graph presenting summary measure data (displayed on the y-axis) for a selected setting of interest. For each date (displayed on the x-axis), there is one coloured bar showing the value of the selected summary measure.

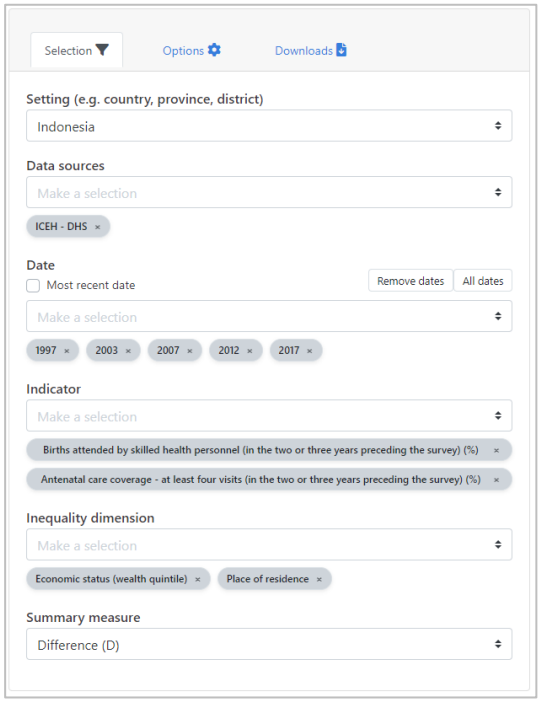
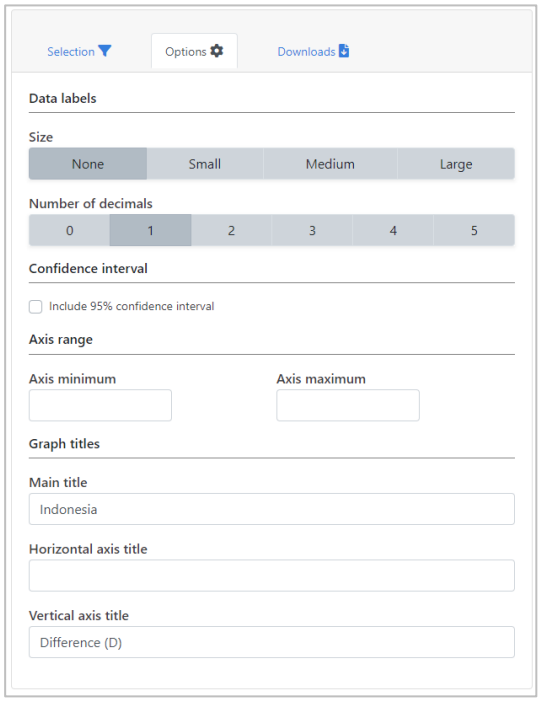
If more than one indicator and/or inequality dimension are selected at the same time, multiple graphs are shown – one for each indicator and/or dimension. You can choose to show up to five indicators and five dimensions simultaneously.

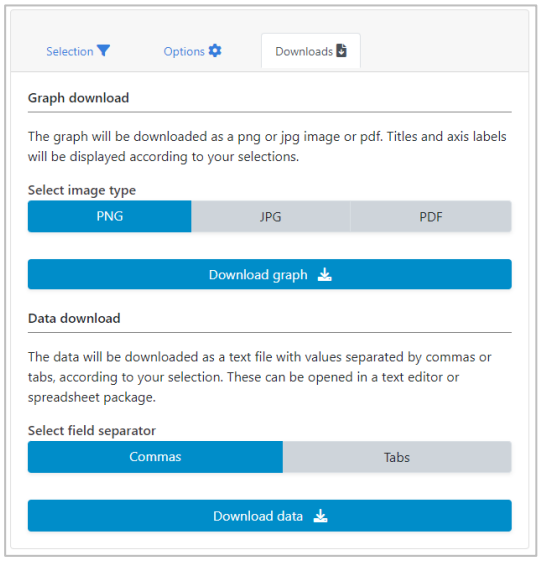


How to explore

The selection menu on the left allows you to customize the results displayed in the visual. Table 8 provides a description of the three tabs that comprise the selection menu: selection, options and downloads.

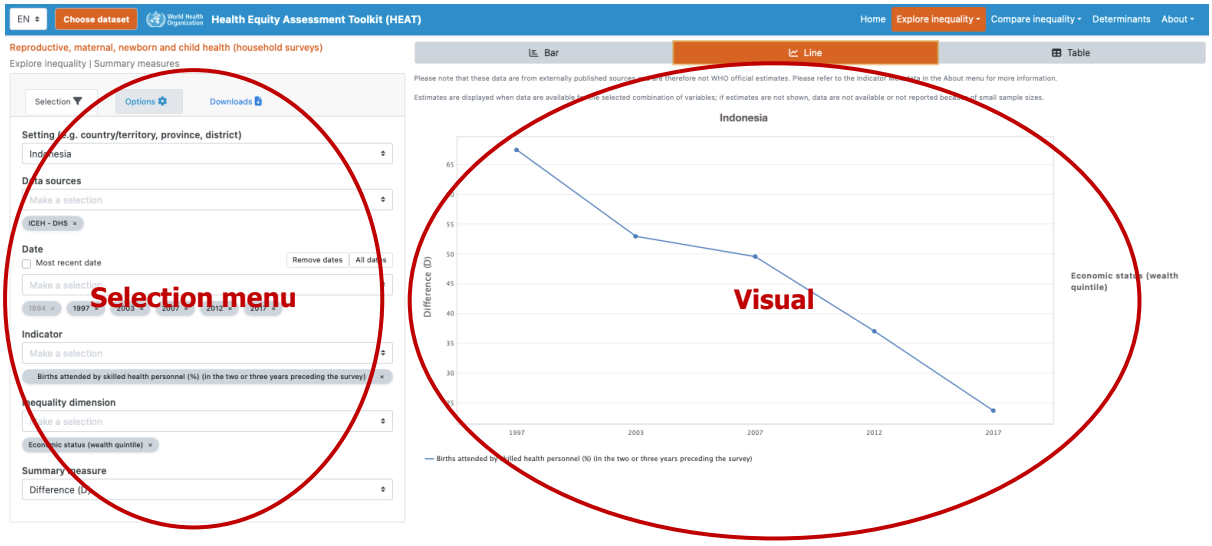
Table 8 Selection menu for the 'Bar graph' showing 'Summary measures' under 'Explore inequality'

Tab	Description	
Selection	Select the data displayed in the visual, including your setting of interest, data source(s), date(s), indicator(s), inequality dimension(s) and summary measure.	
Options	Use different options to modify your view. You can choose to show data labels and confidence intervals, and select custom axis ranges and graph titles.	

Downloads	Download the results displayed in the visual, including the graph (as png or jpg images or pdf) and/or the data (as comma or tab separated text files).	

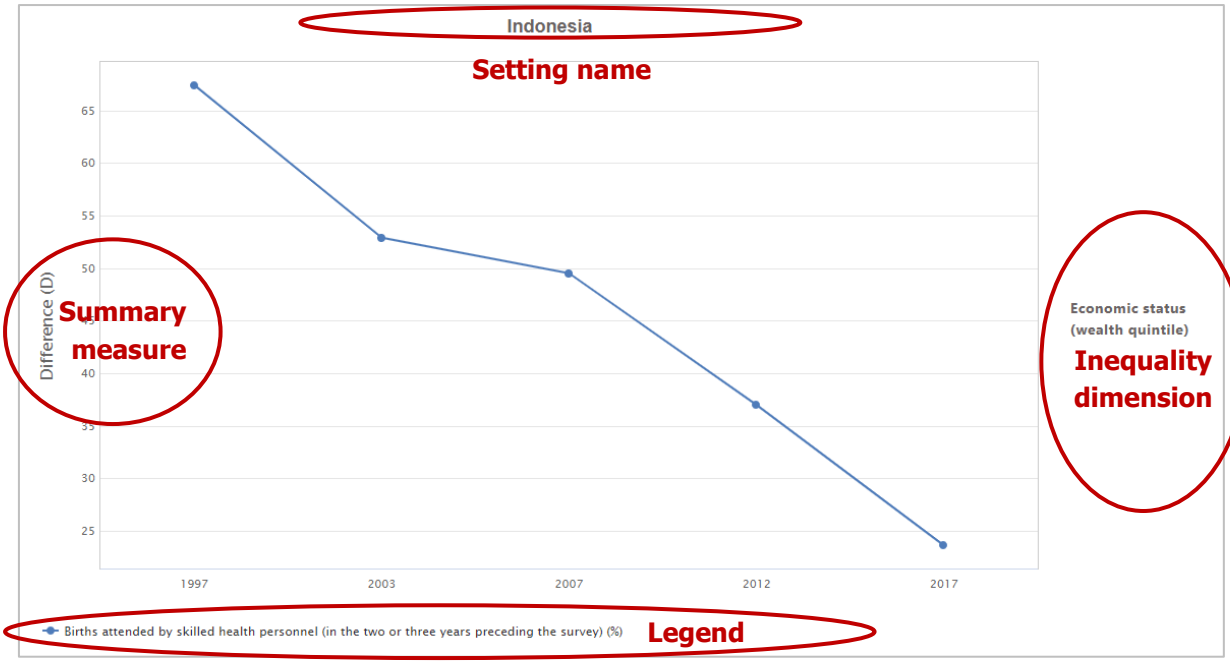
4.2.2 Line graph

In this view, summary measures are displayed in a line graph. The visual at the centre shows the graph; the selection menu on the left allows you to customize the visual.

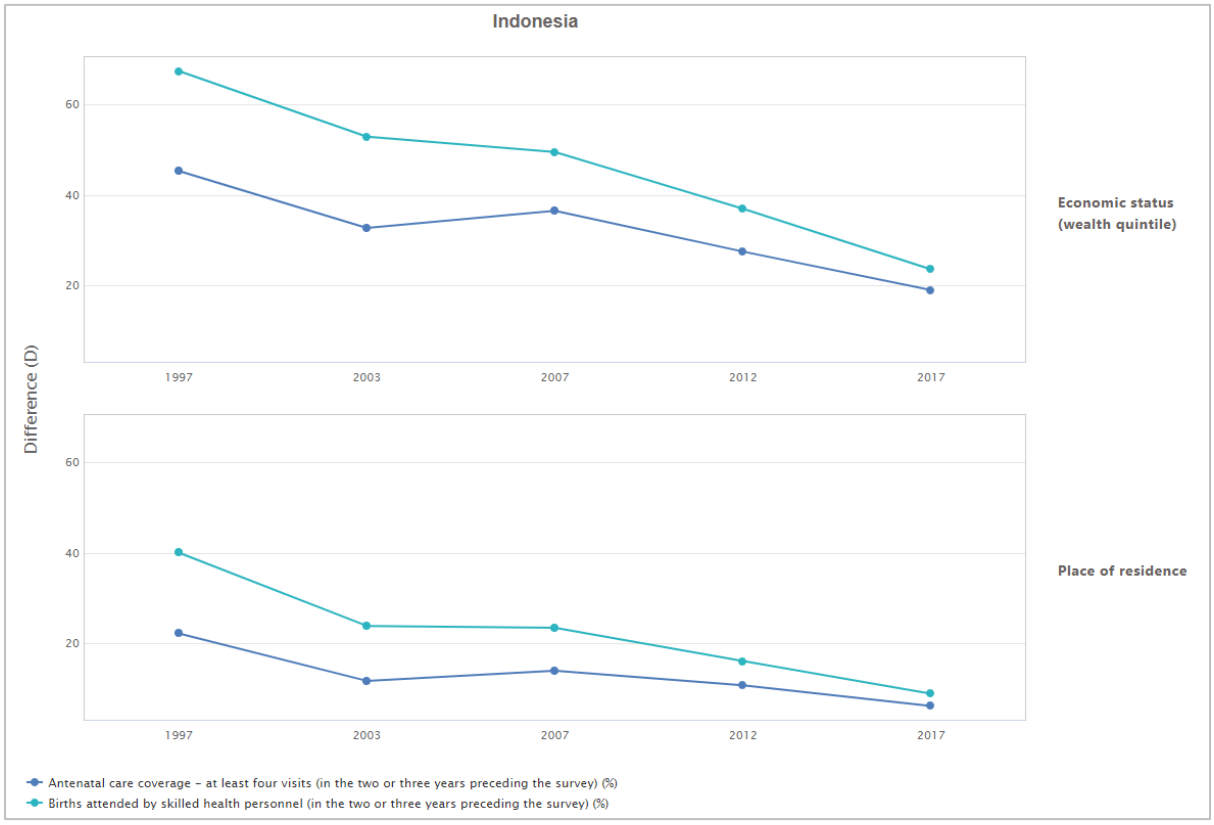


What you see

The visual shows a line graph presenting summary measure data (displayed on the y-axis) for a selected setting of interest. For each date (displayed on the x-axis), there is one data point showing the value of the selected summary measure. Data points are connected by coloured lines.



