



NATIONAL INTEGRATED WATER INFORMATION SYSTEM (NIWIS) USER MANUAL

Information Document for NIWIS Dashboards
Version 2.1

July 2019



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1. SECTION A

1.1 Introduction

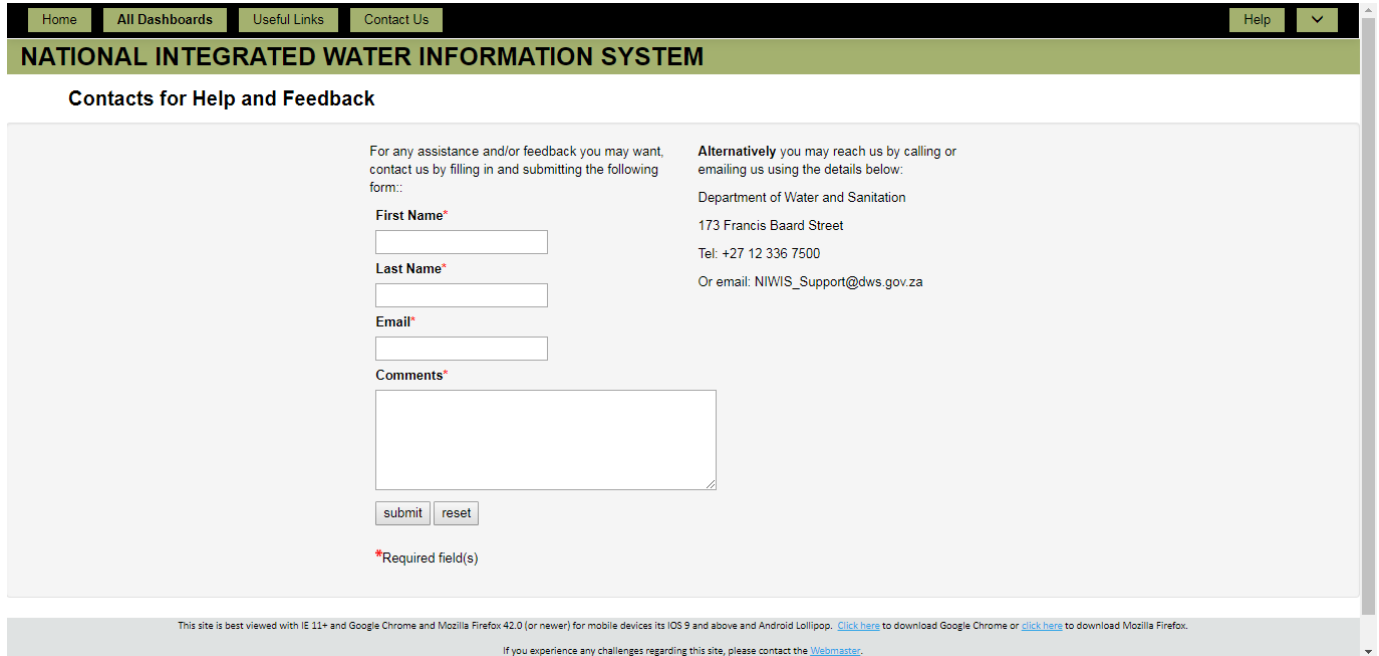
This document is the National Integrated Water Information System (NIWIS) User Manual; it serves as a guide to enable the users to easily interact with the system. This manual focuses on access, navigation, and use of the system. The NIWIS System consists of a set of dashboards to enable to swiftly navigate through various information products (Dashboards). All information products have been designed based on the same framework, therefore the navigation point applies to all products.

This user manual will evolve as and when a new version of NIWIS is introduced and when new features are introduced in the existing dashboard.

Please Note: NIWIS can also be accessed via mobile devices using the internet, i.e. cell phones and tablets (follow the link <http://niwis.dws.gov.za/>), see **Figure 16 to 18**.

1.2 Who can I contact if I need help?

NIWIS_Support@dws.gov.za or from the NIWIS menu click “Contact Us” and the Contacts for Help and Feed back page will show as in **Figure 1**.



Home All Dashboards Useful Links Contact Us Help

NATIONAL INTEGRATED WATER INFORMATION SYSTEM

Contacts for Help and Feedback

For any assistance and/or feedback you may want, contact us by filling in and submitting the following form::

Alternatively you may reach us by calling or emailing us using the details below:

Department of Water and Sanitation
173 Francis Baard Street
Tel: +27 12 336 7500
Or email: NIWIS_Support@dws.gov.za

First Name*

Last Name*

Email*

Comments*

*Required field(s)

This site is best viewed with IE 11+ and Google Chrome and Mozilla Firefox 42.0 (or newer) for mobile devices its IOS 9 and above and Android Lollipop. [Click here](#) to download Google Chrome or [click here](#) to download Mozilla Firefox.
If you experience any challenges regarding this site, please contact the [Webmaster](#).

