An overview of the PHIDU website

Video tutorial transcript

Hi everyone, I'm Sarah from the Public Health Information Development Unit - PHIDU. I will take you through the key elements of our website and the different ways our data can be accessed. The topics I will be covering today include:

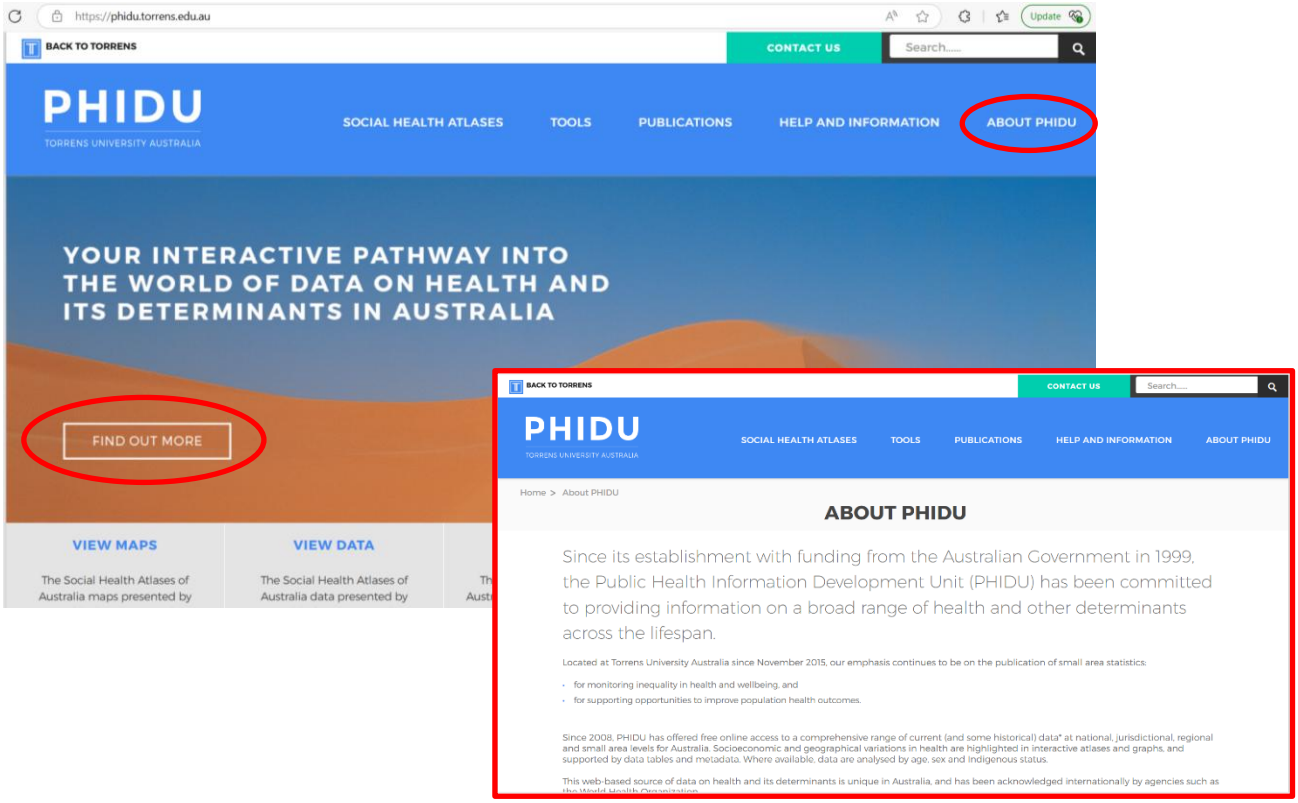
- Who we are at PHIDU
- What data is available on our website
- The different ways we present our data
- How to download data from the website
- What tools are available, and
- Where our past publications can be found

The website can be found at https://phidu.torrens.edu.au

Who we are:

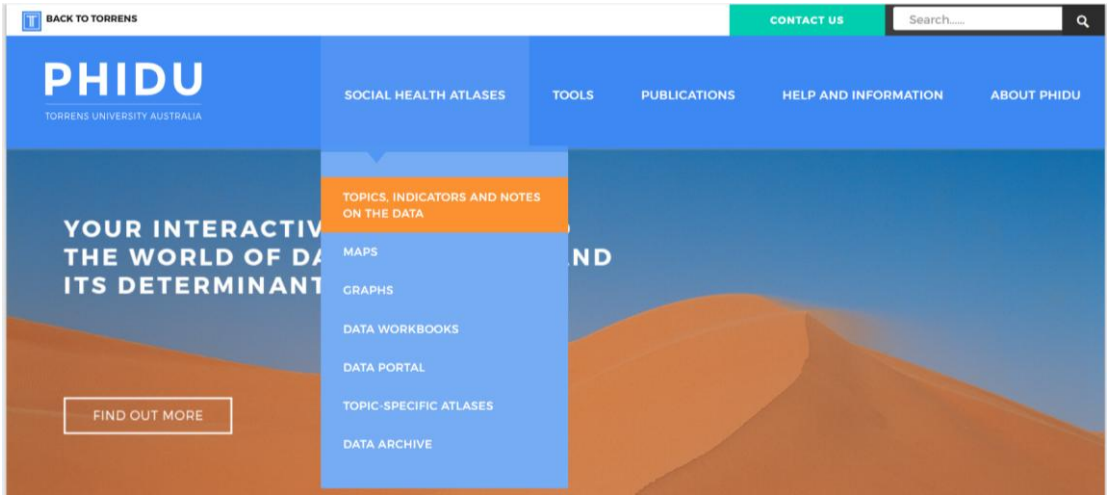
PHIDU was established in 1999 by the Commonwealth Department of Health and Ageing. We are a small team based in Adelaide and since November 2015 have been located at Torrens University Australia. The focus of our work is on the publication of small area statistics relating to health and social influences on health for the whole of Australia for the purpose of monitoring inequality in health and wellbeing and for supporting opportunities to improve population health outcomes.

To find out more about PHIDU you can either click on the 'about PHIDU' button or, the 'find out more' button on the homepage. This page gives further information about how we are funded and the work we do.

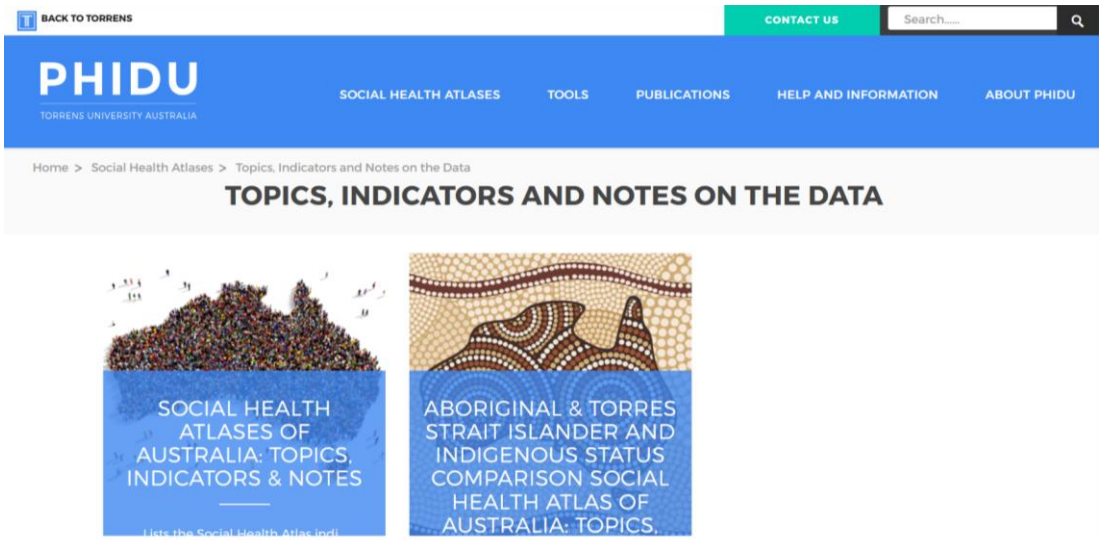


What data do we have available on our website?

Our website hosts a broad range of data related to health including demographic, social and economic factors that affect health outcomes. You can browse what data is available and understand how the indicators are defined by selecting the ‘indicators and notes on the data’ page from the ‘social health atlases’ drop-down menu.



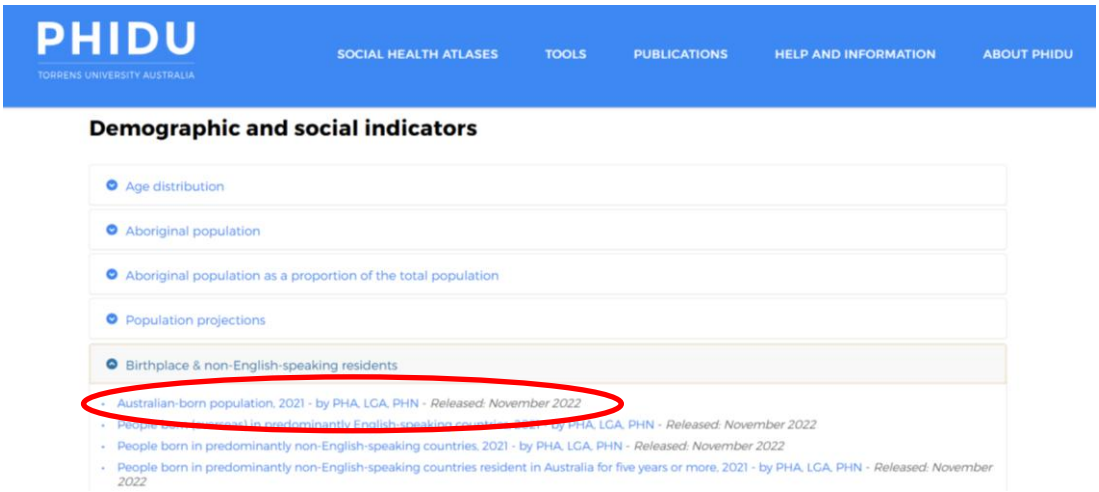
Data is available under two main headings – the general social health atlases of Australia and the Aboriginal and Torres Strait Islander/ Indigenous comparison social health atlases. Clicking on either of these options will take you to the 'indicators and notes on the data' page where you find a list of topics and associated indicators.



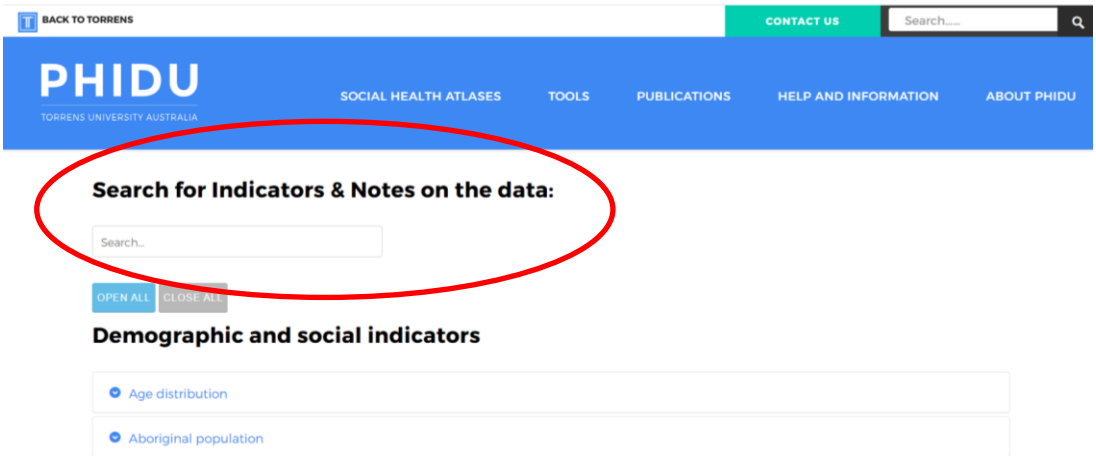
In each data set the available topics are grouped into domains

- demographic and social indicators
- health status, disease prevention, disability, carers and deaths
- use and provision of health and welfare services

Under each topic is a list of indicators, showing the time period and geographical area, the data is available for.



You can also use the search box at the top of the page, to navigate the notes for the indicator you are interested in.



The notes contain important information about the indicator, including why we think the indicator is important to monitor (policy context), a definition, at what area level the data is available (geography), numerator, denominator, units of measurement (detail of analysis) and where the data has been obtained from (source).

Health status, disease prevention, disability, carers and deaths

Mothers and babies

Low birthweight babies, 2019 to 2021
– by PHA, LGA, PHN, Quintiles, Quintiles within PHNs, Remoteness

Policy context: The weight of a baby at delivery (birthweight) is widely accepted as a key indicator of infant health and can be affected by several factors, including the age, size, health and nutritional status of the mother, pre-term birth, and tobacco smoking during pregnancy [1]. A baby is defined as having a low birthweight if they are born weighing less than 2,500 grams. Low birthweight is generally associated with poorer health outcomes, including increased risk of illness and death, longer periods of hospitalisation after birth, and increased risk of developing significant disabilities [2]. The country of birth of the mother may also be an important risk factor for outcomes such as low birthweight and perinatal mortality [3].