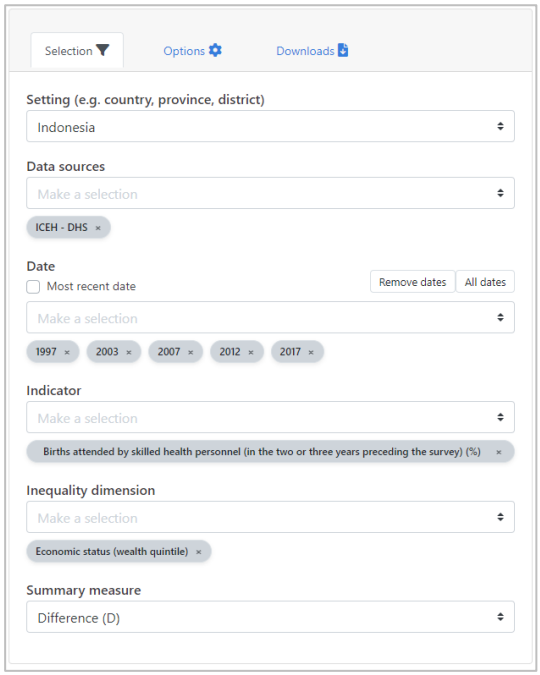
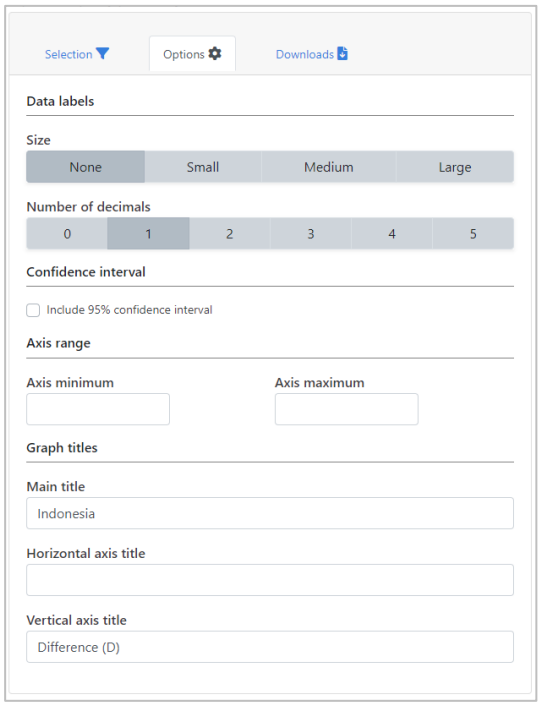
If more than one indicator and/or inequality dimension are selected at the same time, multiple graphs are shown – one for each dimension, with different indicators displayed in different coloured lines. You can choose to show up to five indicators and five dimensions simultaneously.

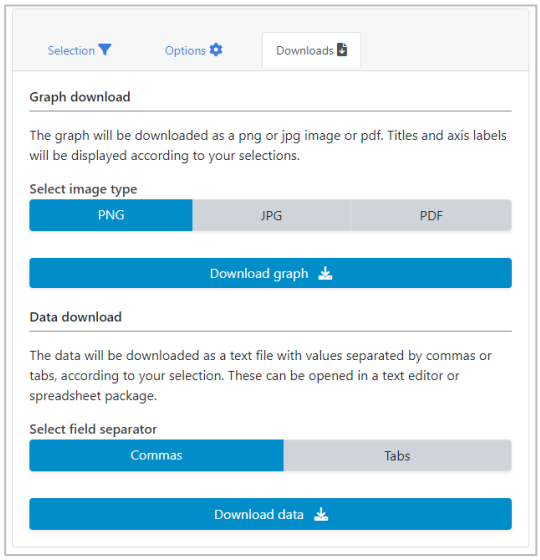


How to explore

The selection menu on the left allows you to customize the results displayed in the visual. Table 9 provides a description of the three tabs that comprise the selection menu: selection, options and downloads.

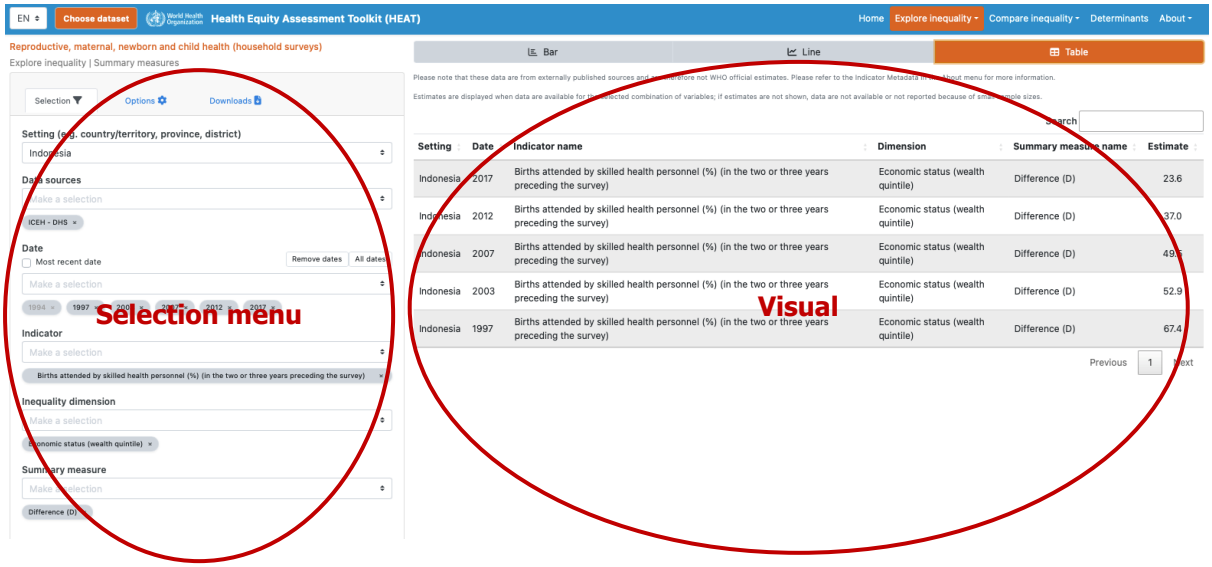
Table 9 Selection menu for the 'Line graph' showing 'Summary measures' under 'Explore inequality'

Tab	Description	
Selection	Select the data displayed in the visual, including your setting of interest, data source(s), date(s), indicator(s), inequality dimension(s) and summary measure.	
Options	Use different options to modify your view. You can choose to show data labels and confidence intervals, and select custom axis ranges and graph titles.	

Downloads	Download the results displayed in the visual, including the graph (as png or jpg images or pdf) and/or the data (as comma or tab separated text files).	

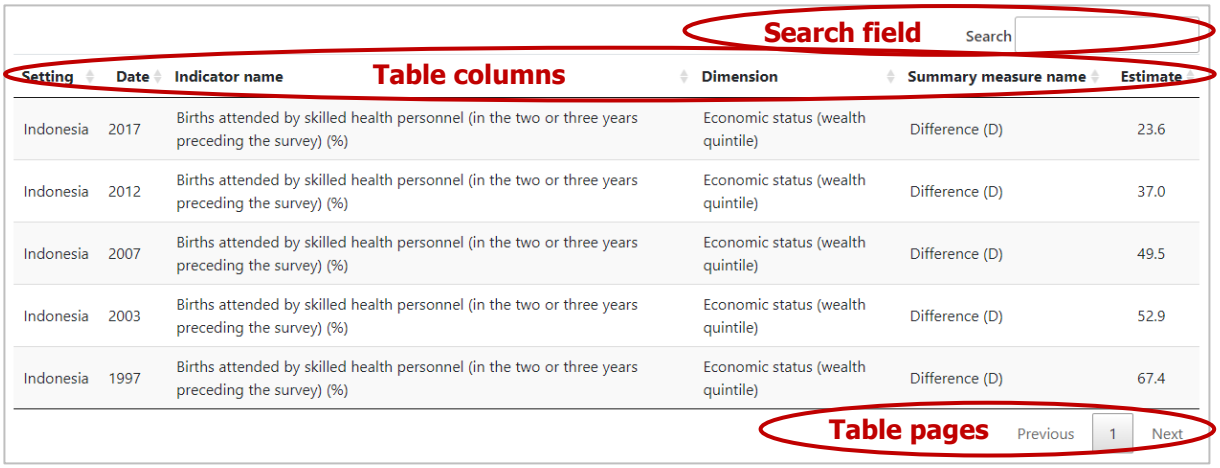
4.2.3 Table

In this view, summary measures are displayed in a table. The visual at the centre shows the table; the selection menu on the left allows you to customize the visual.



What you see

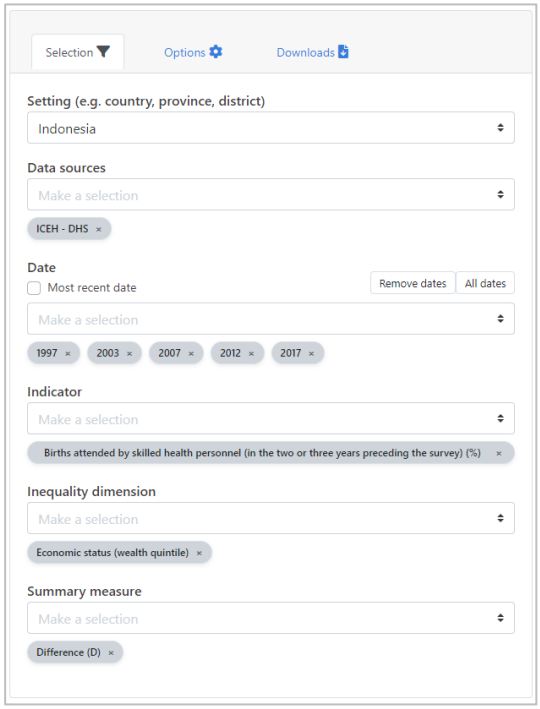
The visual shows a table presenting summary measures for a selected setting of interest. By default, the table displays information about the setting, date, indicator, inequality dimension, summary measure and summary measure estimate (these can be changed under 'Options' in the selection menu on the left).