Figure 1: Contacts for Help and Feedback

1.3 When I logon to NIWIS my username and password are requested as seen in Figure 2 below:

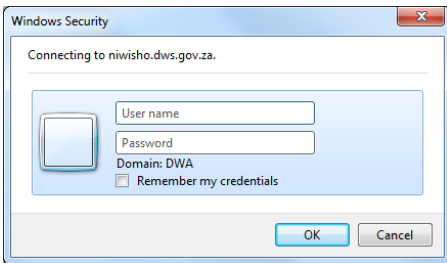


Figure 2: Logging into NIWIS

No login is required. If the system asks you to login as in **Figure 2** select Cancel and make sure your proxy settings are correct. To check the proxy settings do the following:

For **Internet Explorer** click on Tools then the **Internet options** window will open, as in **Figure 3** Below



Figure 3: NIWIS on Intranet

Click on the **Connections** tab and then click on **LAN settings**. The Local Area Network Settings window will open. Click on **Advanced** button. The Proxy Settings window will open. Your **proxy settings** should be as **Figure 4** below.

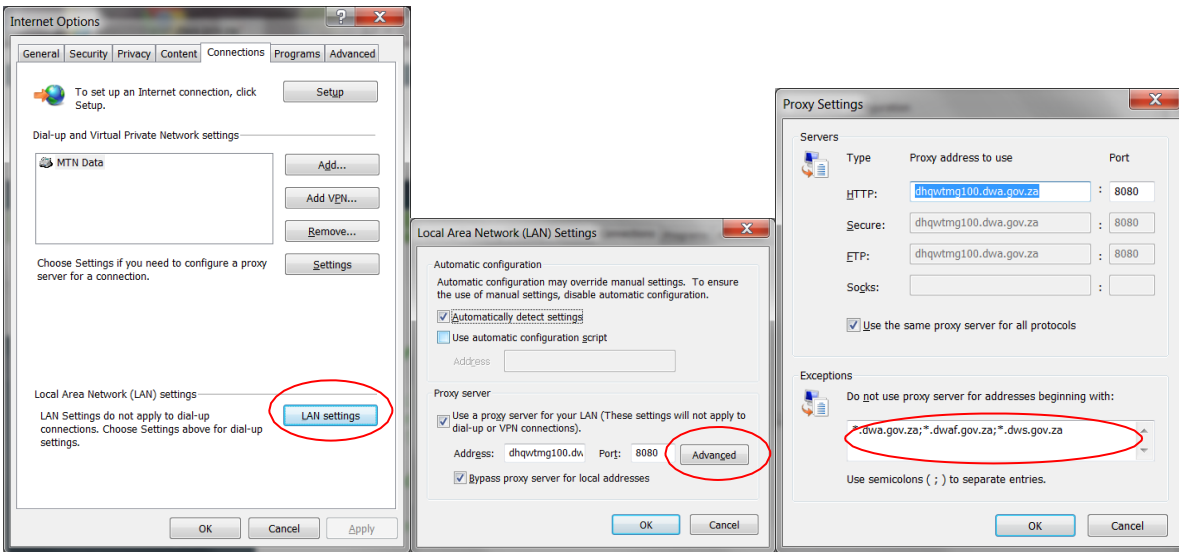


Figure 4: Internet Properties

For **Google Chrome** click on **Customize and control Google Chrome** as in **Figure 5** then select **Settings**. Click on **Show advanced settings** to open more options – see Figure 6. Go down the list till you find **Change proxy settings** and click on it. The Internet Properties window will open as in **Figure 4**. Click on **LAN settings** then Click on **Advanced**. Your proxy settings should be the same as in **Figure 4** above.