References

1. Laws PJ, Grayson N, Sullivan EA. Australia's mothers and babies, 2004. (AIHW Cat. no. PER 34). Sydney: Australian Institute of Health and Welfare (AIHW), 2006.
2. Australian Institute of Health and Welfare (AIHW). A picture of Australia's children, 2012. Canberra: AIHW, 2012.
3. Li Z, McNally L, Hilder L, Sullivan EA. Australia's mothers and babies 2009. (Perinatal statistics series no. 25, AIHW Cat. no. PER 52). Sydney: Australian Institute of Health and Welfare (AIHW), 2011.

Indicator detail: The data comprise all live born babies weighing less than 2500 grams at birth, expressed as a proportion of all live births (data over 3 years).

Data are not shown for areas where there were fewer than 20 births.

Data published prior to 2015 to 2017 were collected from each State and Territory health agency and are likely to have excluded people who live in one State/Territory and used a service in another. This data release uses data, provided to the Australian Institute of Health and Welfare by each State and Territory, in which residents of another jurisdiction were generally coded to their correct usual address. This change will affect the time series published for quintiles and Remoteness Areas.

Data for many remote areas, particularly in Western Australia and Northern Territory, should be treated with caution, as the Australian Bureau of Statistics rate the quality of the population correspondence from SA2 to LGA in some LGAs as 'Poor'.

Geography: Data available by Population Health Area, Local Government Area, Primary Health Network, Quintile of socioeconomic disadvantage of area and Quintiles within PHNs, and Remoteness Area.

Numerator: All liveborn babies weighing less than 2,500 grams at birth (data over 3 years).

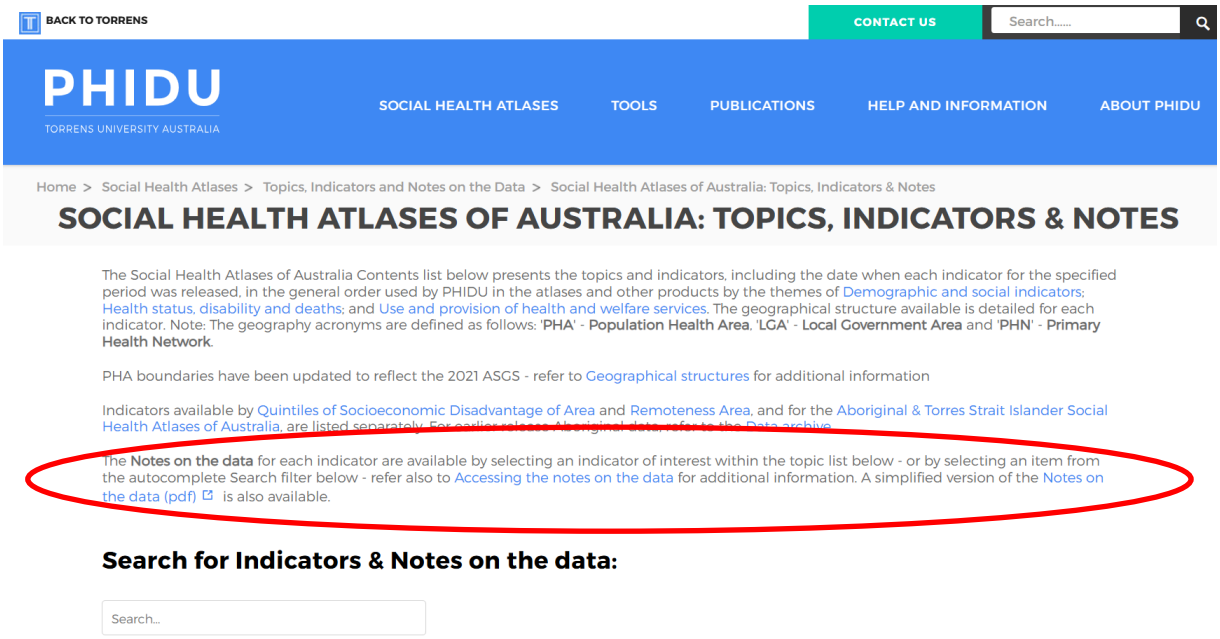
Denominator: Total live births (data over 3 years).

Detail of analysis: Per cent.

Source: Compiled by PHIDU based on data from the Australian Institute of Health and Welfare, on behalf of the States and Territories.

We use a range of data sources to generate these indicators. For some indicators, like hospital admissions, administrative data are available and for many of the social and demographic data the Census is used. Other indicators might be generated using modelled estimates, for instance, prevalence estimates of chronic diseases.

You can also access these notes on the indicators in a pdf document via this link at the top of the page.



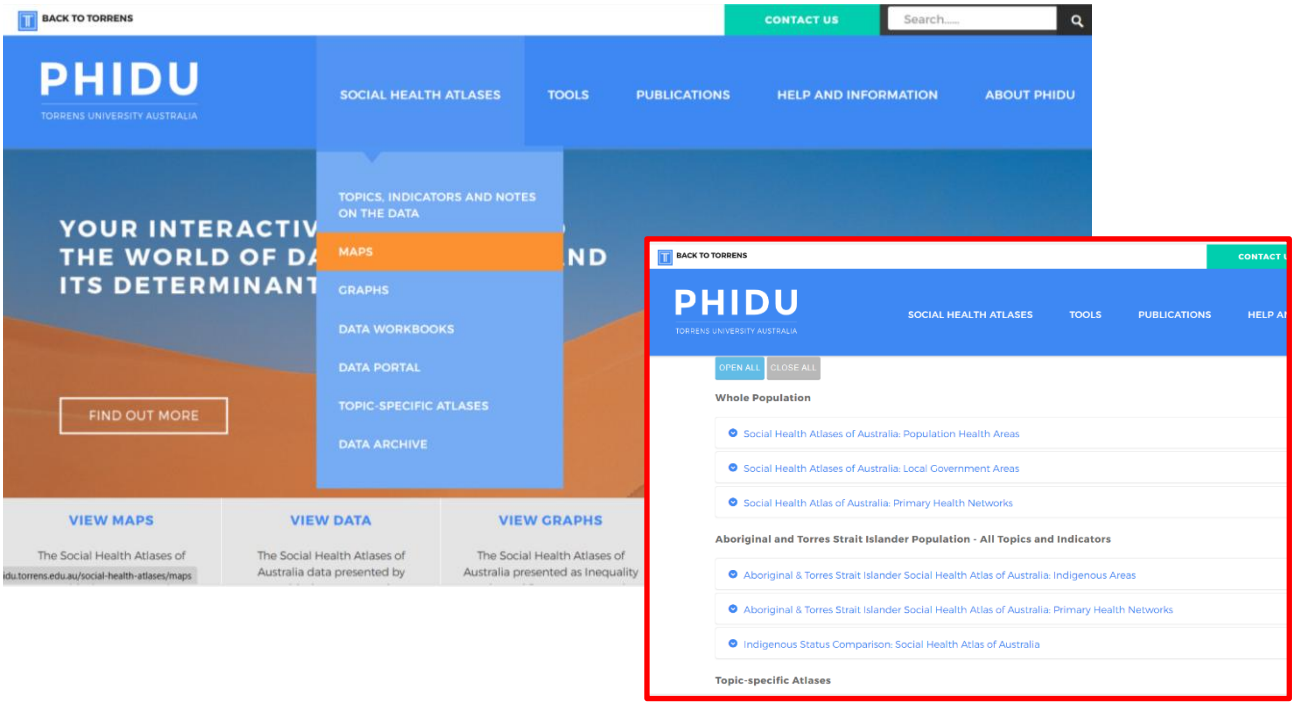
What are the different ways we use to present our data?

The two main ways which we use to present our data are maps showing geospatial variation and graphs to describe data by categories of disadvantage and remoteness.

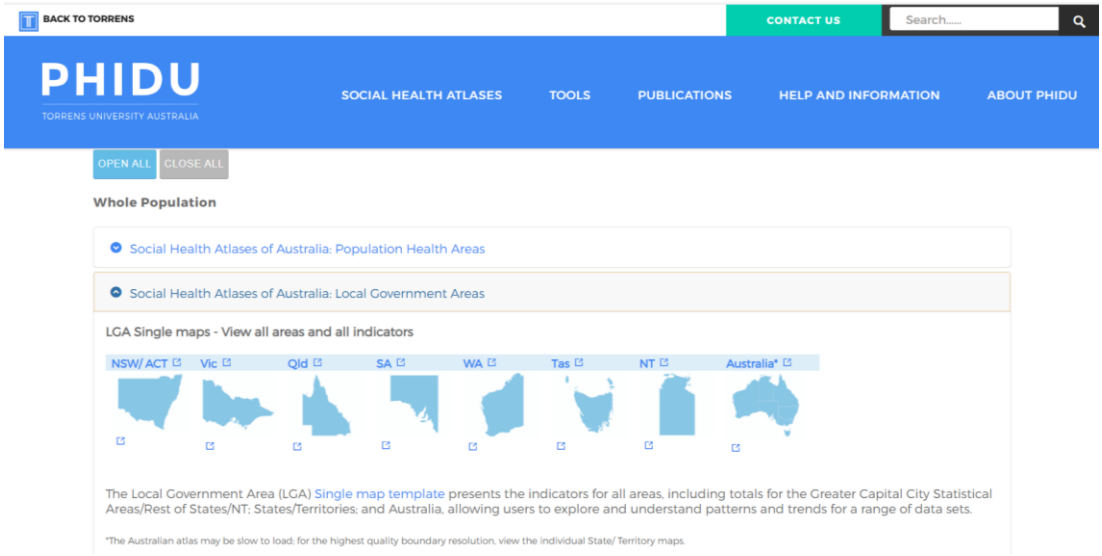
Maps

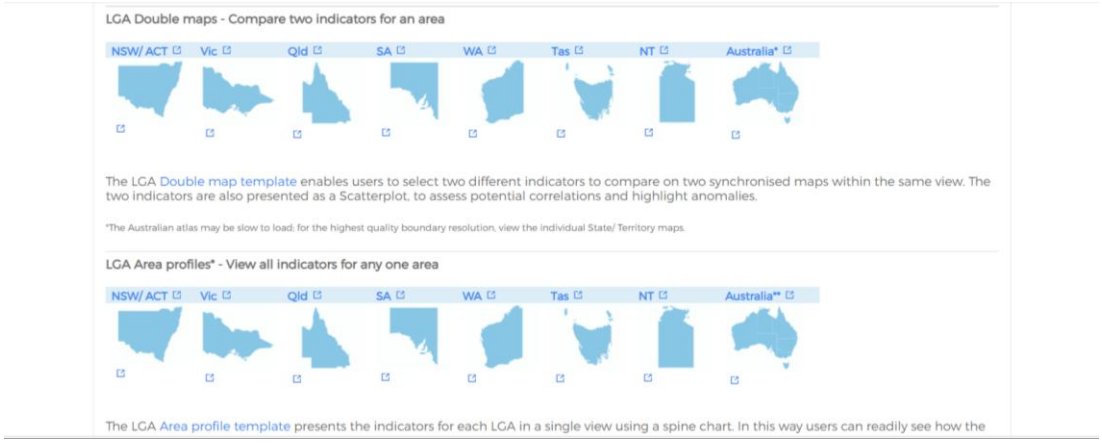
Firstly, the maps can be accessed by selecting the 'maps' page from the 'social health atlases' drop-down menu. Our maps are available by Population Health Areas, Local Government Areas, Primary Health Networks as well as by Indigenous Areas.

- Population Health Areas (PHAs) are comprised of aggregated SA2 areas – a geographical unit defined by the Australian Statistical Geographical Standard.
- The maps by Primary Health Network (PHNs) comprise the 31 primary health care organisations across Australia.

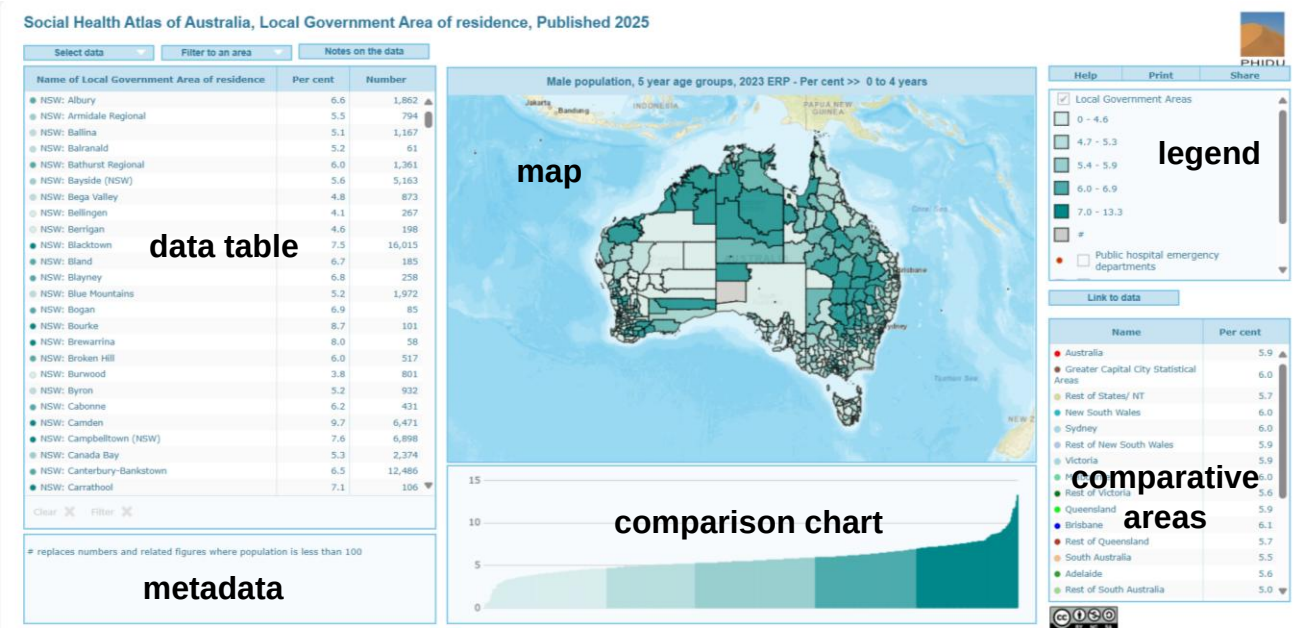


The maps can be viewed as single, double or area profile, and are available by State/ Territory or Australia as a whole. As an example, I will use the Local Government Area (LGA) map of Australia.