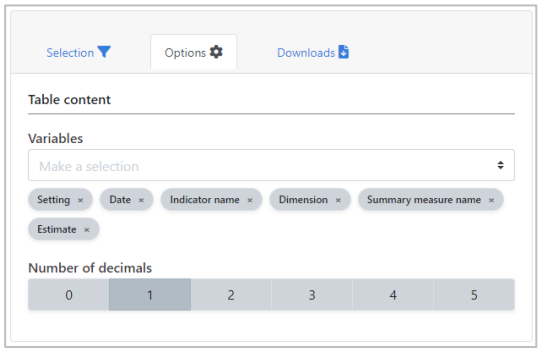
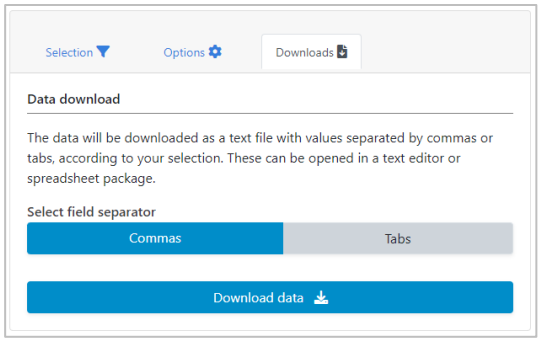


How to explore

The selection menu on the left allows you to customize the results displayed in the visual. Table 10 provides a description of the three tabs that comprise the selection menu: selection, options and downloads.

Table 10 Selection menu for the 'Table' showing 'Summary measures' under 'Explore inequality'

Tab	Description	
Selection	Select the data displayed in the visual, including your setting of interest, data source(s), date(s), indicator(s) and inequality dimension(s).	

Options	Use different options to modify your view. You can add additional variables and determine the number of decimals for numeric values.	
Downloads	Download the data displayed in the visual (as comma or tab separated text files).	

5 Compare inequality

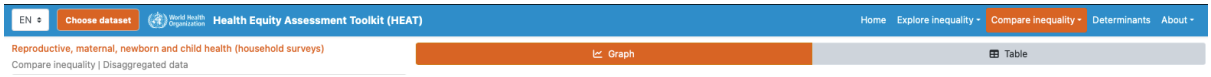
Under 'Compare inequality', you can **compare the situation in one setting of interest with the situation in other settings**. Benchmarking can be done using disaggregated data and summary measures that are visualized in different graphs and tables. To access the visualizations, hover over 'Compare inequality' in the navigation menu at the top and click 'Disaggregated data' or 'Summary measures'.

TIPS for comparing inequality

- It is not recommended to compare inequality across settings if the number of subgroups differs between countries. For example, when looking at the situation by subnational/administrative region (such as provinces or districts), the number of regions may differ between countries. In this case, comparing inequality may lead to false conclusions: Inherently, inequality tends to be lower in settings with fewer regions. However, this may mask inequalities that exist between smaller geographic areas within those settings.

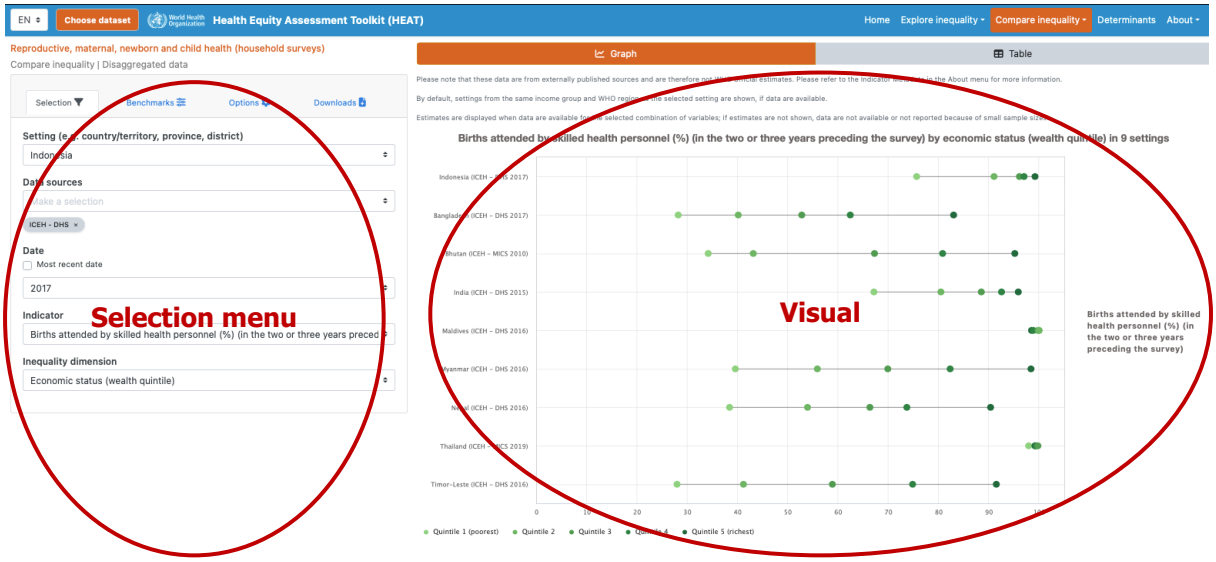
5.1 Disaggregated data

HEAT allows you to compare disaggregated data in different views; data are visualized in graphs and tables. To access the different visualizations, click the tabs in the visualization menu across the top of the view. The selected view will be highlighted in orange.



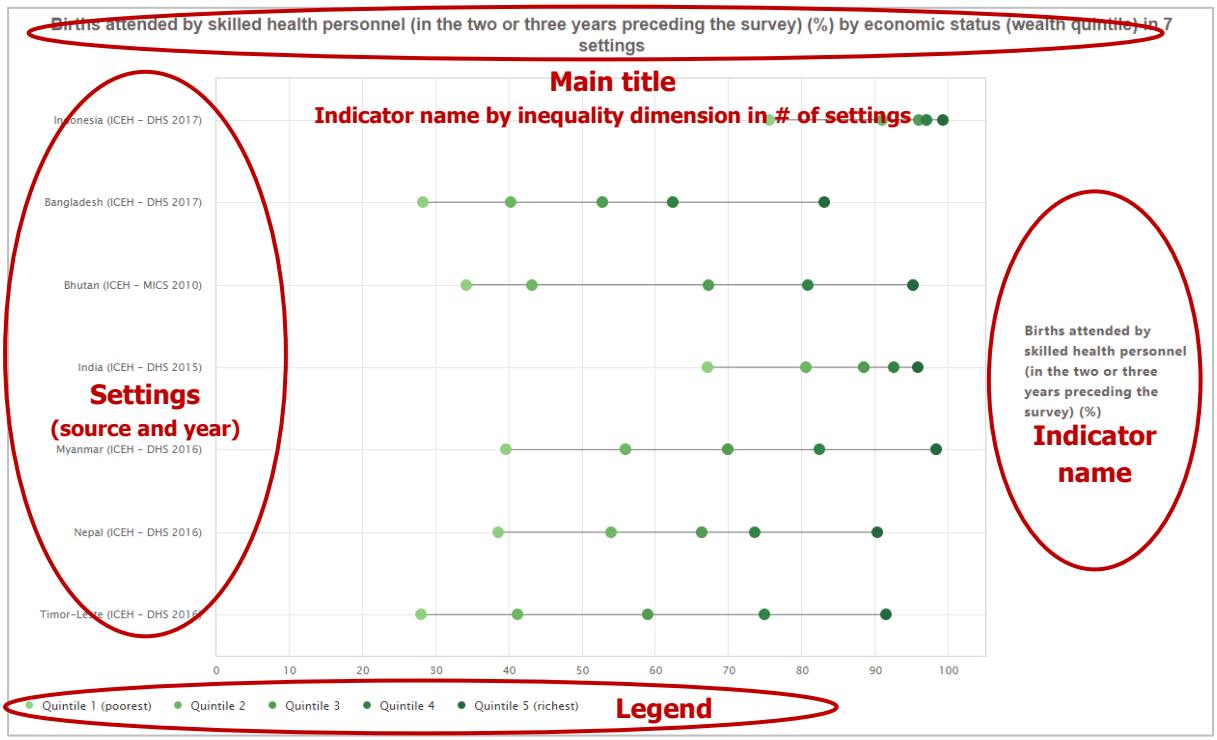
5.1.1 Graph

In this view, disaggregated data are displayed in a horizontal line graph. The visual at the centre shows the graph; the selection menu on the left allows you to customize the visual.



What you see

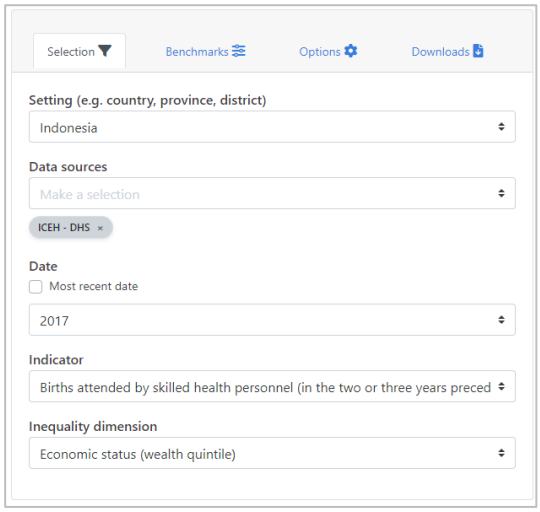
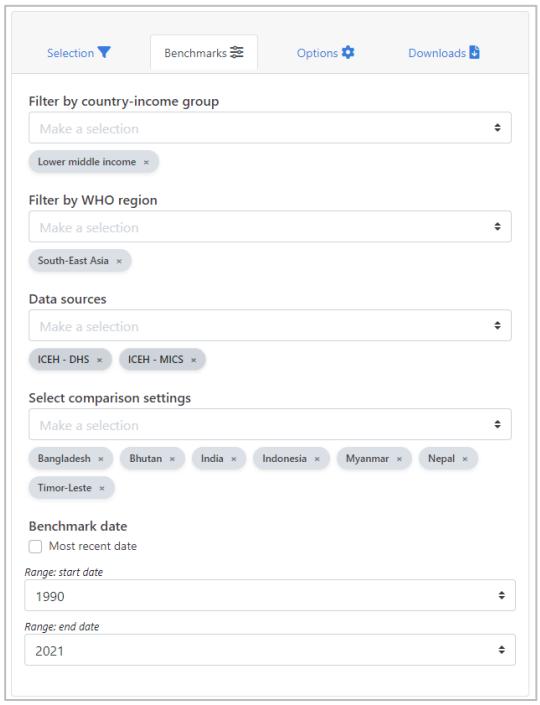
The visual shows a horizontal line graph (also called equiplot) presenting disaggregated data (displayed on the x-axis) for a selected setting of interest and selected benchmark settings. For each setting (displayed on the y-axis), multiple coloured circles are shown – one for each population subgroup. Black horizontal lines indicate the difference between minimum and maximum subgroup estimates. The setting of interest is displayed at the top of the graph; benchmark settings are displayed in alphabetical order below the setting of interest. Note that for country-level data, by default, countries from the same country income group and WHO region as the selected country are shown, if data are available (these can be changed under 'Benchmarks' in the selection menu on the left).