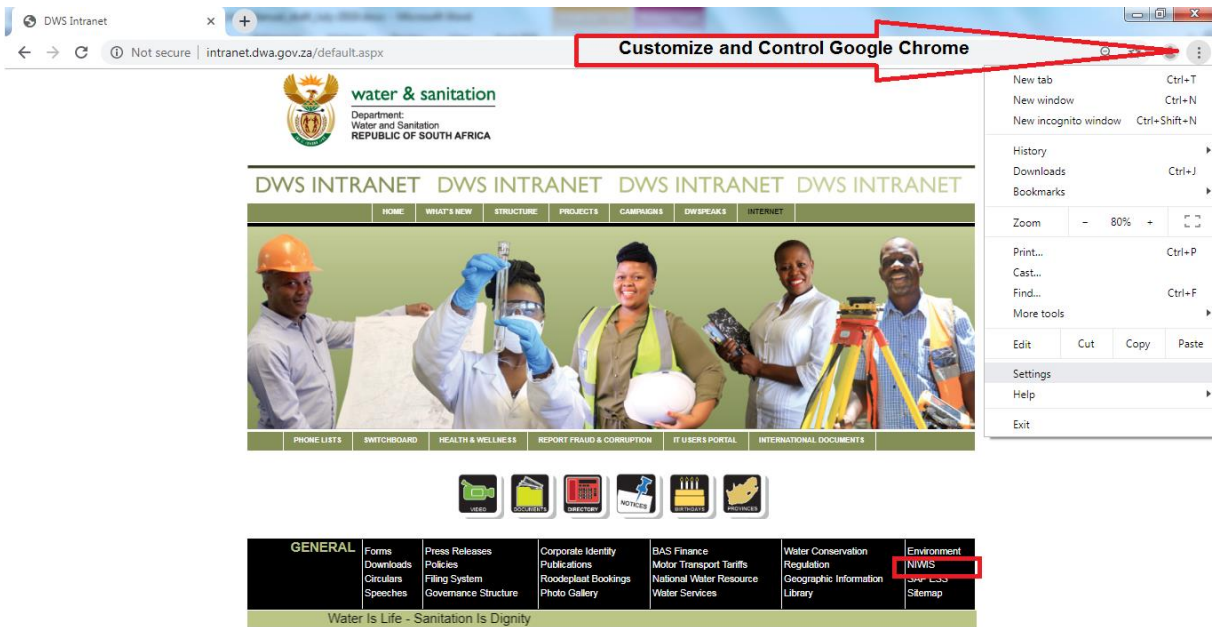


Figure 5: Google Chrome

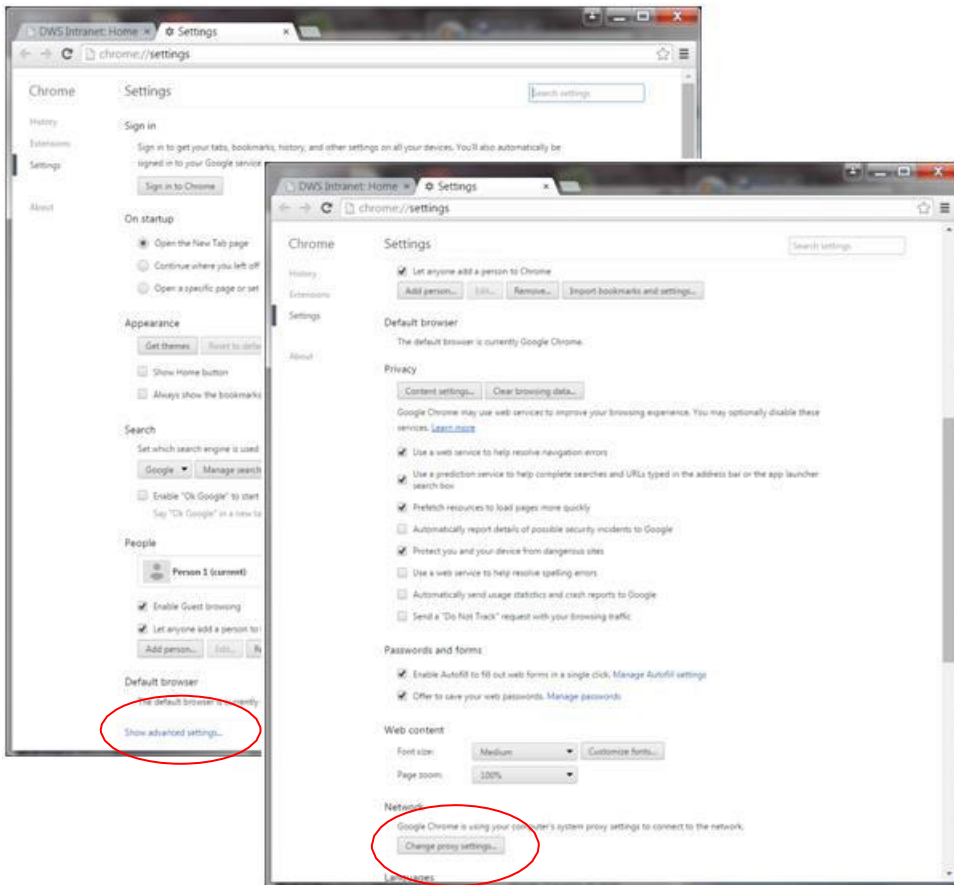


Figure 6: Google Chrome Settings

1.4 How do I access a dashboard from the Home page?

Click on Home tab from menu bar, see **Figure 7** below and the list of all dashboards will pop up, when you select All dashboards from the menu the list of all dashboard will be displayed see **Figure 8** .