The map has several components: the map itself, a data table, metadata, comparison chart, legend, and comparative areas.



The map itself shows the title of the indicator selected, along with the date the data is available for, and the unit being measured– typically a percentage or standardised rate.

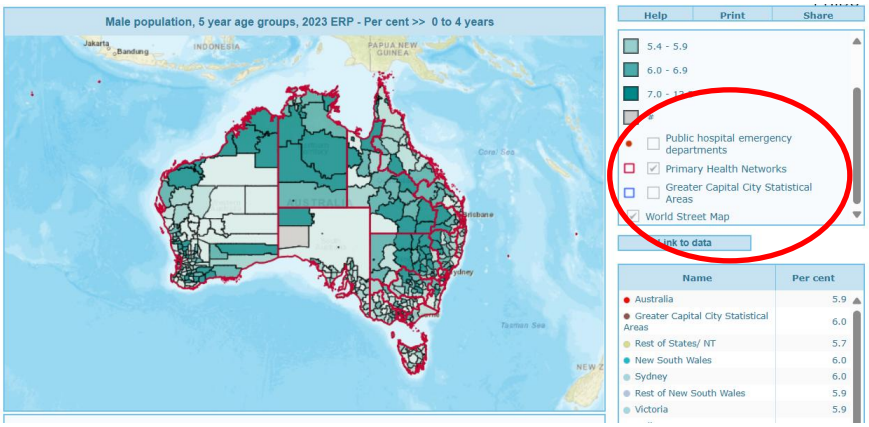
The data table displays the areas being mapped along with the indicator value and the associated number of cases. The areas in the table are listed in alphabetical order, this order can be changed by clicking on the table headings. For example, by clicking on ‘Number’ the table will rearrange the data from lowest to highest number of cases.

To change the indicator displayed in the map click on the 'select data' button, this shows the list of available topics. Under each topic, the drop-down menu then shows the list of available indicators.

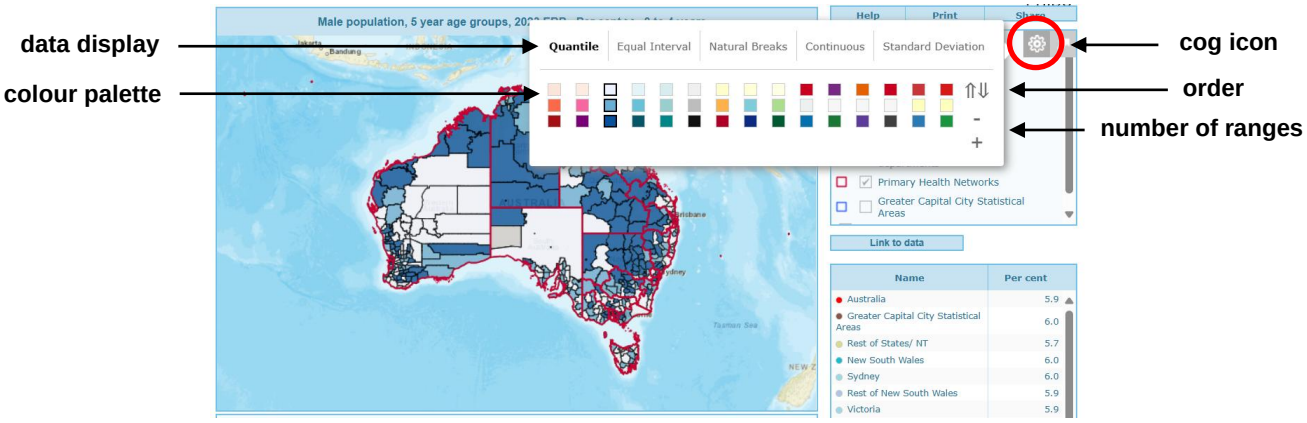
The page icon next to each indicator will also take you to the ‘notes on the data’ page as previously mentioned.

As the indicator changes the metadata in the box also changes to highlight any additional information that the user should be made aware of.

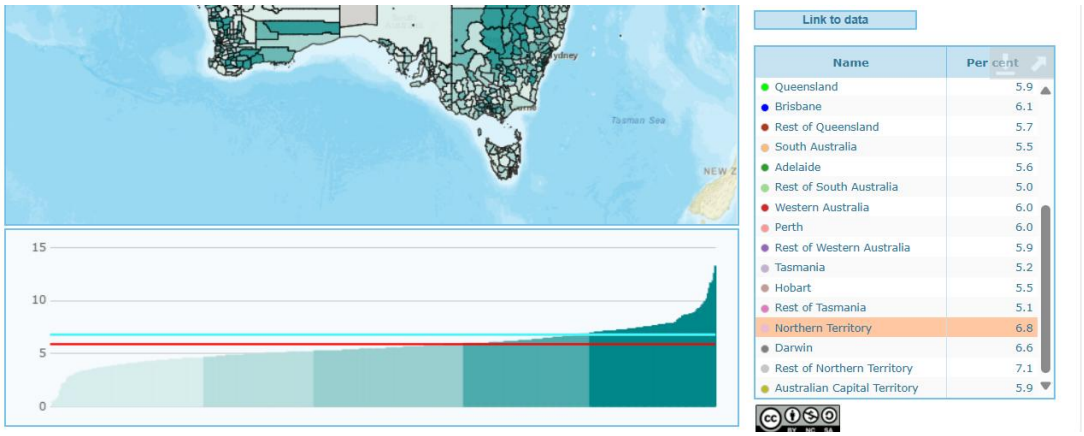
The legend box allows the user to add additional boundary layers to the map, by checking the box to the left of the specific map overlay where available.



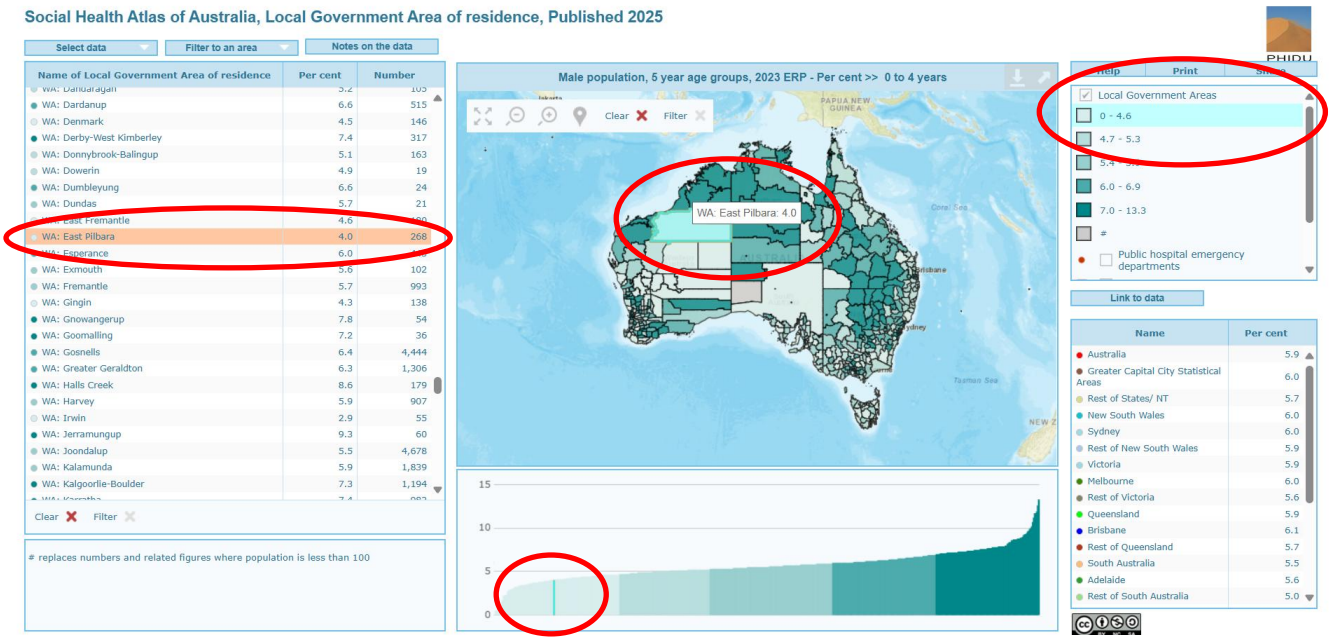
You can also change how the legend is displayed by clicking on the ‘cog’ icon button. Here you can change the colour palette, the number of ranges and the order of the legend – this can help if you want to make comparisons with other indicators which have different polarity – by polarity I mean where the darker shade on the map indicates high or low – good or bad. You can also choose how you want the data to be displayed, for instance by quantiles (5 groups), or by splitting the data range by equal intervals. There are also other options here that you can explore.



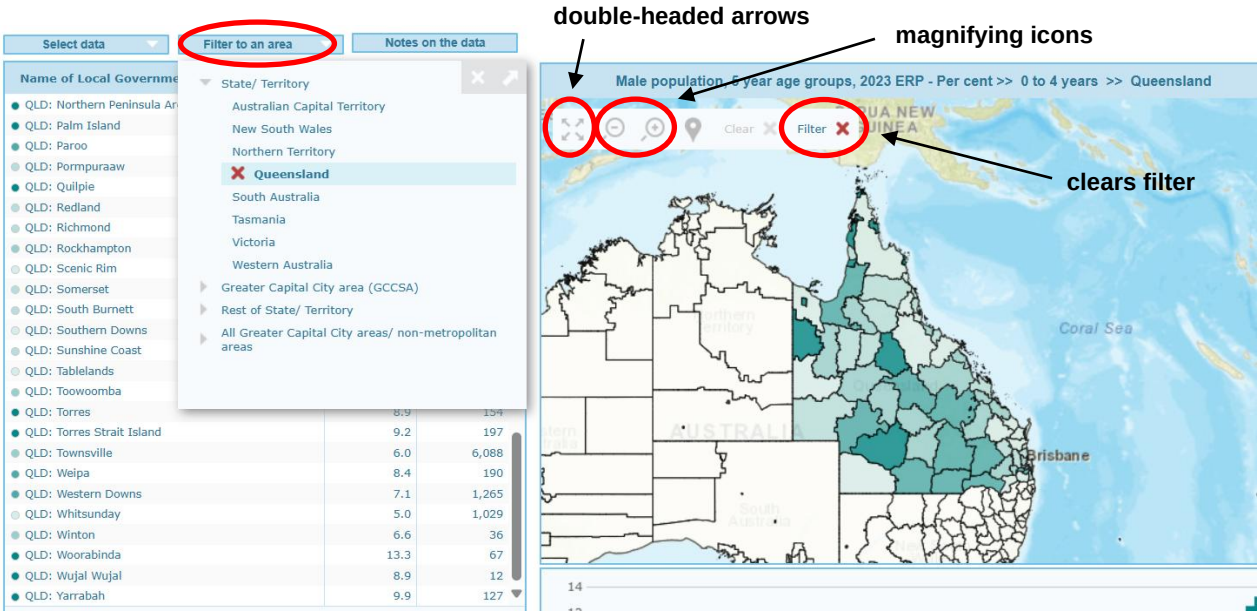
The bar chart below the map shows all the areas in the map and data table for the selected geography. The bars are displayed from lowest to highest. The table to the right contains a list of comparative areas, for example it shows the data for the same indicator for each capital city and each rest of State/ Territory. By clicking on one of these areas a horizontal line on the bar chart is shown. This allows a visual comparison to be made with each of the component areas. More than one comparison area can be selected at a time, clicking back on the area will remove it from the graph.



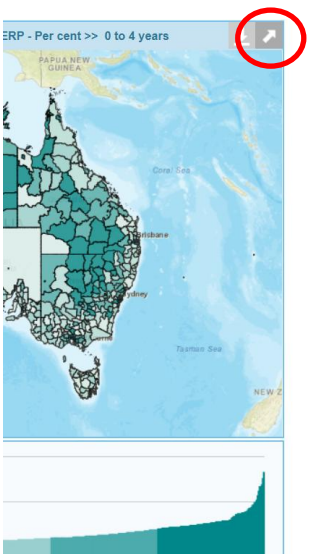
In the Instant Atlas interface each element, the map, table, bar chart, and legend are related. As you move your mouse over one element, the related parts in the other elements are highlighted. For example, if you highlight an area in the table the same area is highlighted in the map, bar chart and legend. As you move your cursor over an area in the map or bar chart you will notice that the name of the area is displayed along with its associated value.