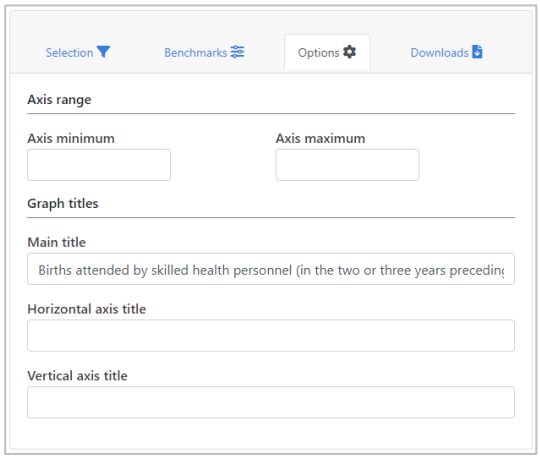
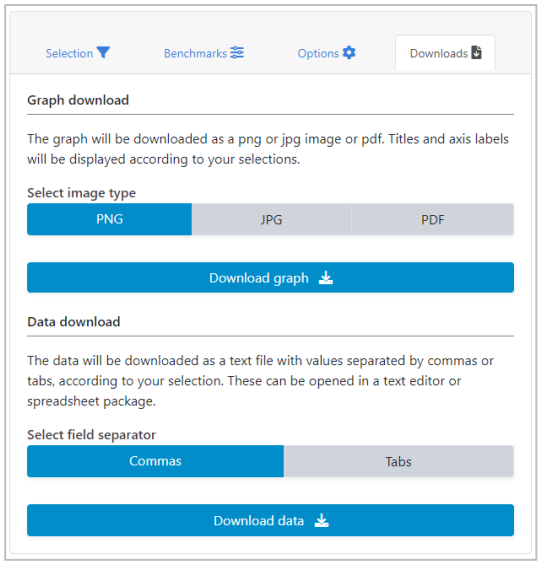


How to explore

The selection menu on the left allows you to customize the results displayed in the visual. Table 11 provides a description of the four tabs that comprise the selection menu: selection, benchmarks, options and downloads.

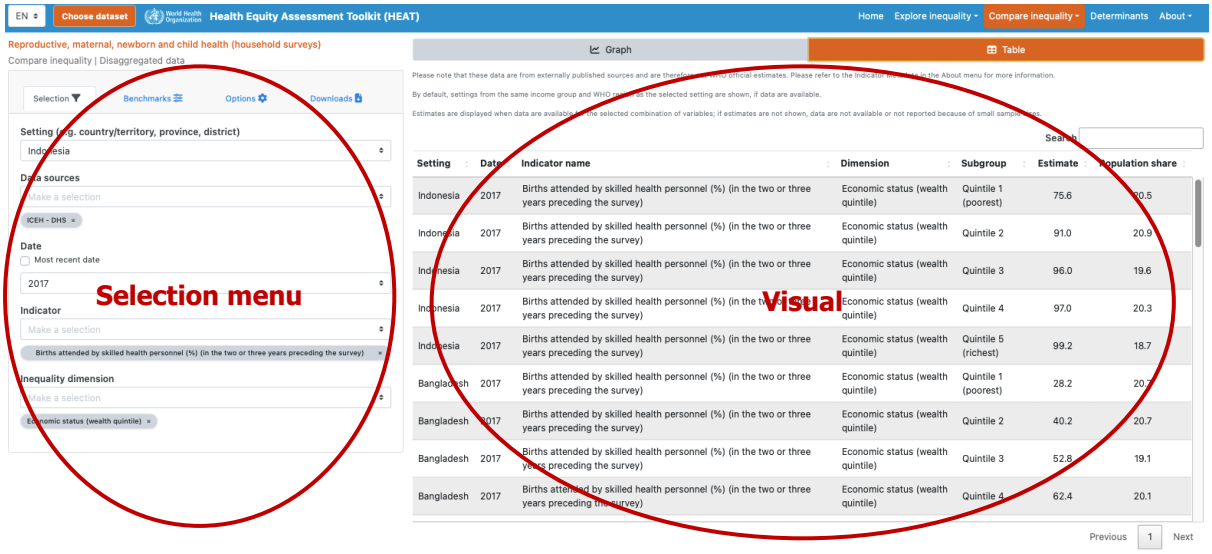
Table 11 Selection menu for the 'Graph' showing 'Disaggregated data' under 'Compare inequality'

Tab	Description	
Selection	Select the data displayed in the visual, including your setting of interest, data sources, date, indicator and inequality dimension.	
Benchmarks	Choose comparison settings for benchmarking. For country-level data, you can filter countries by country-income group and/or WHO region. You can also select the date for your benchmark settings, either using the most recent date or defining a custom date range (including a start and end date).	

Options	Use different options to modify your view. You can choose custom axis ranges and graph titles.	
Downloads	Download the results displayed in the visual, including the graph (as png or jpg images or pdf) and/or the data (as comma or tab separated text files).	

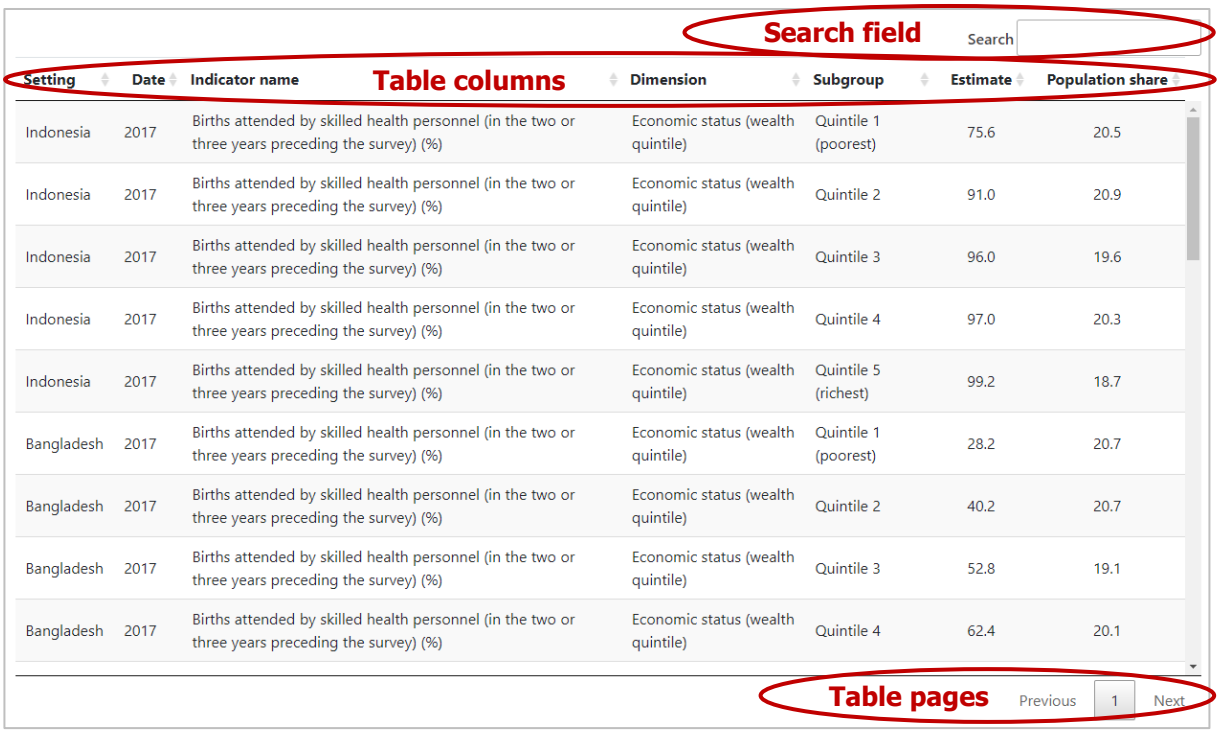
5.1.2 Table

In this view, disaggregated data are displayed in a table. The visual at the centre shows the table; the selection menu on the left allows you to customize the visual.



What you see

The visual shows a table presenting disaggregated data for a selected setting of interest and selected benchmark settings. By default, the table displays information about the setting, date, indicator, inequality dimension, population subgroup, subgroup estimate and subgroup population share (these can be changed under 'Options' in the selection menu on the left). The setting of interest is displayed at the top of the table; benchmark settings are displayed in alphabetical order below the setting of interest. Note that for country-level data, by default, countries from the same country income group and WHO region as the selected country are shown, if data are available (these can be changed under 'Benchmarks' in the selection menu on the left).



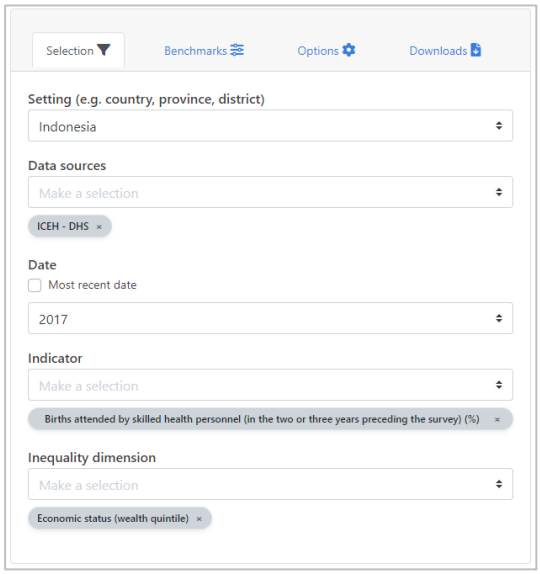
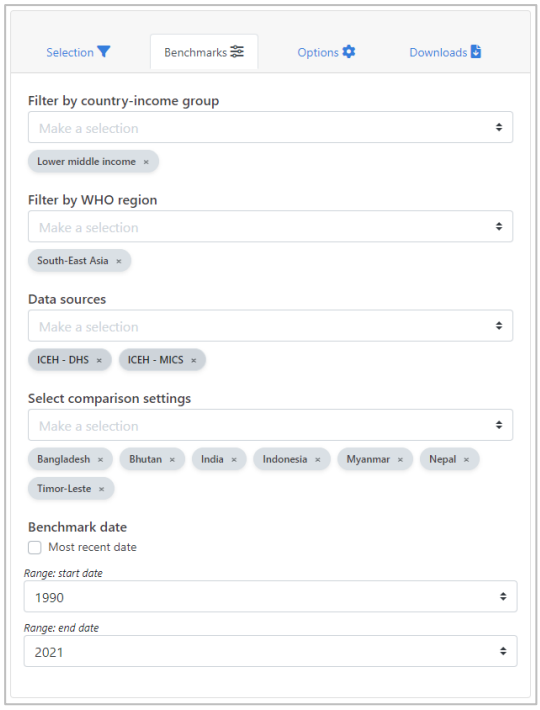
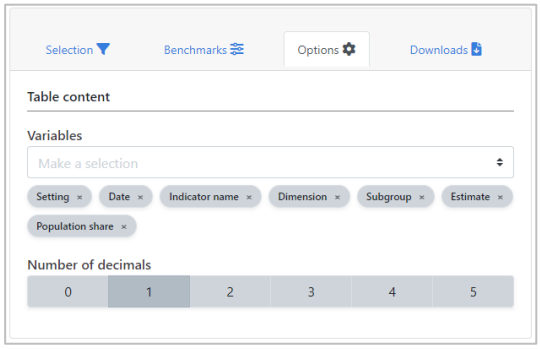
Setting	Date	Indicator name	Dimension	Subgroup	Estimate	Population share
Indonesia	2017	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Quintile 1 (poorest)	75.6	20.5
Indonesia	2017	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Quintile 2	91.0	20.9
Indonesia	2017	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Quintile 3	96.0	19.6
Indonesia	2017	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Quintile 4	97.0	20.3
Indonesia	2017	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Quintile 5 (richest)	99.2	18.7
Bangladesh	2017	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Quintile 1 (poorest)	28.2	20.7
Bangladesh	2017	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Quintile 2	40.2	20.7
Bangladesh	2017	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Quintile 3	52.8	19.1
Bangladesh	2017	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Quintile 4	62.4	20.1

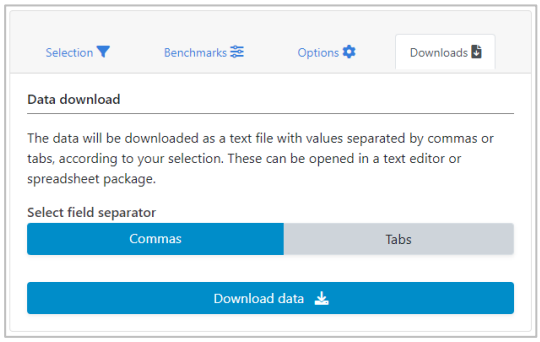
How to explore

The selection menu on the left allows you to customize the results displayed in the visual. Table 12 provides a description of the four tabs that comprise the selection menu: selection, benchmarks, options and downloads.