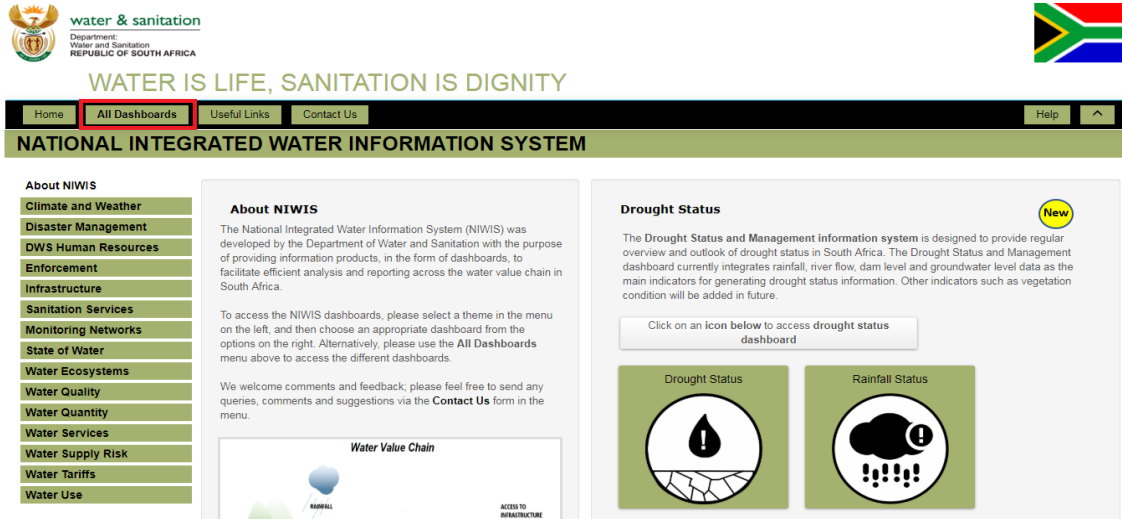


Figure 7: Menu Options

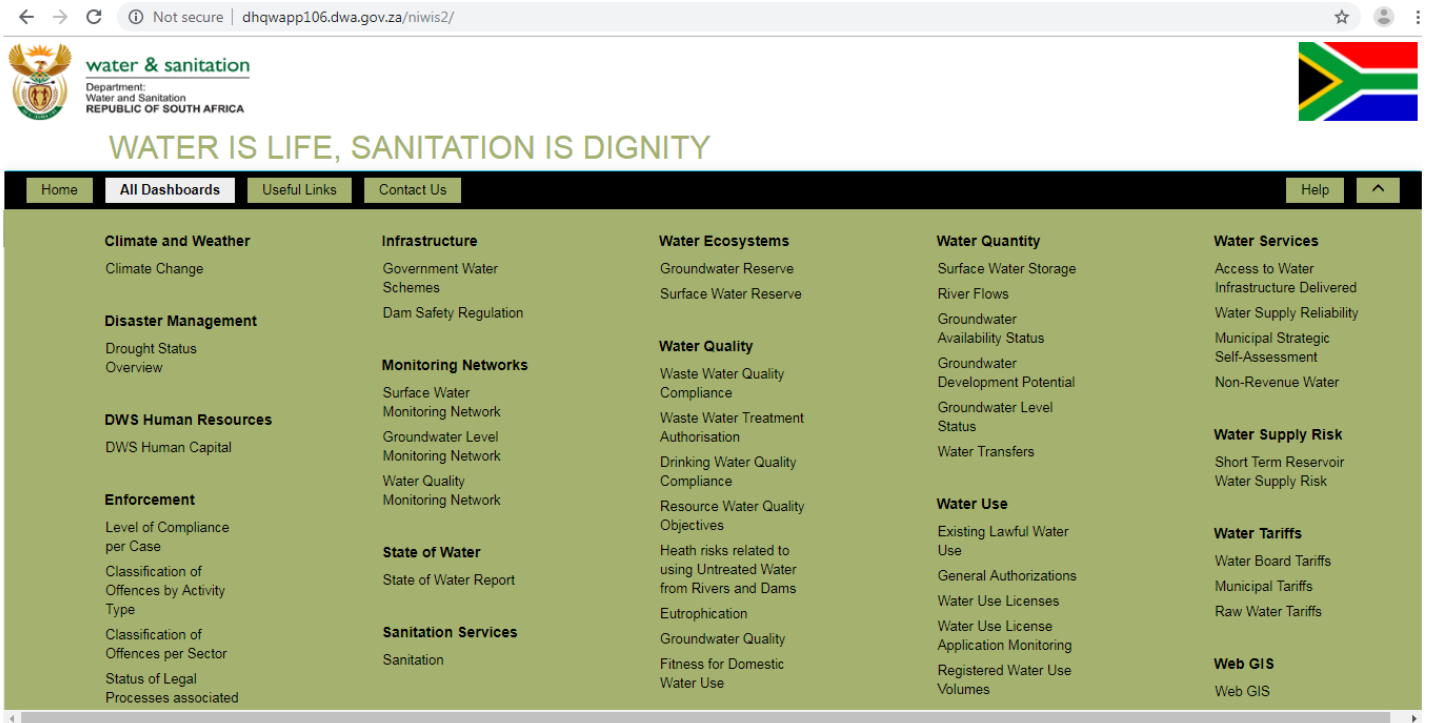


Figure 8: All Dashboards

1.5 How do I access the dashboard from each category?

Click on the Home tab and then click on any category far left of the page as shown below **Figure 9**