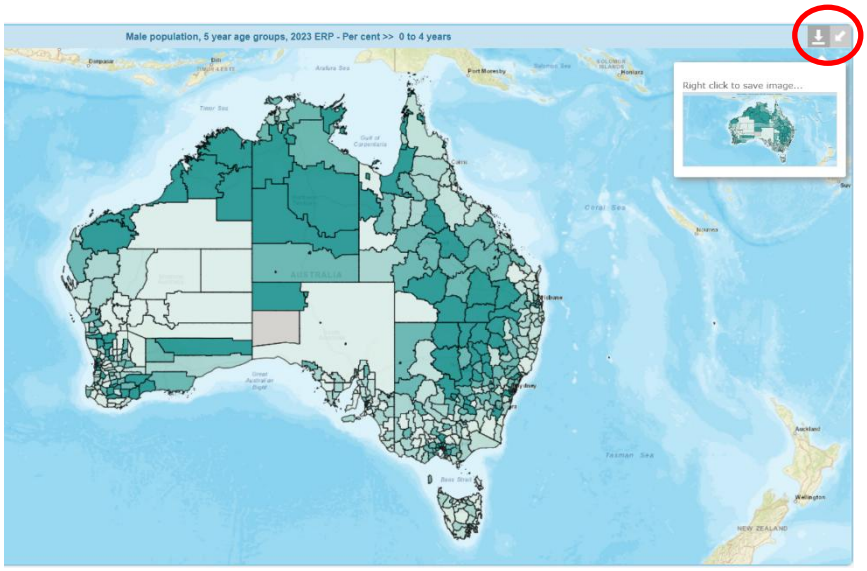


From this view of Australia, you can filter down to selected geographical areas using the 'filter to an area' button. The filter button allows you to zoom into a particular area, for example a State/ Territory or a capital city. To reset the map to the original view of Australia click on the red cross next to the 'filter' option on the slider in the map window. You can also zoom in closer to an area using the magnifying icons, or by highlighting the area of interest in the data table. The double-headed arrows on the slider in the map window will take the map back to its full extent.

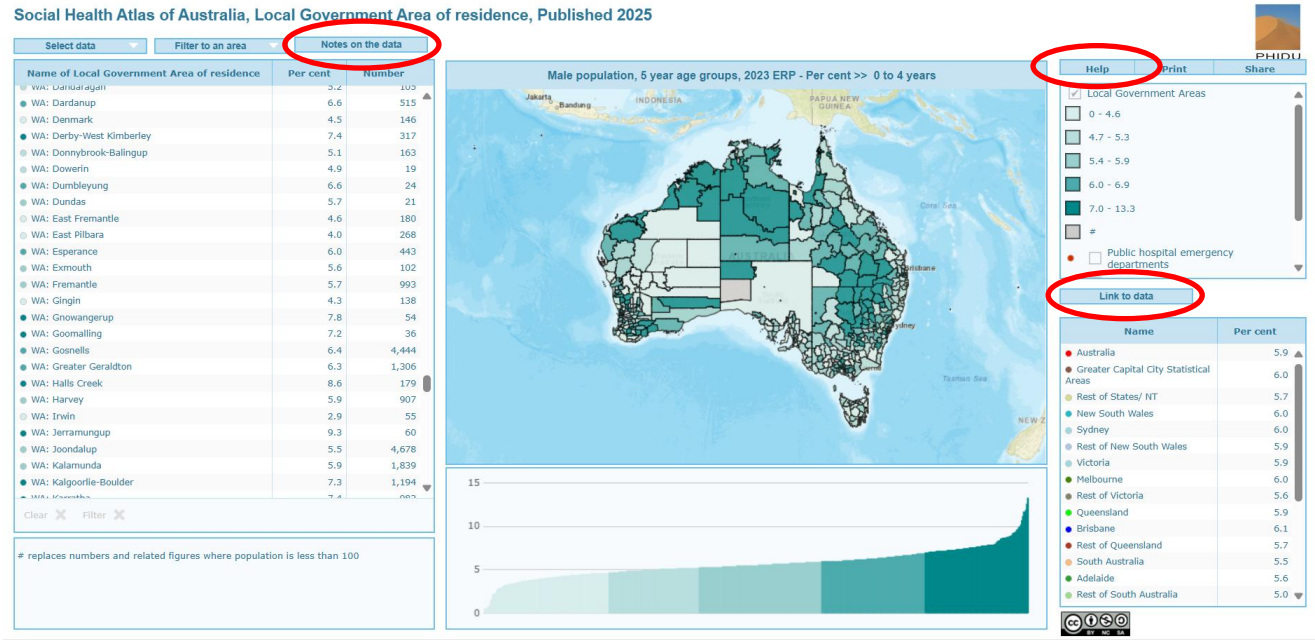


It’s also possible to maximize each of the components on the interface to make it a full screen view. This is done by clicking on the arrow in the top right-hand corner of the component, to restore it back to its original size, click this arrow again. When the component is in full screen view it can be saved by clicking the download button. This can be useful if you just want to save an individual component for your use in your own publications.

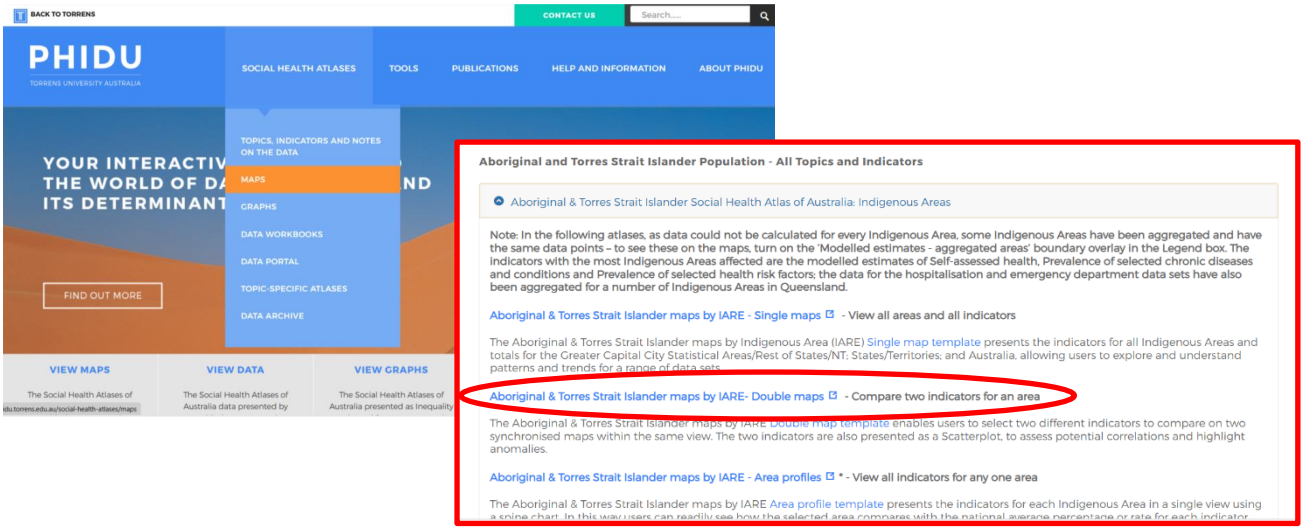




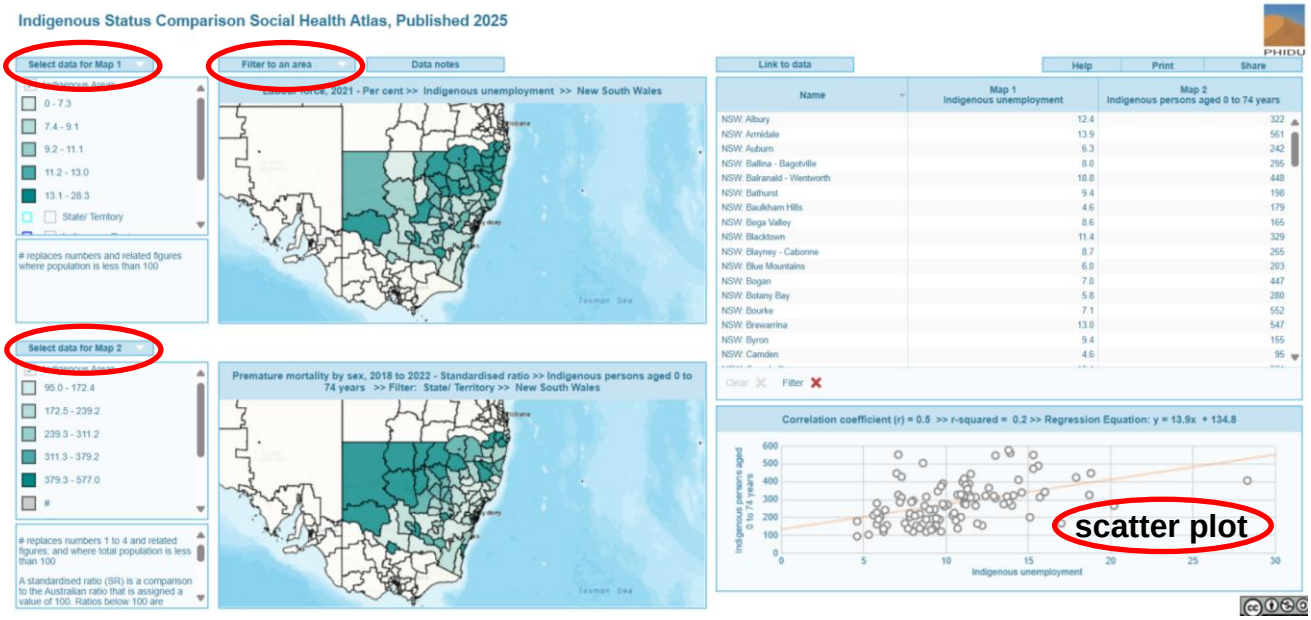
From the Instant Atlas interface, it’s also possible to access the data notes, download the underlying data in a spreadsheet format and from the help button obtain further information.



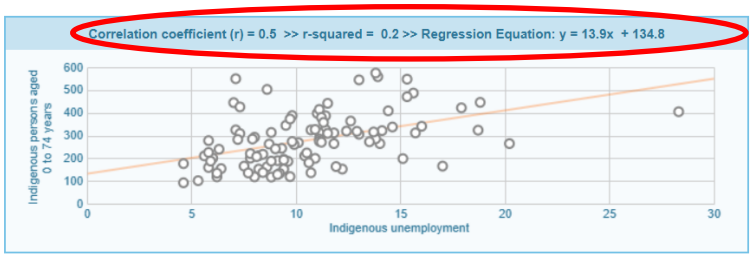
Returning to the map page we will explore a double map of the Indigenous comparison atlas.



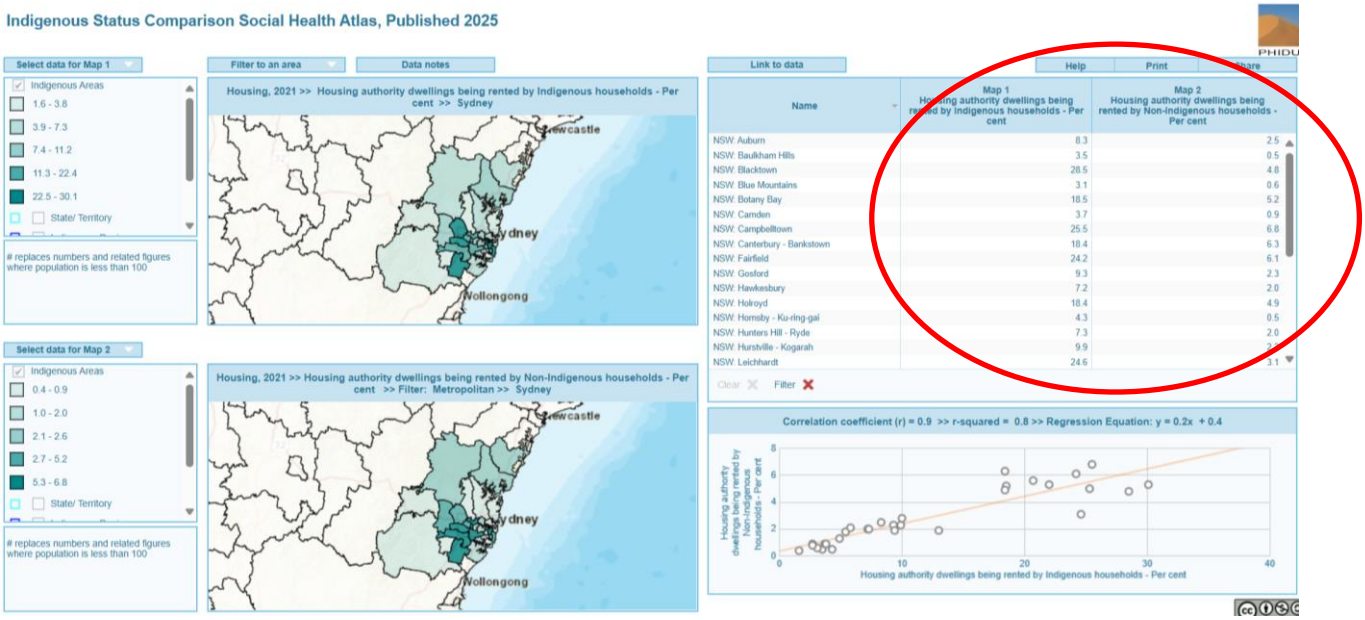
All the components on the double map interface work in the same way as the single map. The main difference with the double template is there are now two maps, and rather than having the bar chart and comparison table there is a scatter plot. Having two maps enables two indicators to be compared at once. As an example, in Map 1 Indigenous unemployment is selected (Topic – Labour force, Indicator – Indigenous unemployment) and in Map 2 premature mortality for Indigenous persons aged 0 to 74 years (Topic – Premature mortality by sex, Indicator – Indigenous persons aged 0 to 74 years) is selected. The map has also been filtered to New South Wales.