Table 12 Selection menu for the 'Table' showing 'Disaggregated data' under 'Compare inequality'

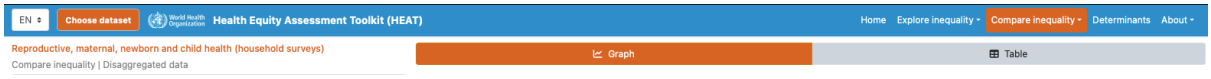
Tab	Description

Selection	Select the data displayed in the visual, including your setting of interest, data sources, date, indicator(s) and inequality dimension(s).	
Benchmarks	Choose comparison settings for benchmarking. For country-level data, you can filter countries by country-income group and/or WHO region. You can also select the date for your benchmark settings, either using the most recent date or defining a custom date range (including a start and end date).	
Options	Use different options to modify your view. You can add additional variables and determine the number of decimals for numeric values.	

Downloads	Download the data displayed in the visual (as comma or tab separated text files).	

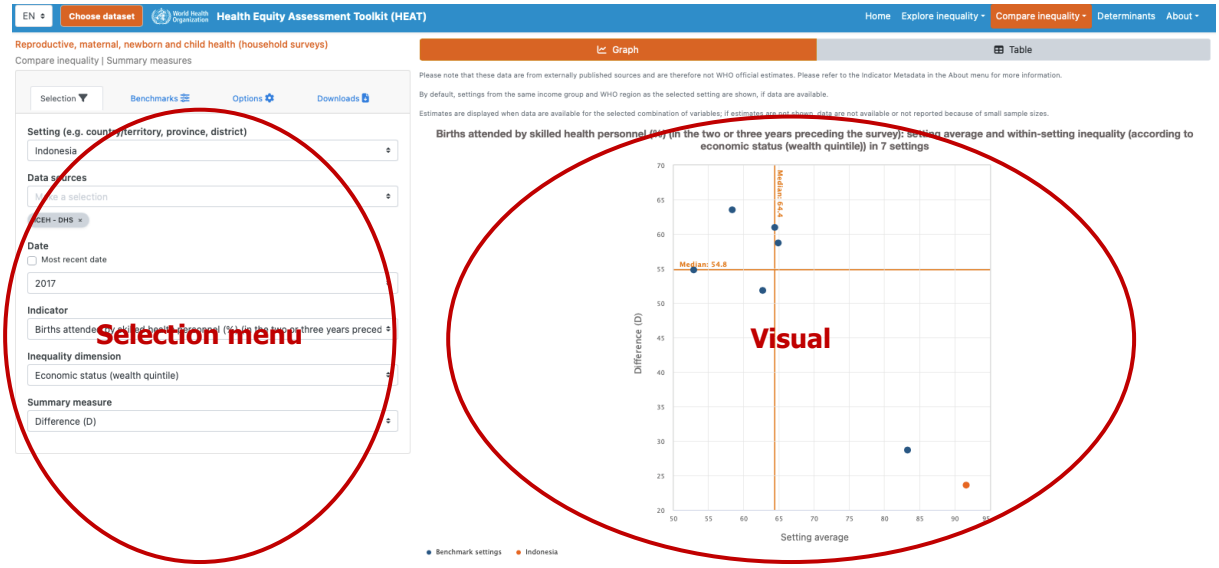
5.2 Summary measures

HEAT allows you to compare summary measures in different views; data are visualized in graphs and tables. To access the different visualizations, click the tabs in the visualization menu across the top of the view. The selected view will be highlighted in orange.



5.2.1 Graph

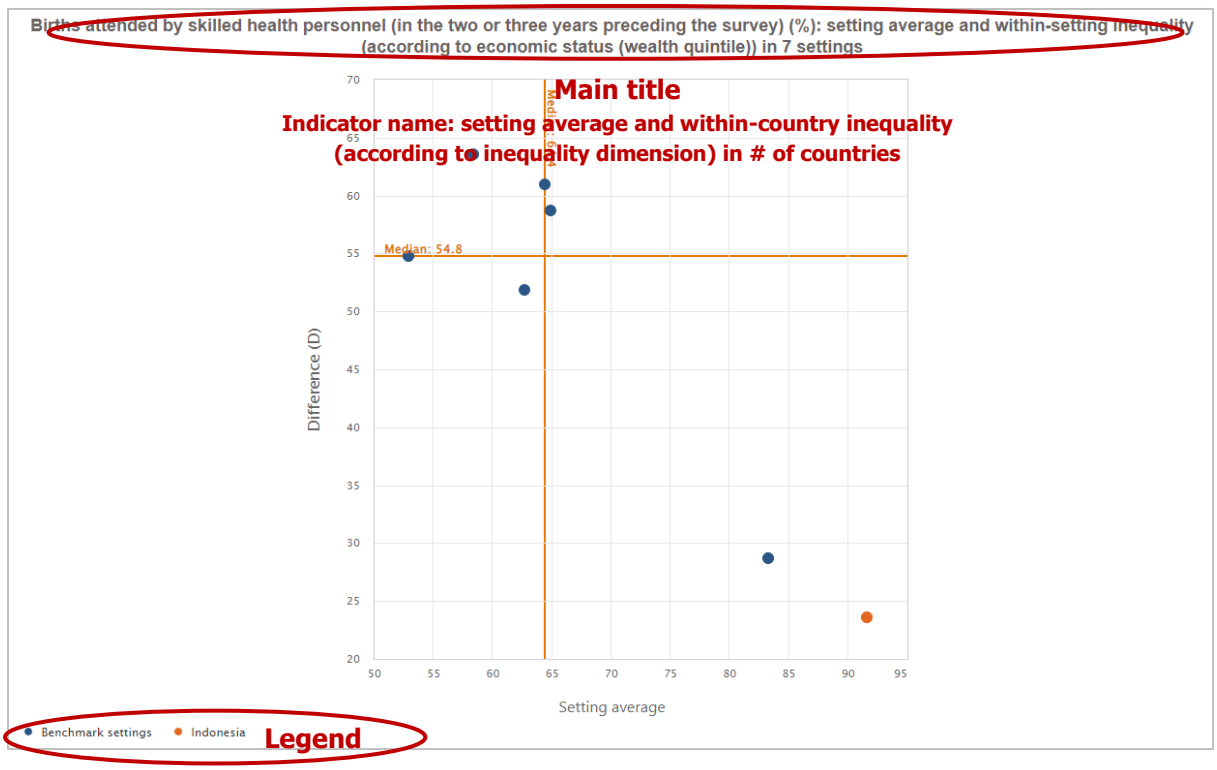
In this view, summary measures are displayed in a scatterplot. The visual at the centre shows the graph; the selection menu on the left allows you to customize the visual.



What you see

The visual shows a scatterplot presenting the setting average (displayed on the x-axis) and the level of within-setting inequality as measured by the selected summary measure (displayed on the y-axis). Each setting is represented by one coloured shape: benchmark settings are displayed in blue, and the setting of interest is highlighted in orange. Note that for country-level data, by default, countries from

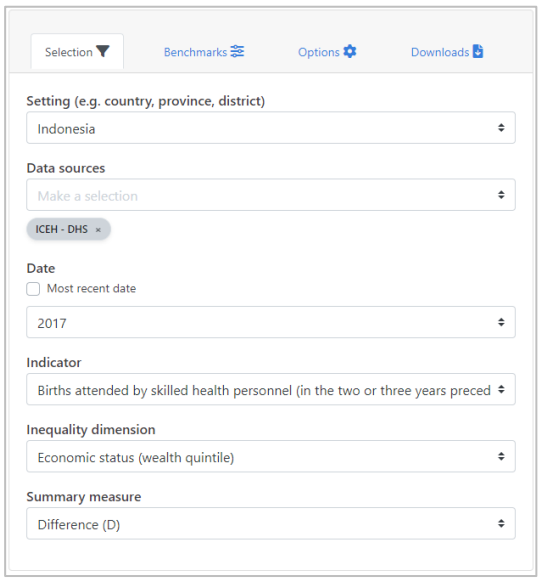
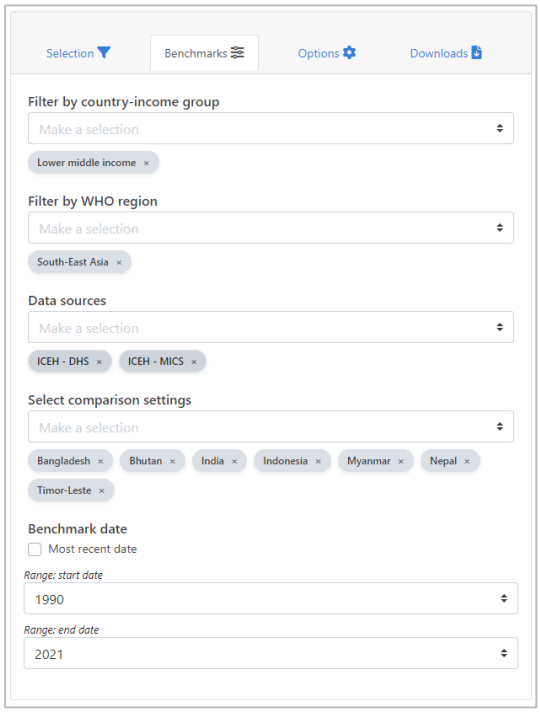
the same country income group and WHO region as the selected country are shown, if data are available (these can be changed under 'Benchmarks' in the selection menu on the left).