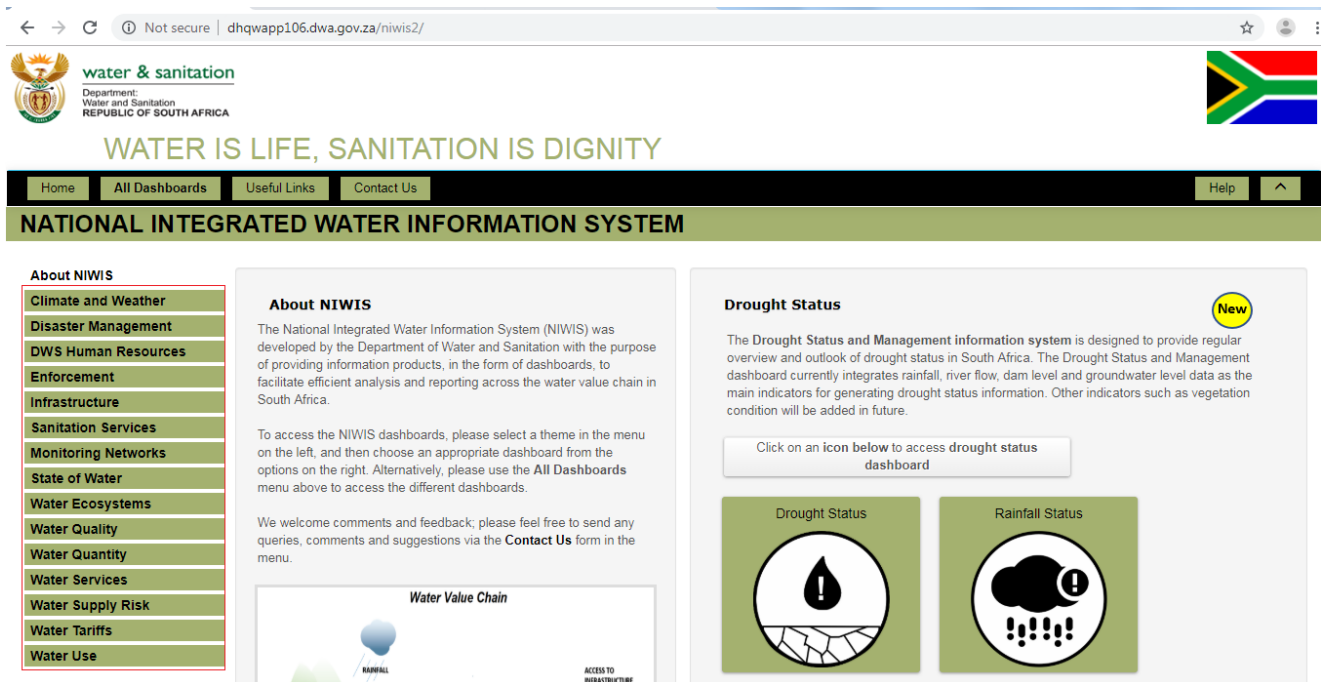



Figure 9: Shows how to access the dashboard from each category

1.6 Where can I find more [information](#) about the dashboard, [map legend](#) and [filter](#) option?

Click on the information button  in the top right corner of the dashboard pointed at by the red arrow in **Figure 10**. The information relating to the dashboard will appear as shown in the figure below. To close the dashboard **information page** by clicking **close** in **blue** at the bottom of the page or **cross** at the top right corner of information page.