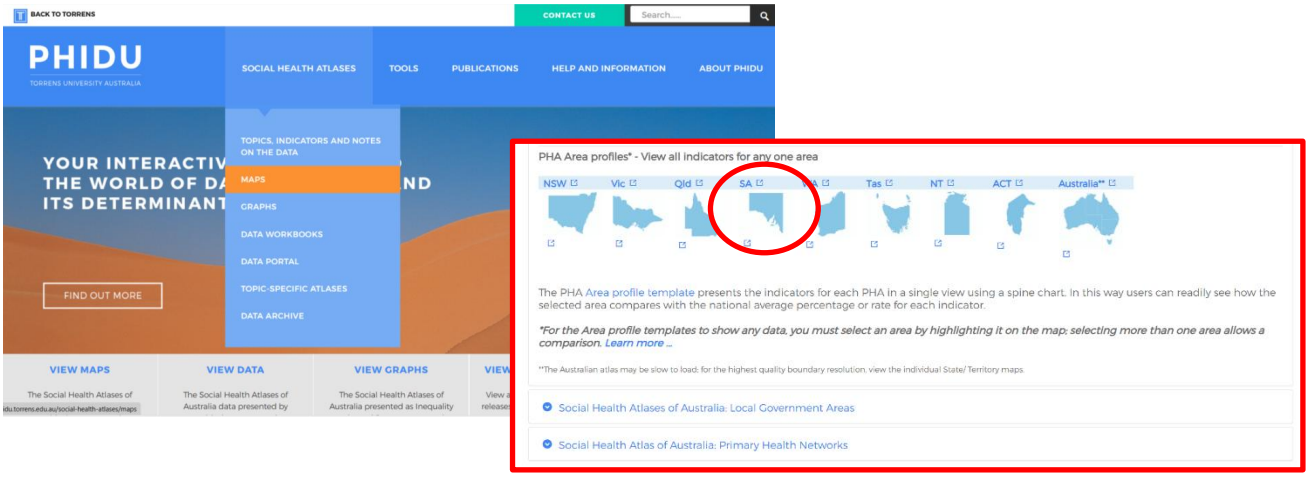
As mentioned, the double map template has a scatter plot. The scatter plot shows the relationship, or correlation, that exists between two indicators. Each dot on the scatter plot represents an area on the map. For each area, the value of the indicator selected for Map 1 is plotted against the value of the indicator selected for Map 2. Here we can see there appears to be a relationship between these two indicators – as Indigenous unemployment increases so too does the premature mortality rate. This is described by the correlation coefficient, or r value, given at the top of the scatter plot. The correlation co-efficient is 0.5 indicates a meaningful correlation between these two indicators when looking at the Indigenous Areas in New South Wales.



In the case of the Indigenous comparison atlas, the double map also allows us to look at the same indicator by Indigenous status. In Map 1, we will select housing authority rented dwellings by Indigenous households and in Map 2, we will select housing authority rented dwellings by non-Indigenous households, and filter to Sydney. Both the maps and the scatter plot show a strong relationship between the two indicators, however the table shows the much higher rates of rented dwellings among the Indigenous population.



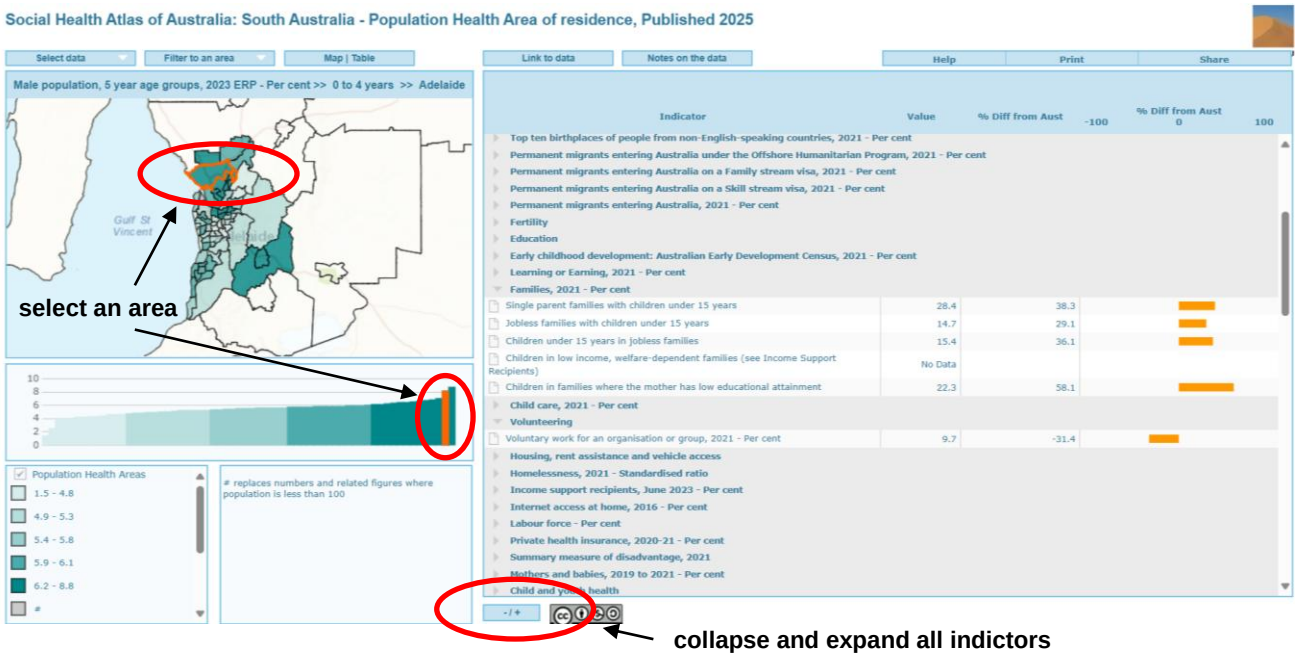
The final maps available on the website are the area profiles. For this example, we are going to look at the area profile map for South Australia.



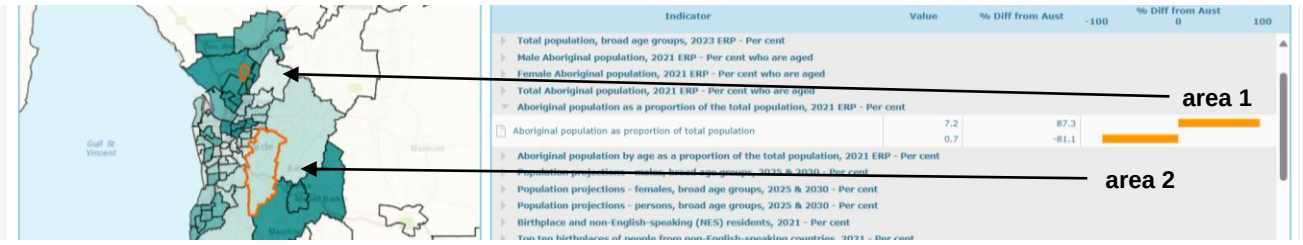
The area profiles present the indicators for each area in a single view using a spine chart. To customize the legend, filter maps, download data, access help and all other functions work in the same way as the previous maps.

The Instant Atlas window for the area profiles opens with the map displayed. This can be changed to display the data table by clicking the ‘table / map’ button found just above the map. When working with the table view it is useful to know that the column widths can be altered by clicking and dragging the column dividers and that by clicking and dragging on the column headings, the column order can also be changed.

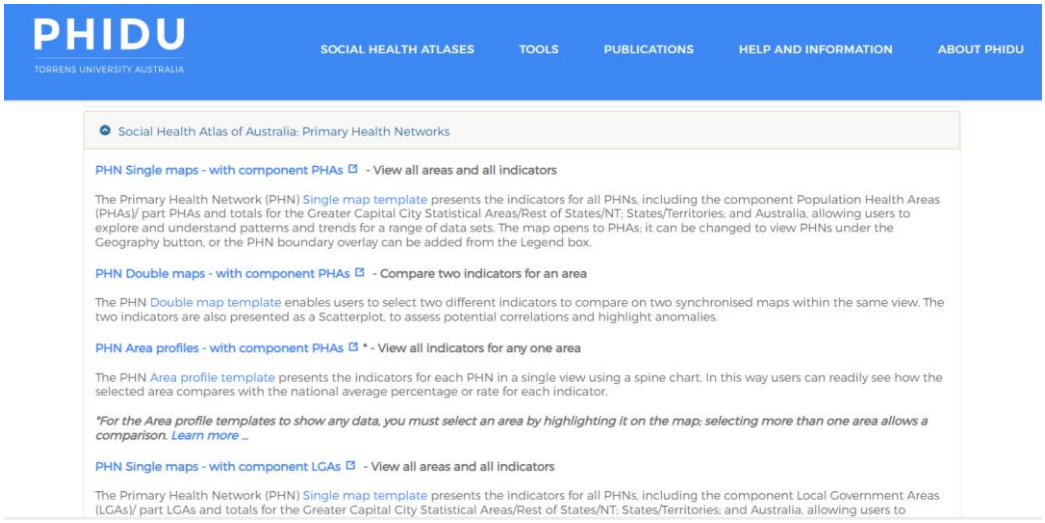
To display data on the spine chart an area must first be selected. To select your area of interest you can choose an area on the map, or you can select an area from the table or graph. To display the data in the spine chart, the topic of interest needs to be expanded using the arrow to the left of the topic name. This then shows the percent difference for each indicator compared to the Australian total. The chart shows an area's score for each indicator on a scale from +100% to -100%. A figure of +100% indicates the rate or percent in that area is twice that of Australia's rate or per cent. A score lower than the Australian value will be a negative percent and where the area's value is zero, this is displayed as -100%. Several topics can be displayed at once, to give you a snapshot of how an area is fairing against Australia as a whole. All indicators can be displayed by using the + and – icons at the bottom left of the spine chart window.



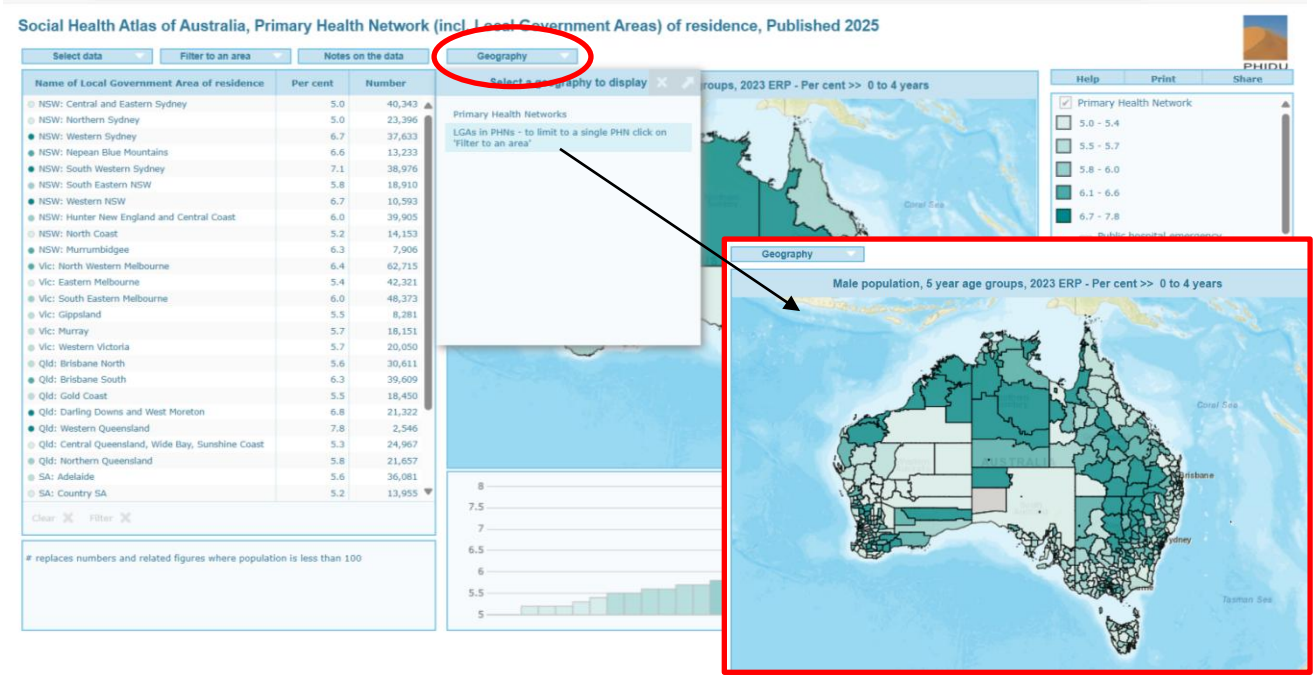
Another useful function of the area profile map is the ability to compare two areas at once. In this example, two quite different areas on the map have been selected, this is reflected in the spine chart showing rates both above and below the Australian average.