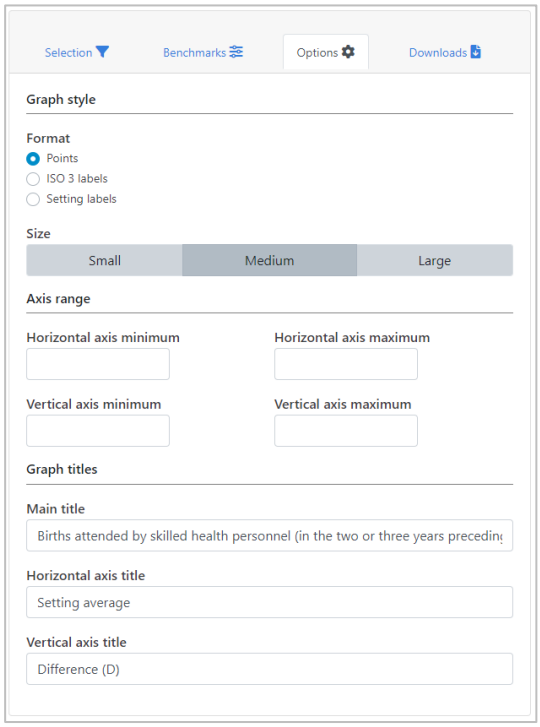
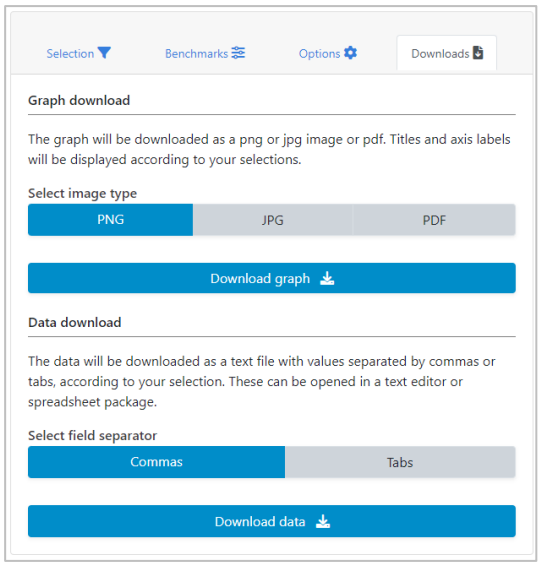


How to explore

The selection menu on the left allows you to customize the results displayed in the visual. Table 13 provides a description of the four tabs that comprise the selection menu: selection, benchmarks, options and downloads.

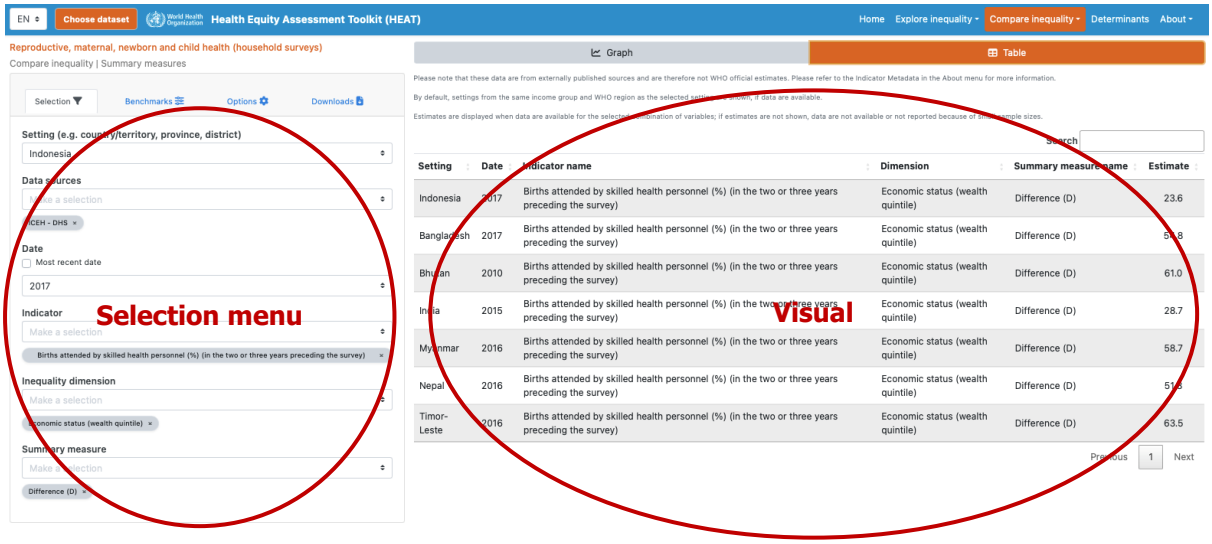
Table 13 Selection menu for the 'Graph' showing 'Summary measures' under 'Compare inequality'

Tab	Description	
Selection	Select the data displayed in the visual, including your setting of interest, data sources, date, indicator, inequality dimension and summary measure.	
Benchmarks	Choose comparison settings for benchmarking. For country-level data, you can filter countries by country-income group and/or WHO region. You can also select the date for your benchmark settings, either using the most recent date or defining a custom date range (including a start and end date).	

Options	Use different options to modify your view. You can select different formats and sizes for your data points, and choose custom axis ranges and graph titles.	
Downloads	Download the results displayed in the visual, including the graph (as png or jpg images or pdf) and/or the data (as comma or tab separated text files).	

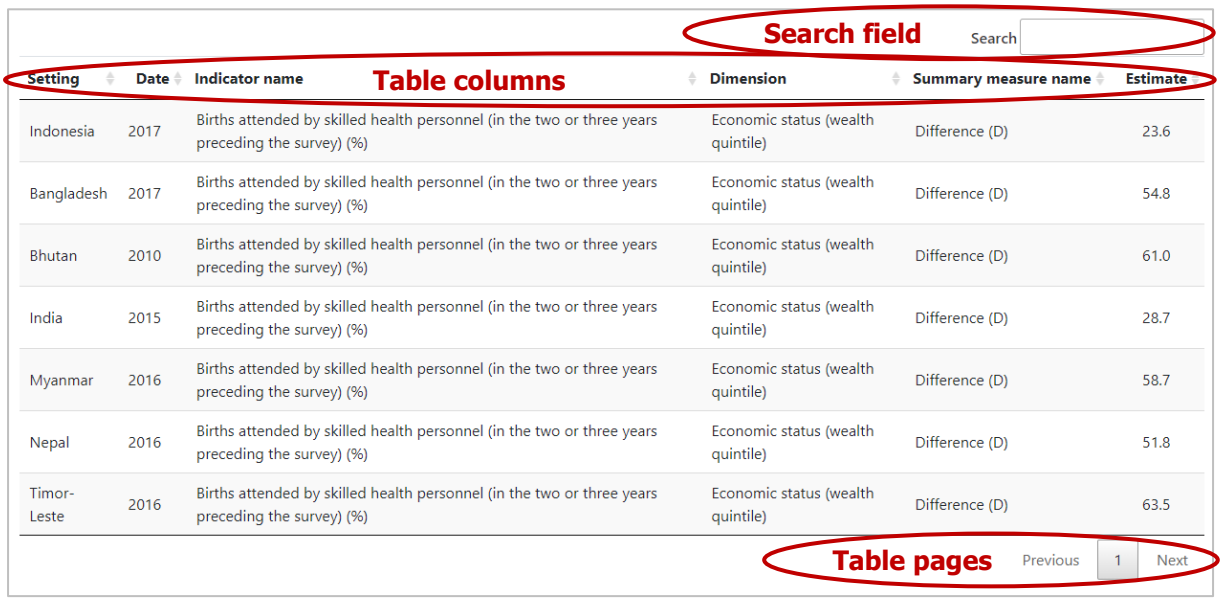
5.2.2 Table

In this view, summary measures are displayed in a table. The visual at the centre shows the table; the selection menu on the left allows you to customize the visual.



What you see

The visual shows a table presenting summary measure data for a selected setting of interest and selected benchmark settings. By default, the table displays information about the setting, date, indicator, inequality dimension, summary measure and summary measure estimate (these can be changed under 'Options' in the selection menu on the left). The setting of interest is displayed at the top of the table; benchmark settings are displayed in alphabetical order below the setting of interest. Note that for country-level data, by default, countries from the same country income group and WHO region as the selected country are shown, if data are available (these can be changed under 'Benchmarks' in the selection menu on the left).

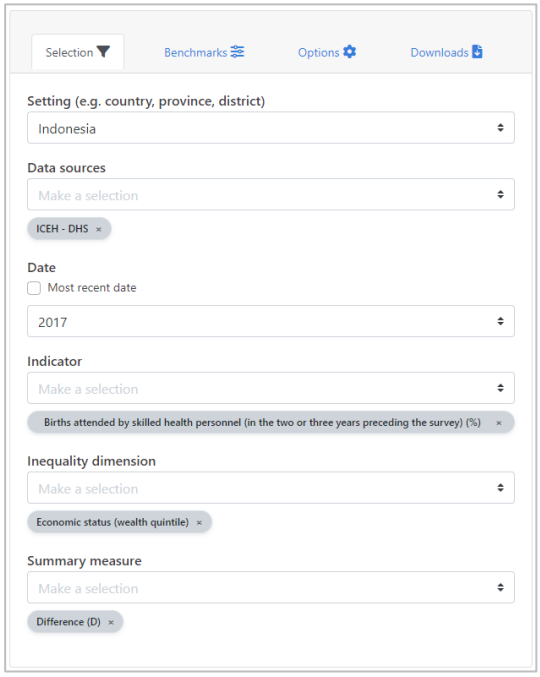
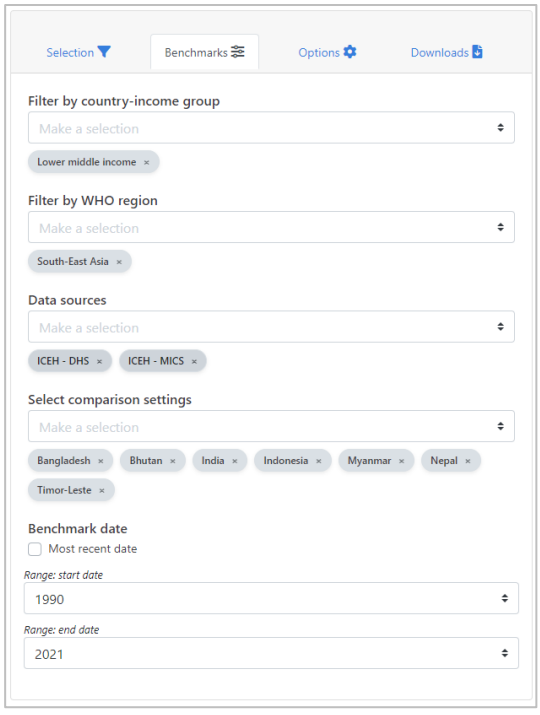


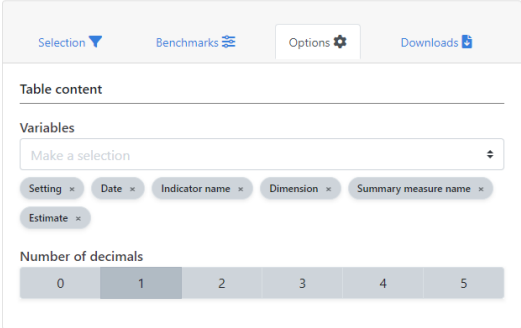
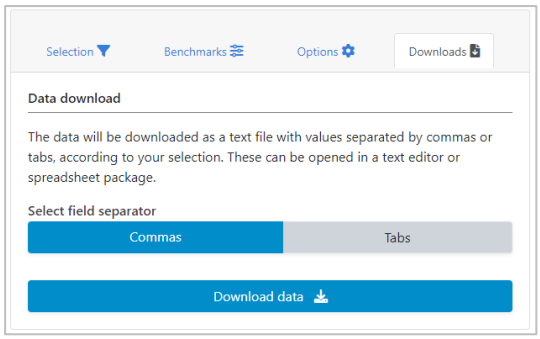
Setting	Date	Indicator name	Dimension	Summary measure name	Estimate
Indonesia	2017	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Difference (D)	23.6
Bangladesh	2017	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Difference (D)	54.8
Bhutan	2010	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Difference (D)	61.0
India	2015	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Difference (D)	28.7
Myanmar	2016	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Difference (D)	58.7
Nepal	2016	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Difference (D)	51.8
Timor-Leste	2016	Births attended by skilled health personnel (in the two or three years preceding the survey) (%)	Economic status (wealth quintile)	Difference (D)	63.5

How to explore

The selection menu on the left allows you to customize the results displayed in the visual. Table 14 provides a description of the four tabs that comprise the selection menu: selection, benchmarks, options and downloads.