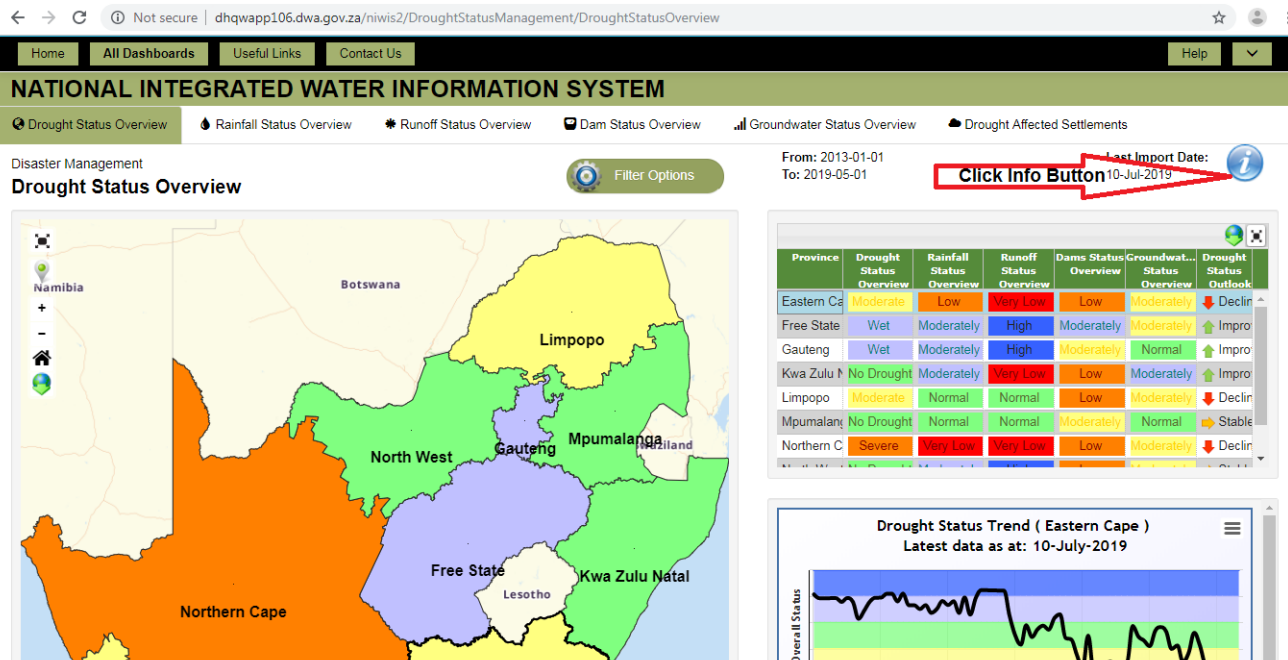



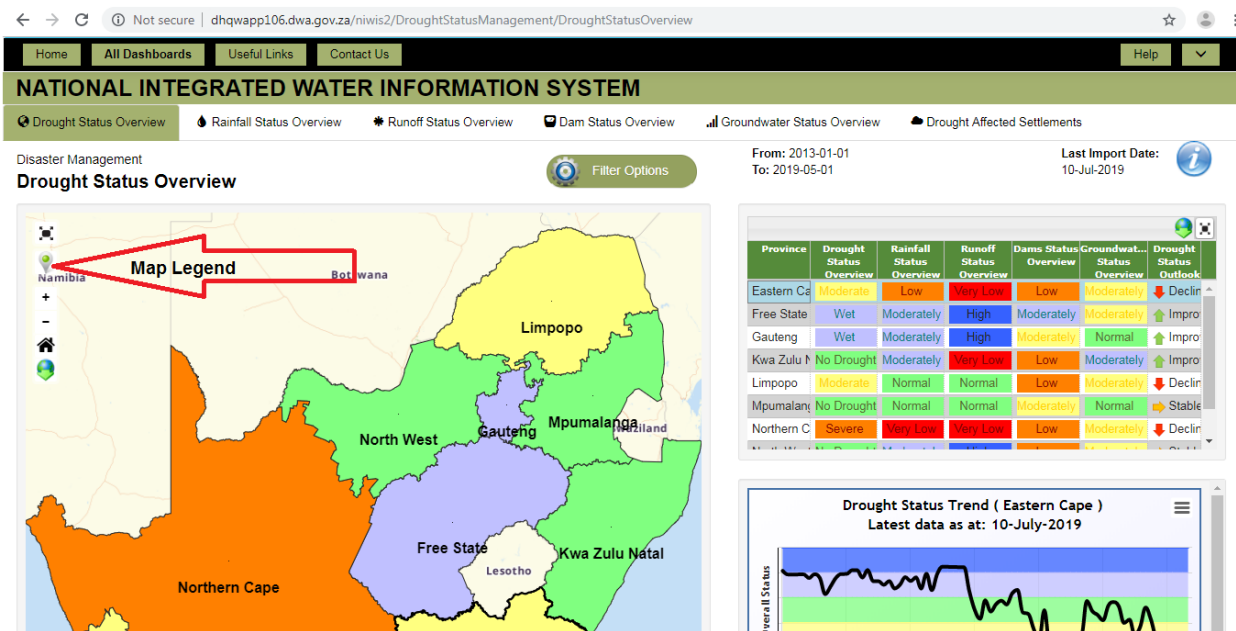


Figure 10: Dashboard information button

Click on the map legend button  in the left panel of the dashboard pointed at by the red arrow in Figure 11. The **map legend** will popup as shown below. You can **zoom in** and **zoom out** using **positive** and **negative** signs and can revert to the original map by clicking the **home** sign . Above the legend icon there is a **full screen** icon , you can click it for full screen view and click it again for original view.