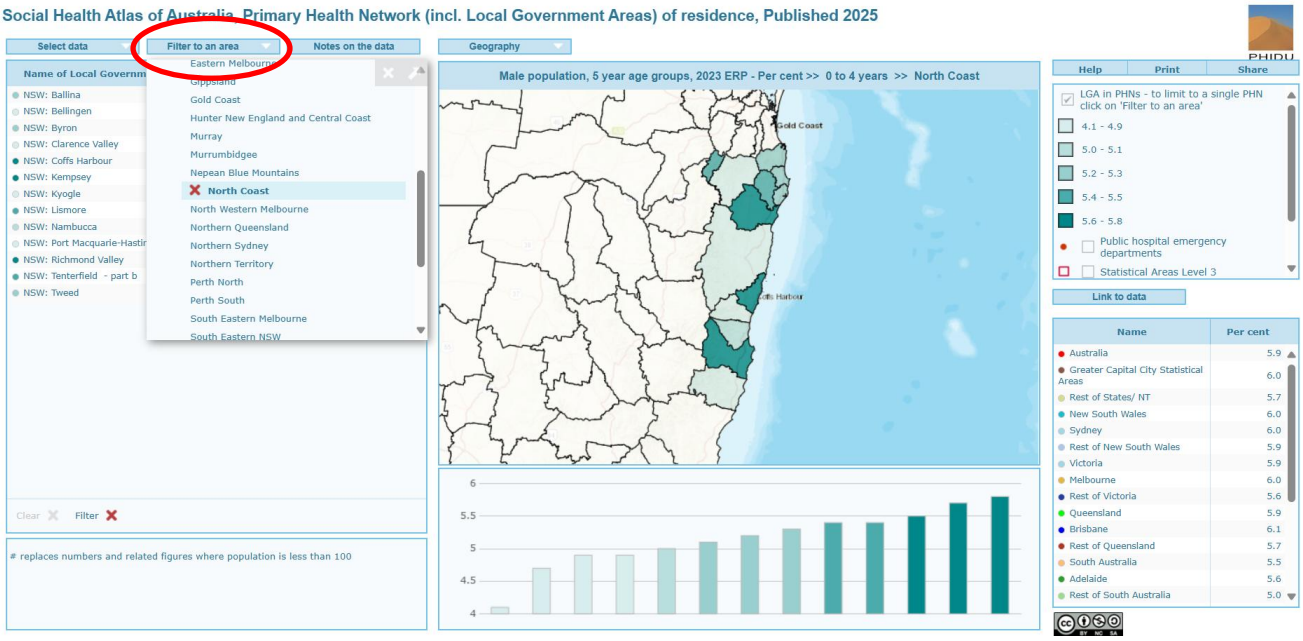
We will also have a look at another set of geography, the Primary Health Networks (PHNs), which are available with component PHAs or LGAs.



When the PHN map first opens, the interface is displayed with the PHN boundaries showing. To switch between geographies, the ‘Geography’ button at the top of the map can be clicked, this has a drop-down menu which allows the user to select a different geography. In this case LGAs have been selected.

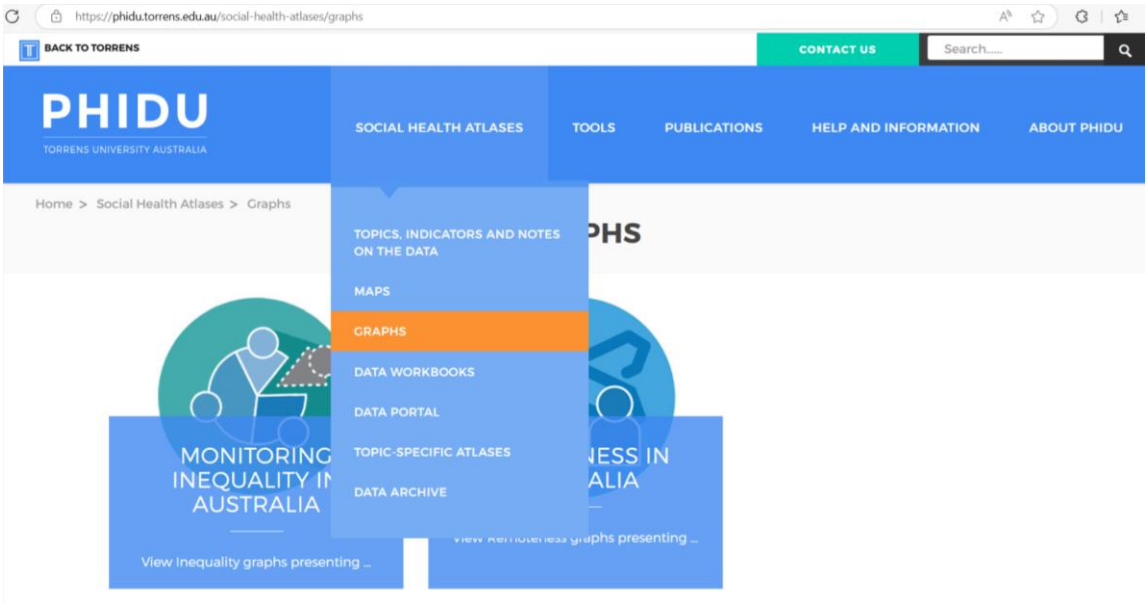


To look at the LGAs within a PHN of particular interest you can also use the ‘Filter to an area’ button, select the PHN of choice and this will limit the map, graph and table to the LGAs within that area.

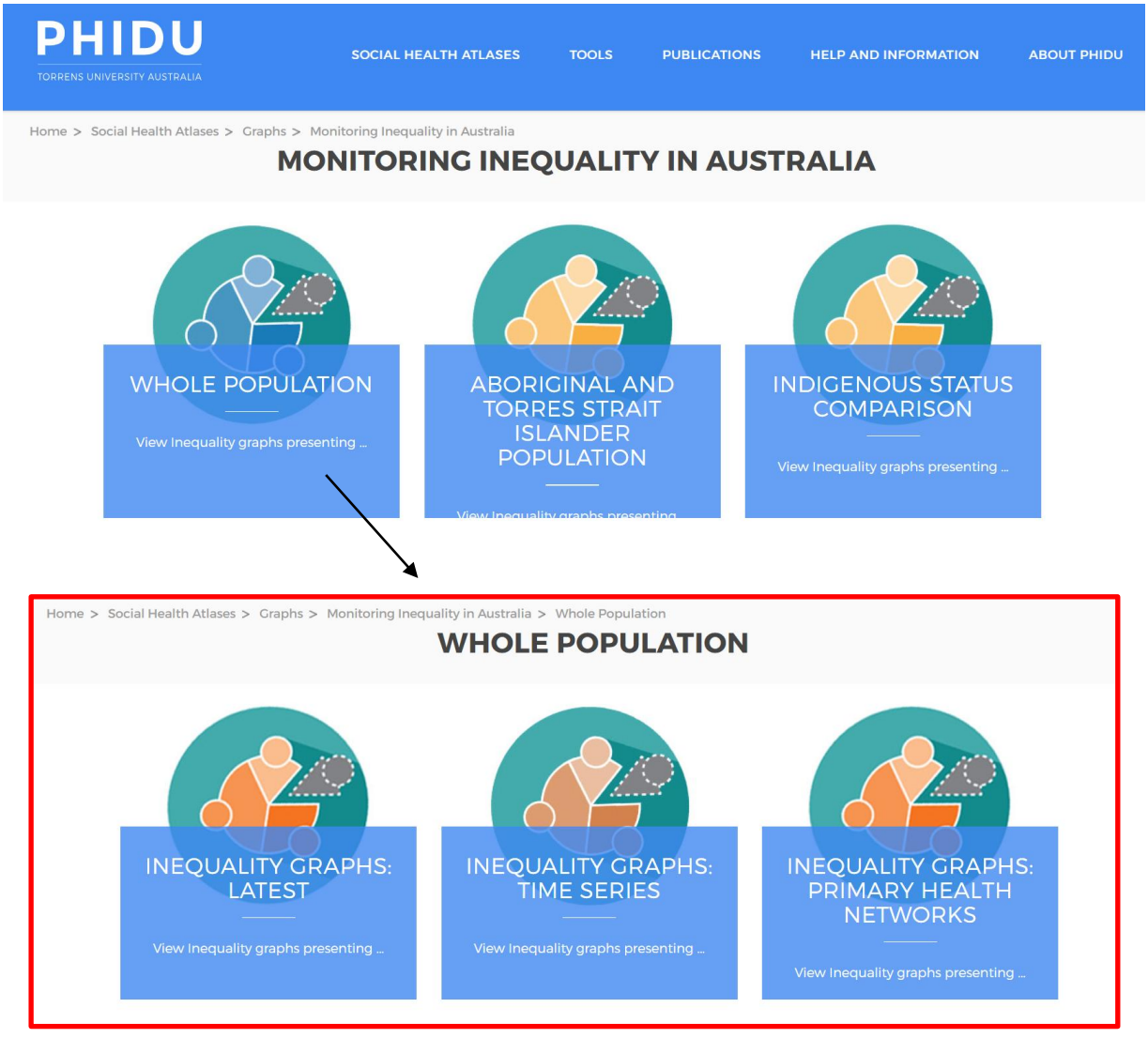


Graphs

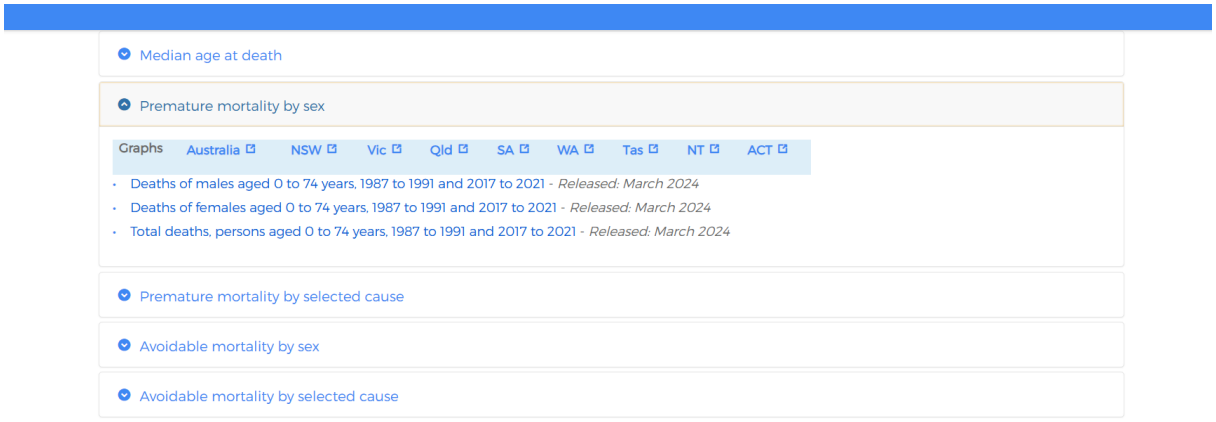
An alternative way to view our data is in the form of interactive graphs. The graphs display data either by level of disadvantage or by remoteness categories as defined by the Australian Bureau of Statistics.