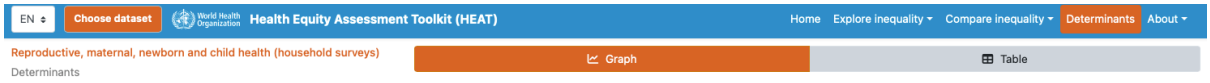
Table 14 Selection menu for the 'Table' showing 'Summary measures' under 'Compare inequality'

Tab	Description	
Selection	Select the data displayed in the visual, including your setting of interest, data sources, date, indicator(s), inequality dimension(s) and summary measure(s).	
Benchmarks	Choose comparison settings for benchmarking. For country-level data, you can filter countries by country-income group and/or WHO region. You can also select the date for your benchmark settings, either using the most recent date or defining a custom date range (including a start and end date).	

Options	Use different options to modify your view. You can add additional variables and determine the number of decimals for numeric values.	
Downloads	Download the data displayed in the visual (as comma or tab separated text files).	

6 Determinants

Under 'Determinants', you can **identify the association between the setting average of a health indicator and the setting average of a determinant indicator in various settings of interest**. Data of both the health indicator and determinant can be visualized in different graphs and tables. To access the visualizations, hover over and click 'Determinants'. The selected view will be highlighted in orange.

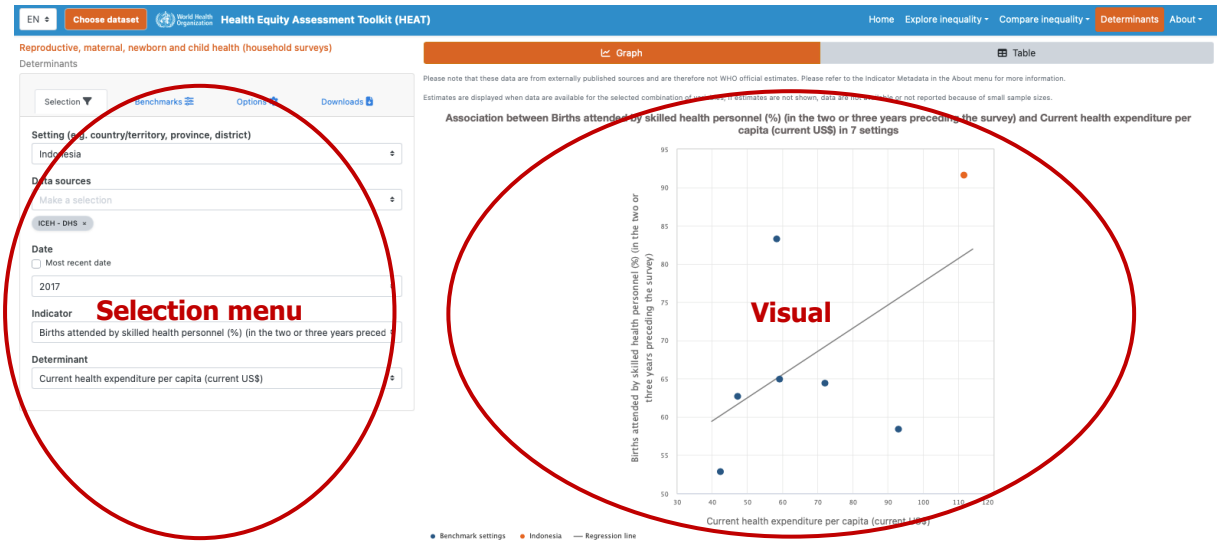


TIPS for association the relation between health indicators and determinants

- ✓ It is recommended, when interpreting the graph and regression line, to consider that estimates correspond to setting averages (both for health indicator and determinant) and results are prone to ecological fallacy.
- ✓ It is recommended to note the date for the indicator and the determinant indicator as they might differ.

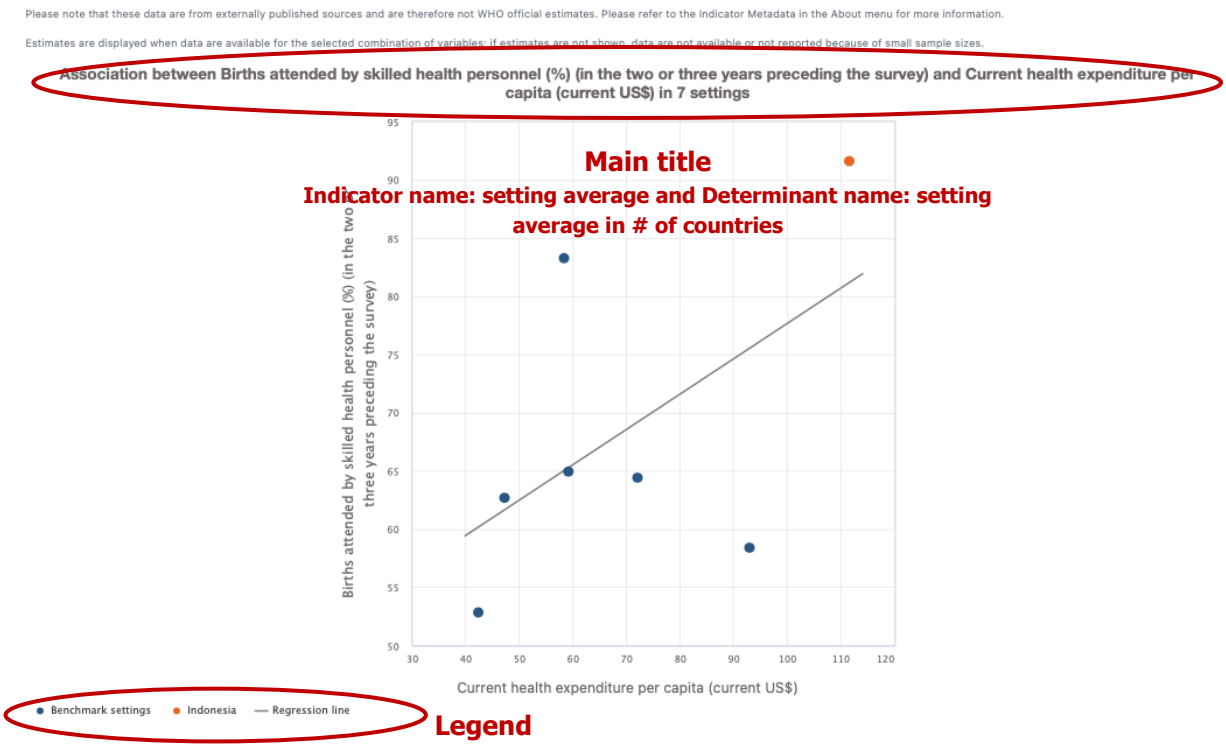
6.1 Graph

In this view, the health indicator and determinant indicator are displayed in a scatterplot along a linear regression line. The visual at the centre shows the graph; the selection menu on the left allows you to customize the visual.



What you see

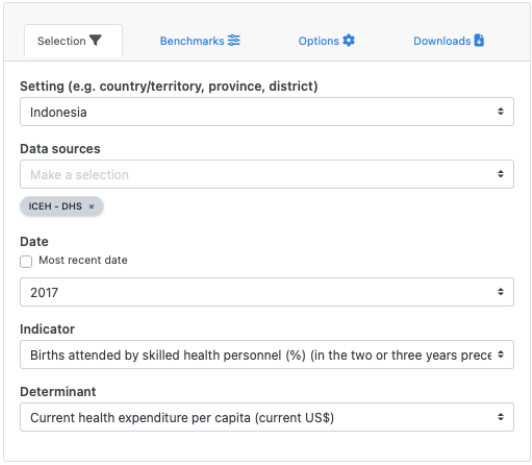
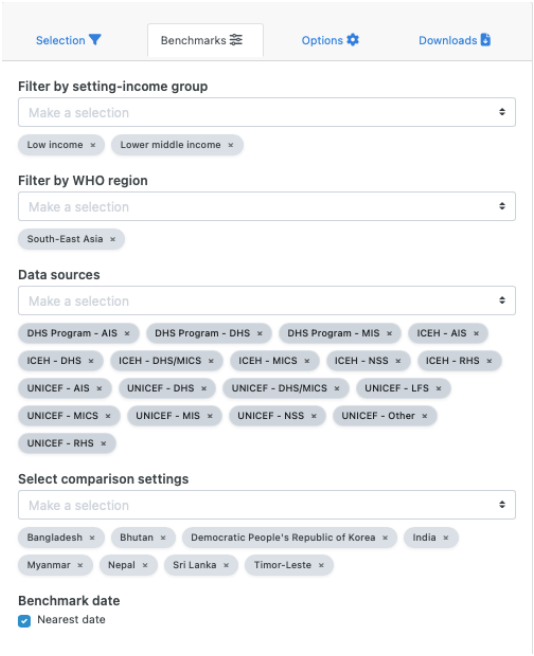
The visual shows a scatterplot presenting the health indicator setting average (displayed on the x-axis) and the setting average of the selected determinant indicator (displayed on the y-axis). Each setting is represented by one coloured shape: benchmark settings are displayed in blue, and the setting of interest is highlighted in orange. Note that for country-level data, by default, countries from the same country income group and WHO region as the selected country are shown, if data are available (these can be changed under 'Benchmarks' in the selection menu on the left).

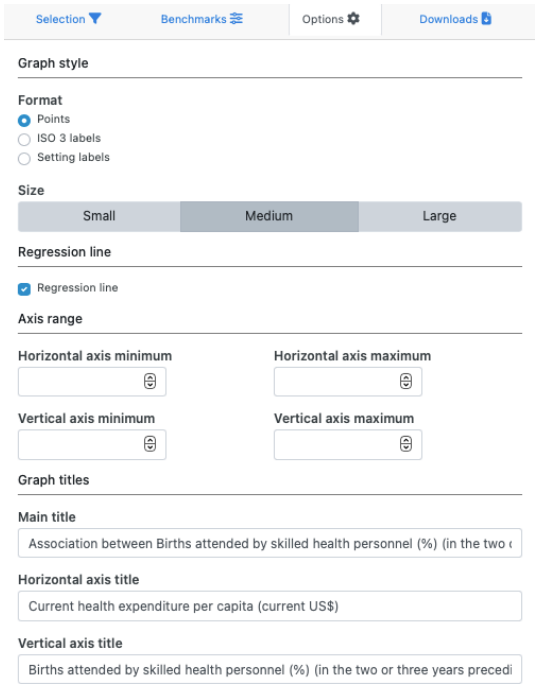
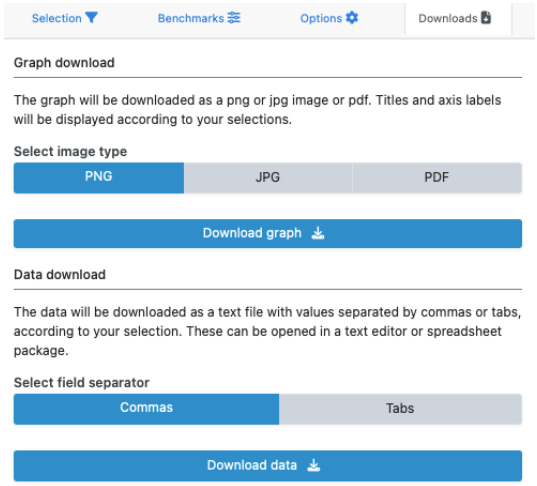


How to explore

The selection menu on the left allows you to customize the results displayed in the visual. Table 15 provides a description of the four tabs that comprise the selection menu: selection, benchmarks, options and downloads.