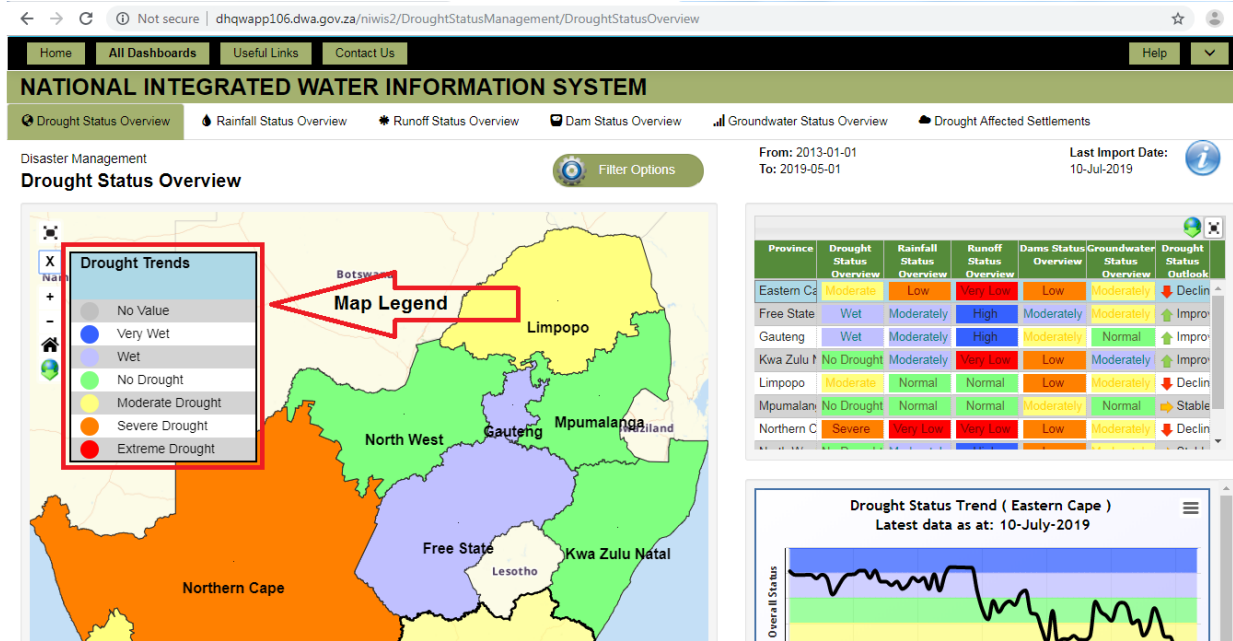
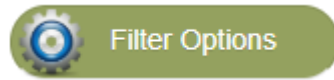
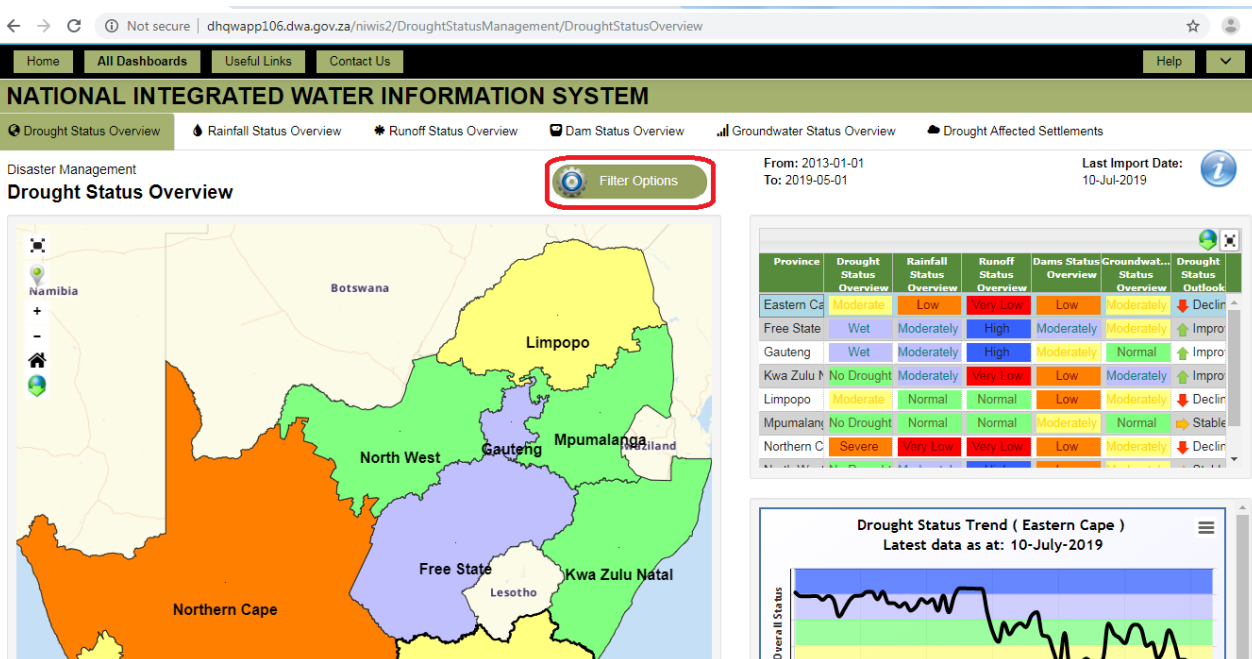


Figure 11: Map showing the legend panel.



Click on the filter button **Filter Options** as bolded by the red border on the dashboard in **Figure 12**. The dialog box will popup and from dropdown arrow, click to choose the filter option.