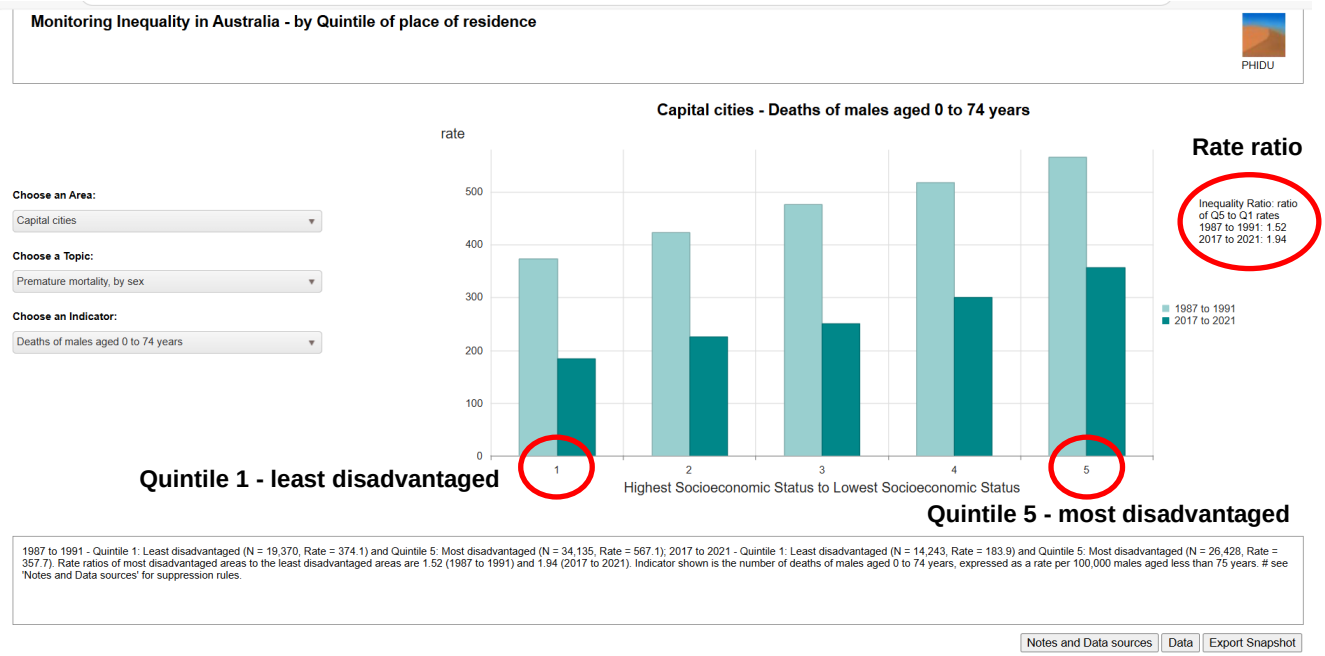
Each of the graphing packages are available for the whole population, Aboriginal and Torres Strait Islander population, and by Indigenous status. A further breakdown of the most recent data and a time series is also available. In this example, we are going to look at how the monitoring inequality time series graph works for the whole population, although many of the functions are applicable across all packages.



The interactive graph is accessible under the same domains/ topics/ indicators as previously mentioned and are available for each State/ Territory or Australian as a whole.



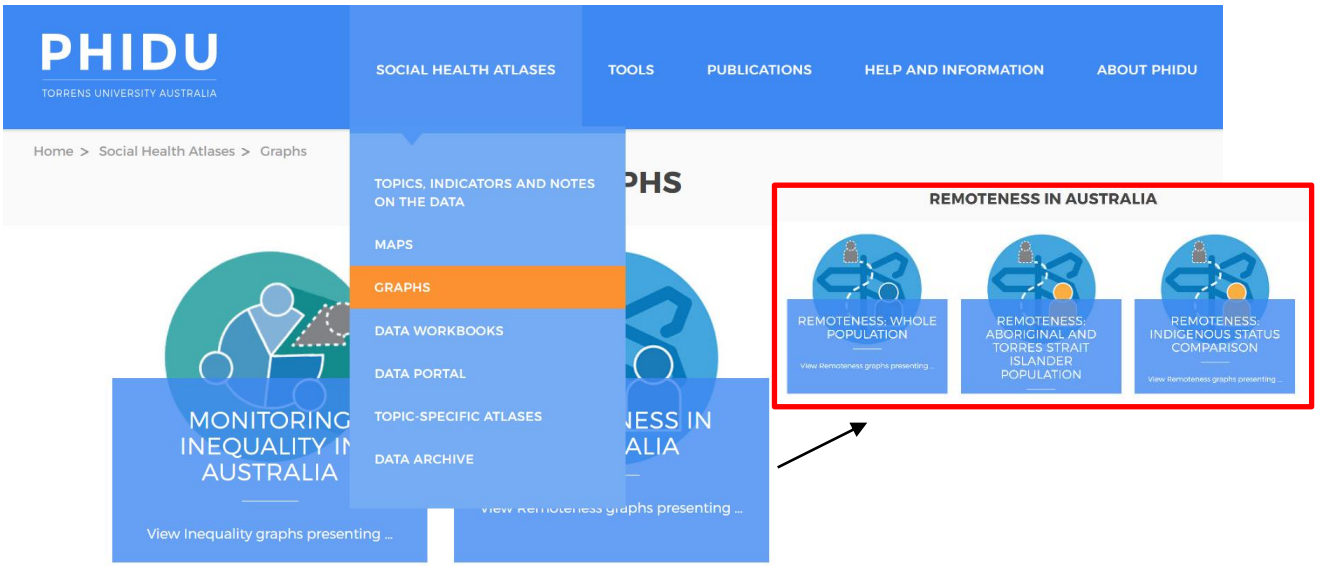
Let's look at the graphs for Australia. The inequality graphs show how the indicator varies by level of disadvantage. The data are presented in five groups where each group represents approximately one fifth of the population – from those people living in the least disadvantaged (Quintile 1) areas to those living in the most disadvantaged areas (Quintile 5).



The bar for each quintile indicates the indicator value for the population in that quintile. The inequality rate ratio shown on the right hand side of the graph is the ratio of the rate in the most disadvantaged group compared to the rate in the least disadvantaged group. We can see here that a rate ratio of 1.52 indicates that the rate of premature mortality in the earlier time period (represented by the lighter colour bars) is 52 percent higher in the most disadvantaged areas compared to the least disadvantaged areas. The rate ratio of 1.94 in the later time period (darker colour bars) indicates that the rate of premature mortality is 94 percent higher in the most disadvantaged areas compared to the least disadvantaged areas. So, from looking at the graph we can see that although over time the mortality rate has come down across all quintiles the gap in inequality has widened.

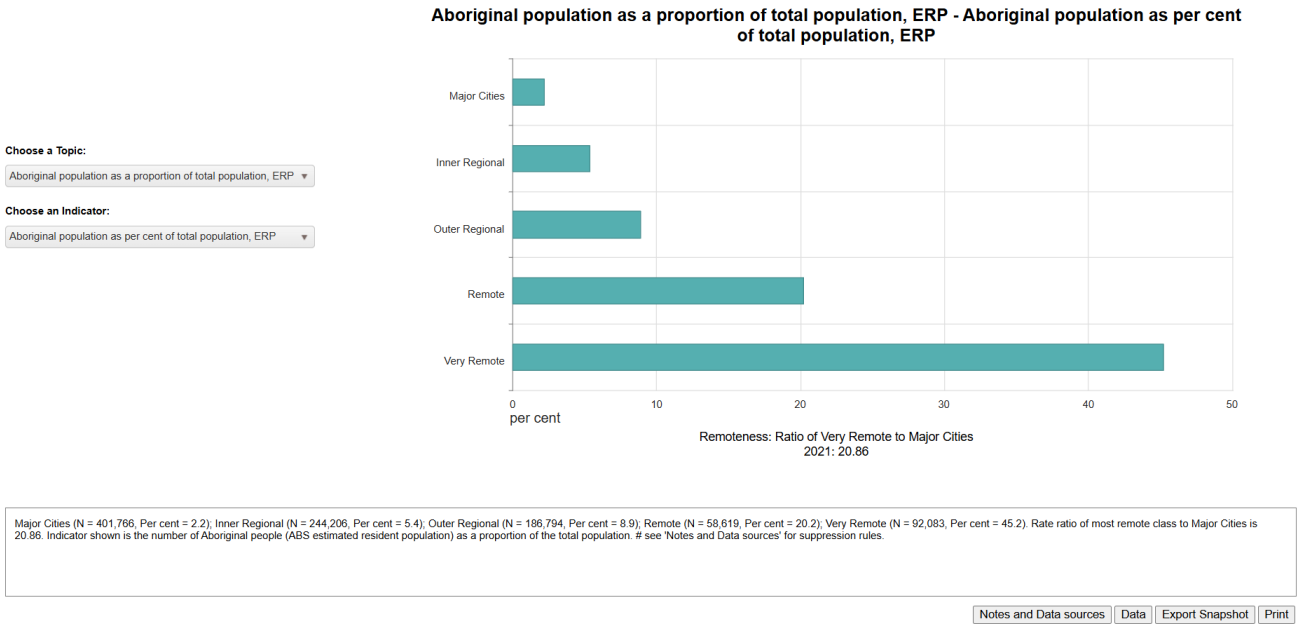
The box at the bottom of the graph displays a short description of the rates shown and an indictor definition. The drop-down menus to the left of the graph enable the user to modify the graph by selecting an area, topic and indictor of interest. The buttons at the bottom of the graph allow the user to access the notes on the data, the data in excel spreadsheets and export a snapshot of the image.

The graphs for remoteness work in the same way as the inequality graphs except they display the five levels of remoteness across Australia.



We are now going to look at the remoteness graph for the whole population of Australia for the latest time period. The remoteness classes range from Major Cities through to Very Remote. Please note that each of the categories do not all have 20 percent of the population in them, with the majority of people residing in the Major Cities and the smallest proportion in the Very Remote areas.

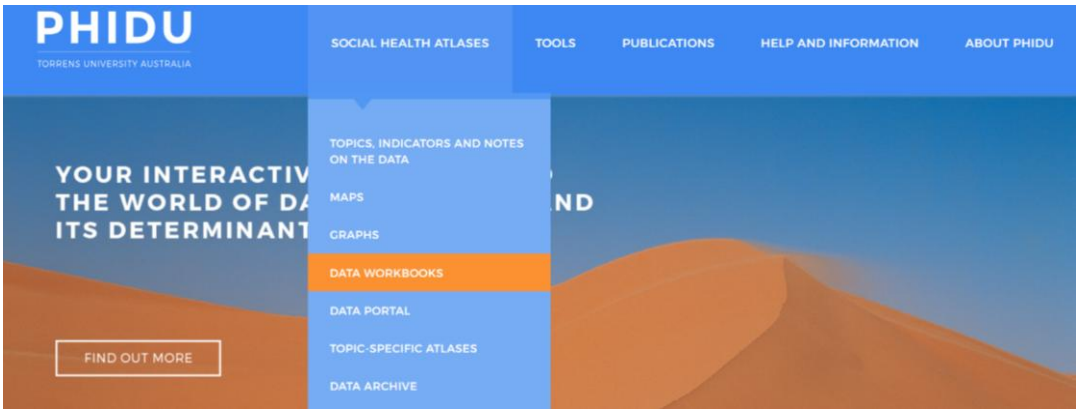
The remoteness ratio at the bottom of this graph measures the difference between the rate in the Very Remote areas compared to that in the Major Cities. Here we can see that there are 20 times more Indigenous people in the Very Remote areas compared to the Major Cities.



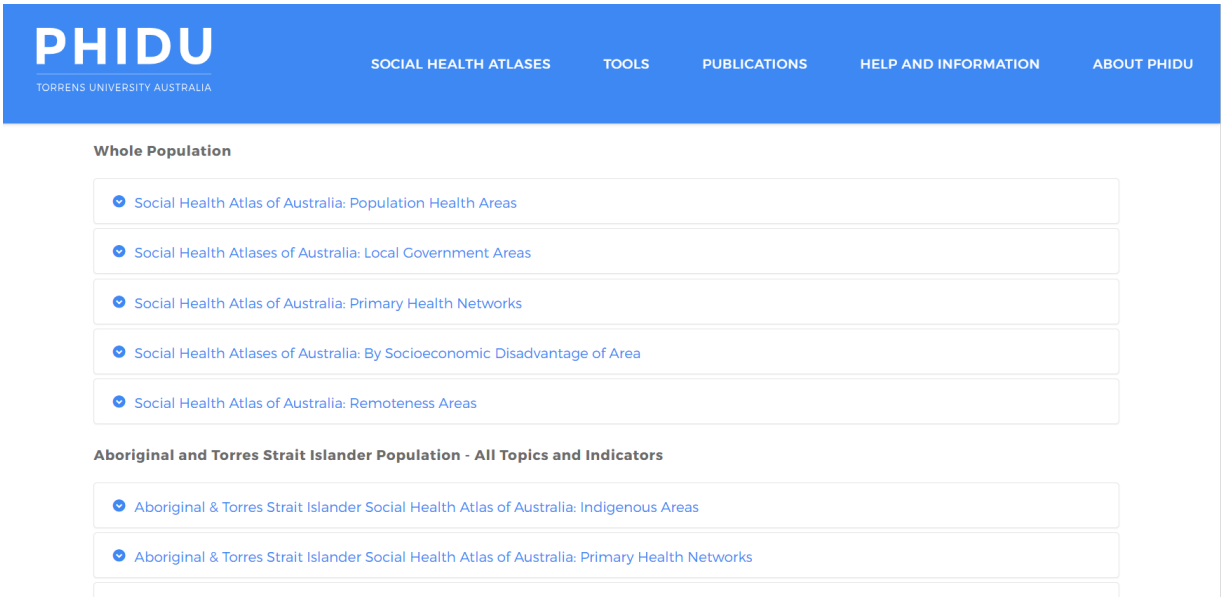
Users also can select a different topic or indicator using the drop-down menus on the left-hand side and can access the notes on the data, download the data underlying the graphs in spreadsheet format, and print the graph using the buttons at the bottom of the page.

How can data be downloaded from our website?

There are two ways in which the data can be downloaded, firstly through the map and graph interfaces using the ‘Link to data’ buttons and secondly from the ‘data workbook’ tab under the ‘social health atlases’ tab.