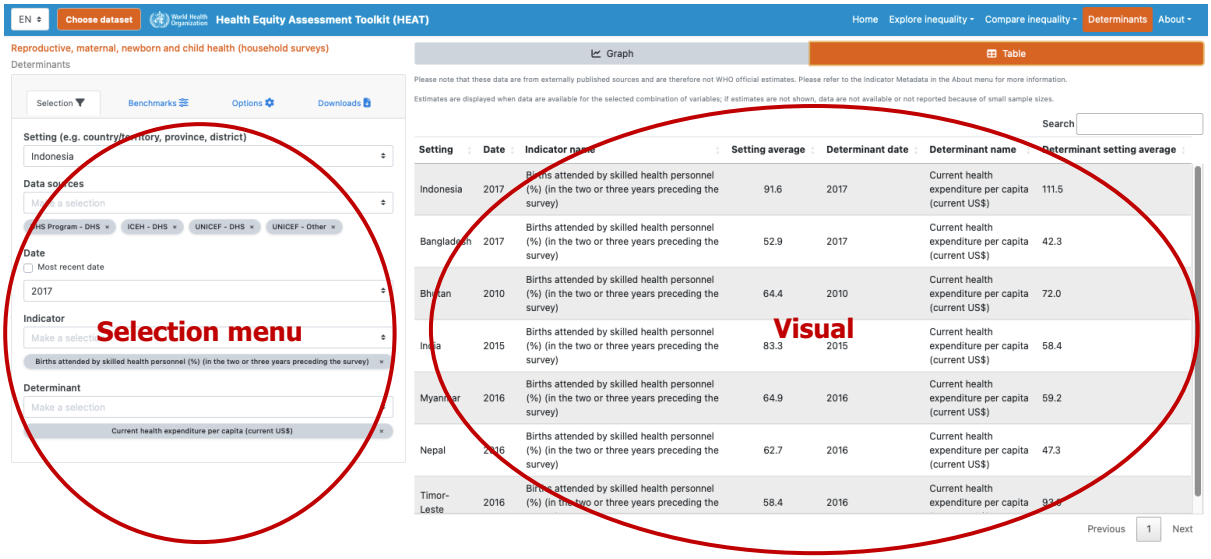
Table 15 Selection menu for the 'Graph' under 'Determinants'

Tab	Description	
Selection	Select the data displayed in the visual, including your setting of interest, data sources, date, indicator, and determinant.	
Benchmarks	Choose comparison settings for benchmarking. For country-level data, you can filter countries by country-income group and/or WHO region. You can also select the date for your benchmark settings, either using the nearest date or defining a custom date range (including a start and end date).	

Options	Use different options to modify your view. You can select different formats and sizes for your data points, add a regression line and choose custom axis ranges and graph titles.	
Downloads	Download the results displayed in the visual, including the graph (as png or jpg images or pdf) and/or the data (as comma or tab separated text files).	

6.2 Table

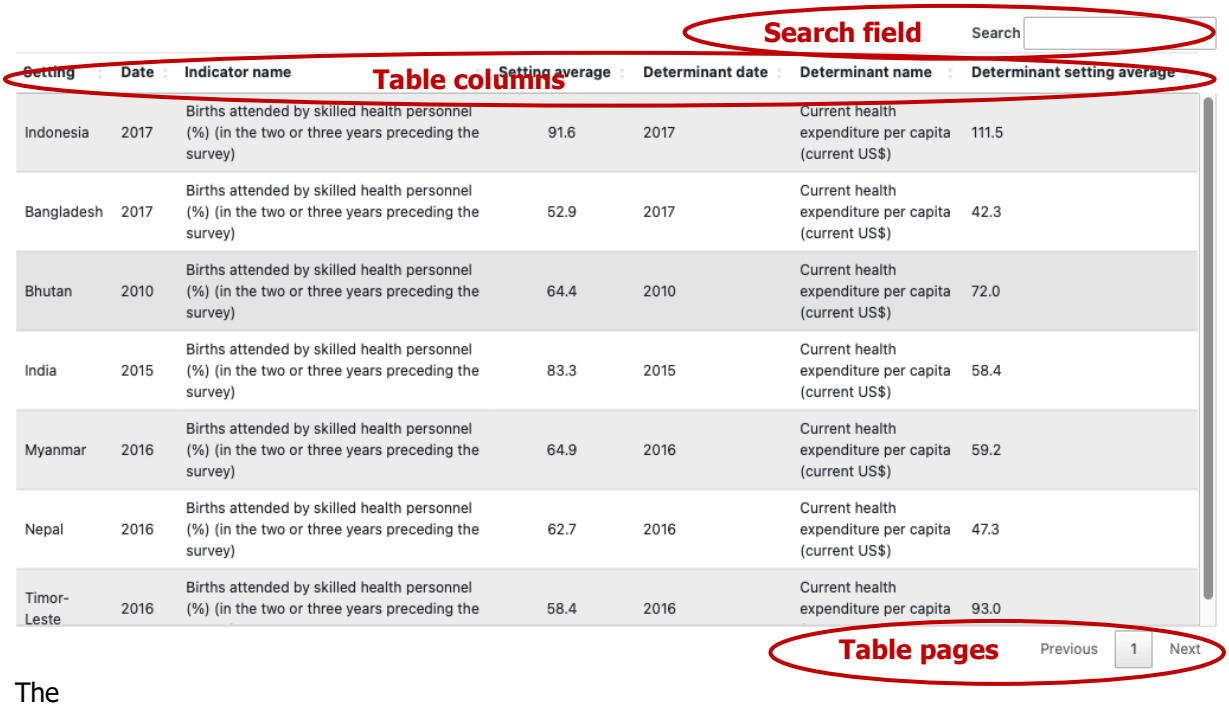
In this view, setting averages are displayed in a table. The visual at the centre shows the table; the selection menu on the left allows you to customize the visual.



What you see

The visual shows a table presenting the health indicator data for a selected setting of interest and selected benchmark settings. By default, the table displays information about the setting, date, indicator, and determinant (these can be changed under 'Options' in the selection menu on the left). The setting of interest is displayed at the top of the table; benchmark settings are displayed in alphabetical order below the setting of interest. Note that for country-level data, by default, countries from the same country income group and WHO region as the selected country are shown, if data are available (these can be changed under 'Benchmarks' in the selection menu on the left).

How to explore



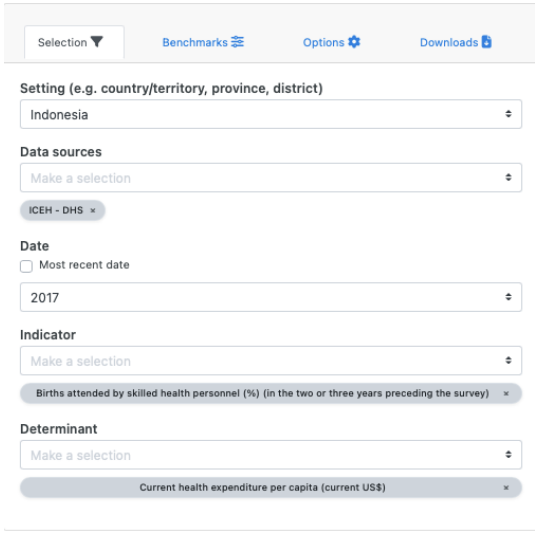
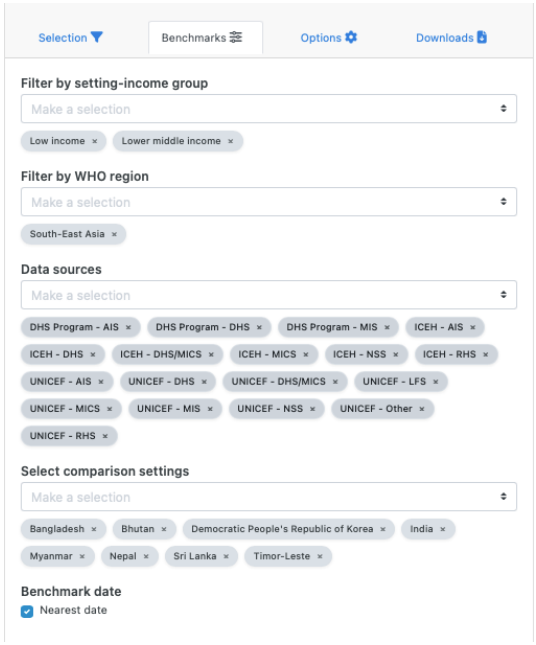
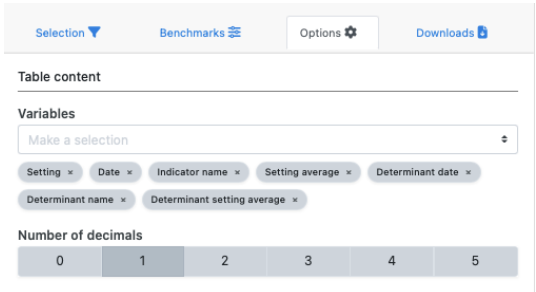
Setting	Date	Indicator name	Setting average	Determinant date	Determinant name	Determinant setting average
Indonesia	2017	Births attended by skilled health personnel (%) (in the two or three years preceding the survey)	91.6	2017	Current health expenditure per capita (current US$)	111.5
Bangladesh	2017	Births attended by skilled health personnel (%) (in the two or three years preceding the survey)	52.9	2017	Current health expenditure per capita (current US$)	42.3
Bhutan	2010	Births attended by skilled health personnel (%) (in the two or three years preceding the survey)	64.4	2010	Current health expenditure per capita (current US$)	72.0
India	2015	Births attended by skilled health personnel (%) (in the two or three years preceding the survey)	83.3	2015	Current health expenditure per capita (current US$)	58.4
Myanmar	2016	Births attended by skilled health personnel (%) (in the two or three years preceding the survey)	64.9	2016	Current health expenditure per capita (current US$)	59.2
Nepal	2016	Births attended by skilled health personnel (%) (in the two or three years preceding the survey)	62.7	2016	Current health expenditure per capita (current US$)	47.3
Timor-Leste	2016	Births attended by skilled health personnel (%) (in the two or three years preceding the	58.4	2016	Current health expenditure per capita	93.0

Previous 1 Next

The
selection menu on the left allows you to customize the results displayed in the visual. Table 16

provides a description of the four tabs that comprise the selection menu: selection, benchmarks, options and downloads.

Table 16 Selection menu for the 'Table' under 'Determinants

Tab	Description	
Selection	Select the data displayed in the visual, including your setting of interest, data sources, date, indicator(s), and determinant(s).	
Benchmarks	Choose comparison settings for benchmarking. For country-level data, you can filter countries by country-income group and/or WHO region. You can also select the date for your benchmark settings, either using the nearest date or defining a custom date range (including a start and end date).	
Options	Use different options to modify your view. You can add additional variables and determine the number of decimals for numeric values.	

Downloads	Download the data displayed in the visual (as comma or tab separated text files).