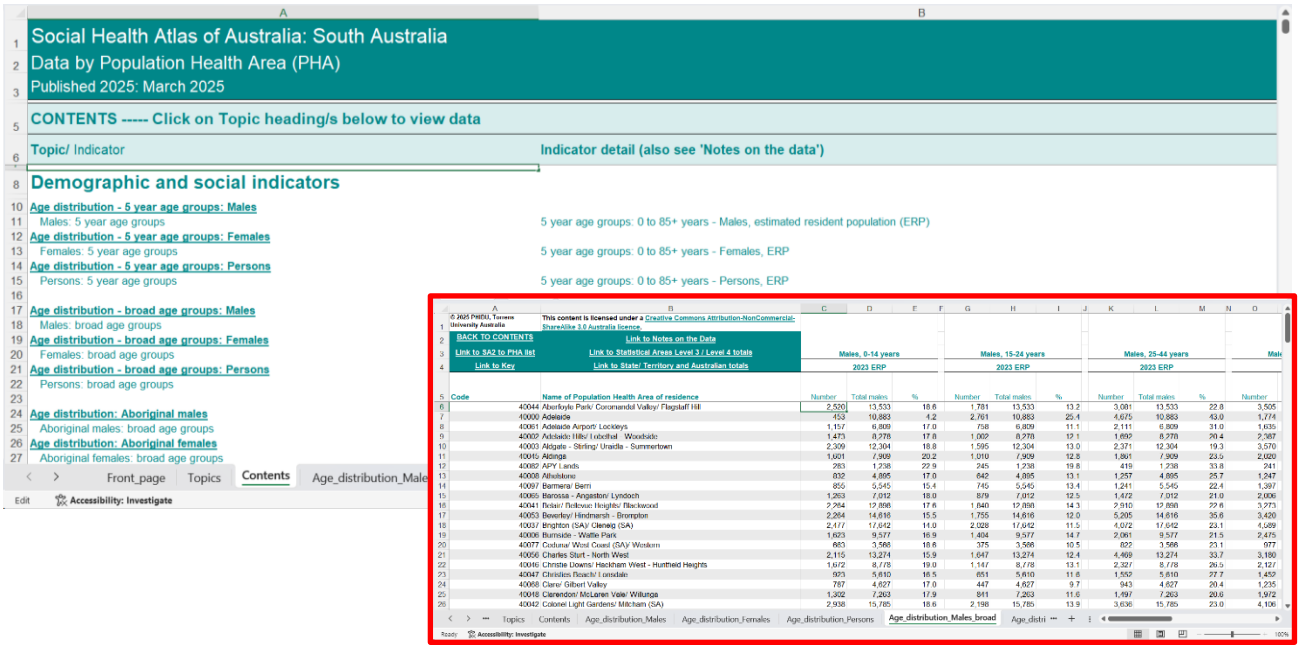


Data can then be accessed for the whole population or Aboriginal and Torres Strait Islander population by geography type.

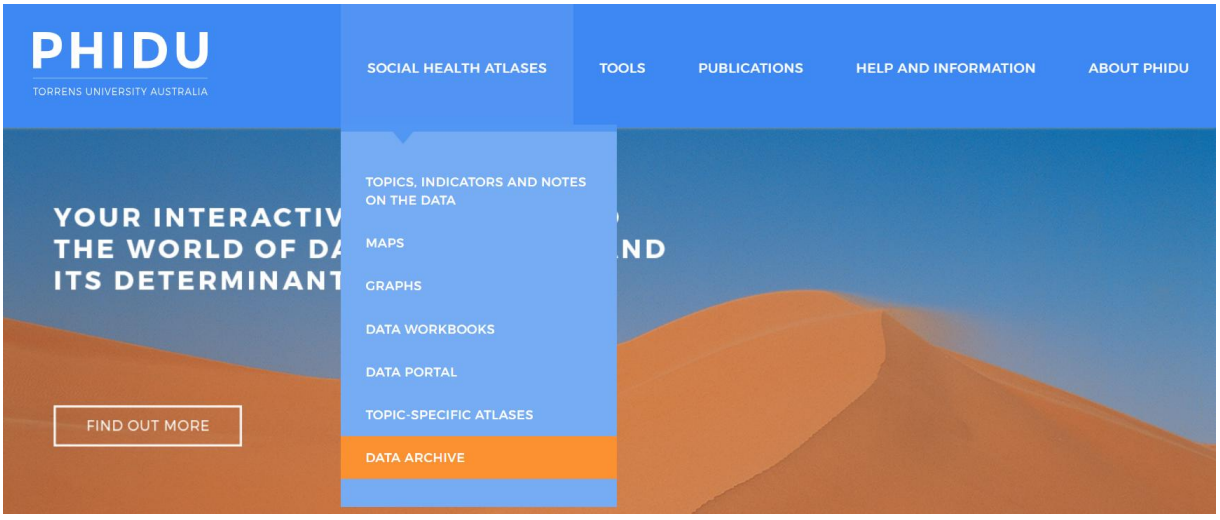


From here data can be downloaded for an individual State/ Territory or Australian as a whole, some data sets can also be downloaded by topic.

The data workbooks have a contents page that is set up by domain/ topic/ indicator, and each topic is linked to a data sheet. The data sheet contains geography in the rows and indicators in the columns. A key and notes page are located at the end of the workbook.



Previously published data can be found in the ‘data archive’ section of the website. Here we have earlier releases of the Social Health Atlas of Australia, the Aboriginal and Torres Strait Islander Atlases of Australia, topic-specific atlases and South Australian atlases. If you are looking for something specific and can’t see it here, please contact us**.**

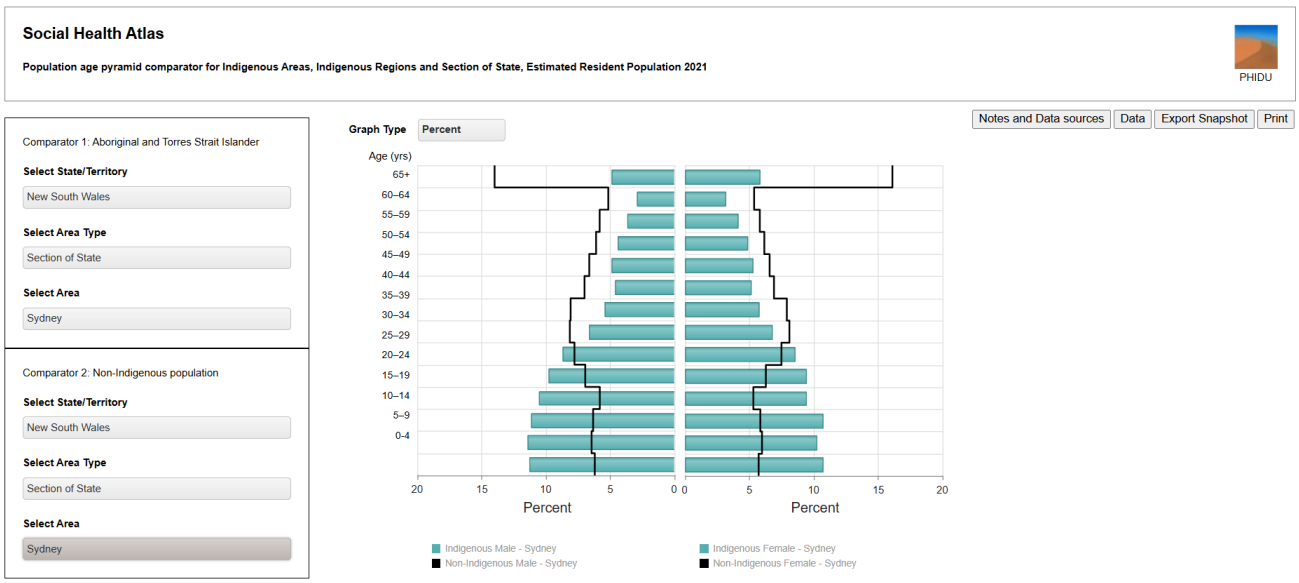


What tools do we have available?

Please note the 'map your own data' tool is no longer available

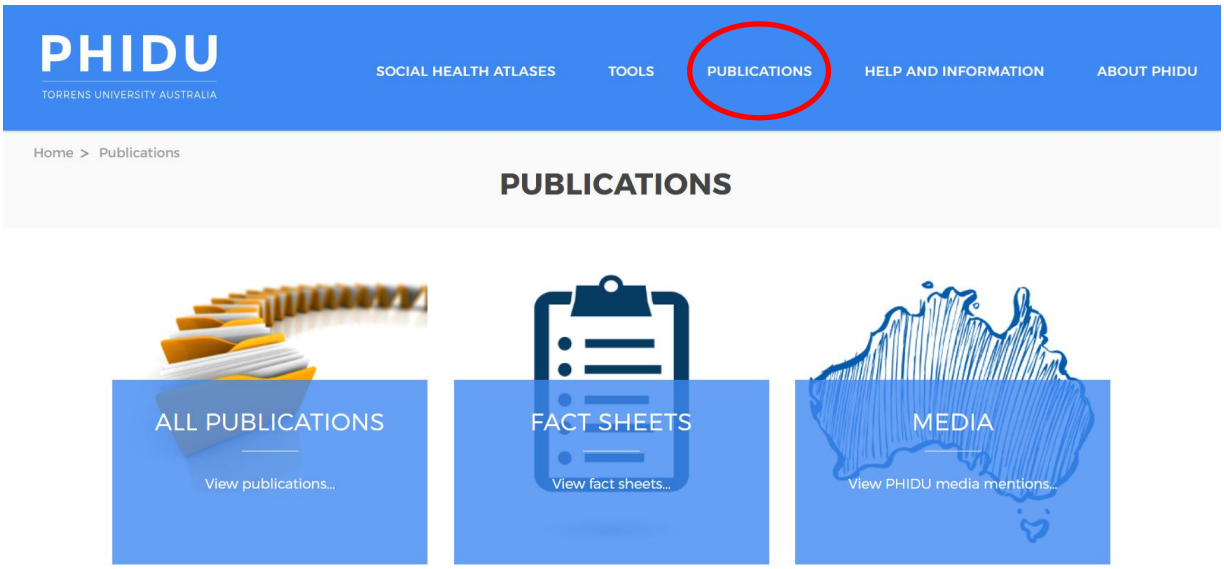
Accessible through the 'tools' menu is a population pyramid generator. This function allows you to build population pyramids for total population, Aboriginal and Torres Strait Islander and Indigenous status. You can produce the 'Total Australian populations' pyramid for LGAs, PHAs, PHNs or Section of state (choosing this last option allows comparisons with Australia, any Greater Capital City Area (and all GCCAs combined) or any Rest of state/ Northern Territory area (and all Rest of state/ NT combined).

The Indigenous status population pyramid allows you to compare the age structure of both the Indigenous and non-Indigenous population for a given area. Comparator 1 shows the Indigenous population (green solid bars) and Comparator 2 shows the non-Indigenous population (black outline). The pyramid shows the percent of population by five-year age group and sex, males on the left-hand side of the graph and females on the right. For each of the comparators, there is an option to select your data by State/ Territory, area type (geography level) and individual area.



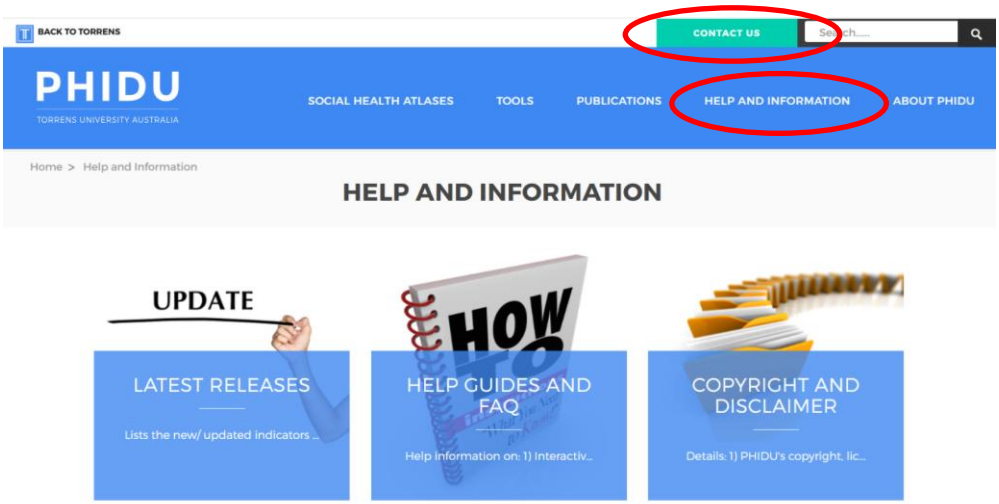
Where can our publications be found?

You will find all our publications on the publications tab. The publications date back to 1999 and are available for download in pdf format. The publications include reports, fact sheets, presentations, atlases, media releases, papers and contributions to peer-reviewed literature.



Where can we get help and further Information?

If you have any questions which have not been answered after watching this video, you can find further help and information on the 'help and information' page. This page leads to information on our latest data releases, help guides and frequently asked questions and copyright and disclaimer information. Lastly, if your questions have not been answered here, don't hesitate to get in touch by e-mailing us through the 'contact us' page on our website.



On this page you can add your name to the PHIDU mailing list to receive notification of updates to the maps, data, etc. on the website.