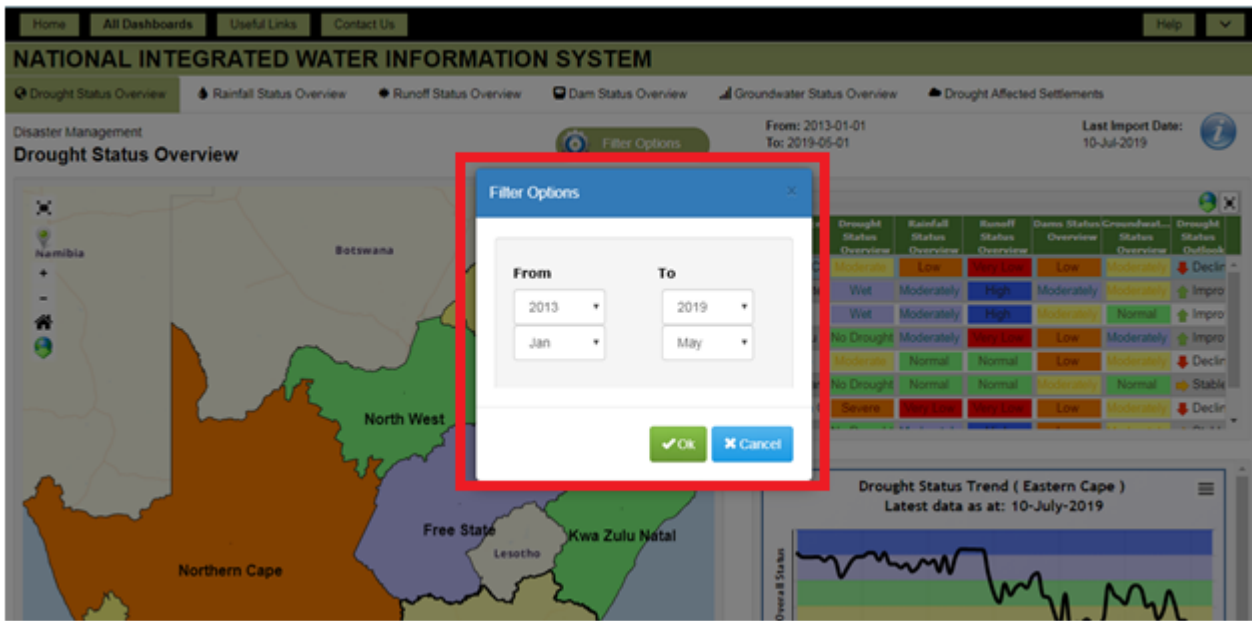
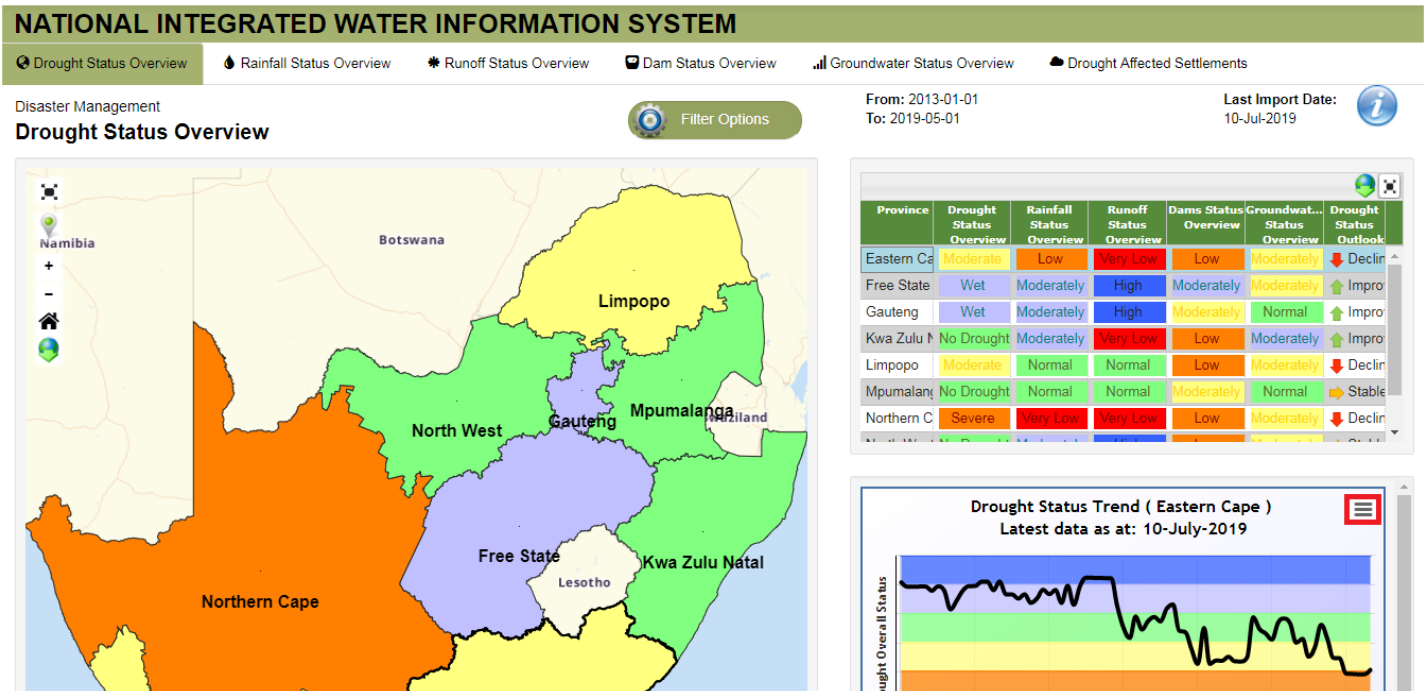


Figure 12: Map showing the filter option

1.7 How can I print, download data/information from the dashboards?

Click the **Download/Print button**, the print or download options for the chart will appear as indicated in **Figure 13**. Then you can select either print or download option from the menu below.



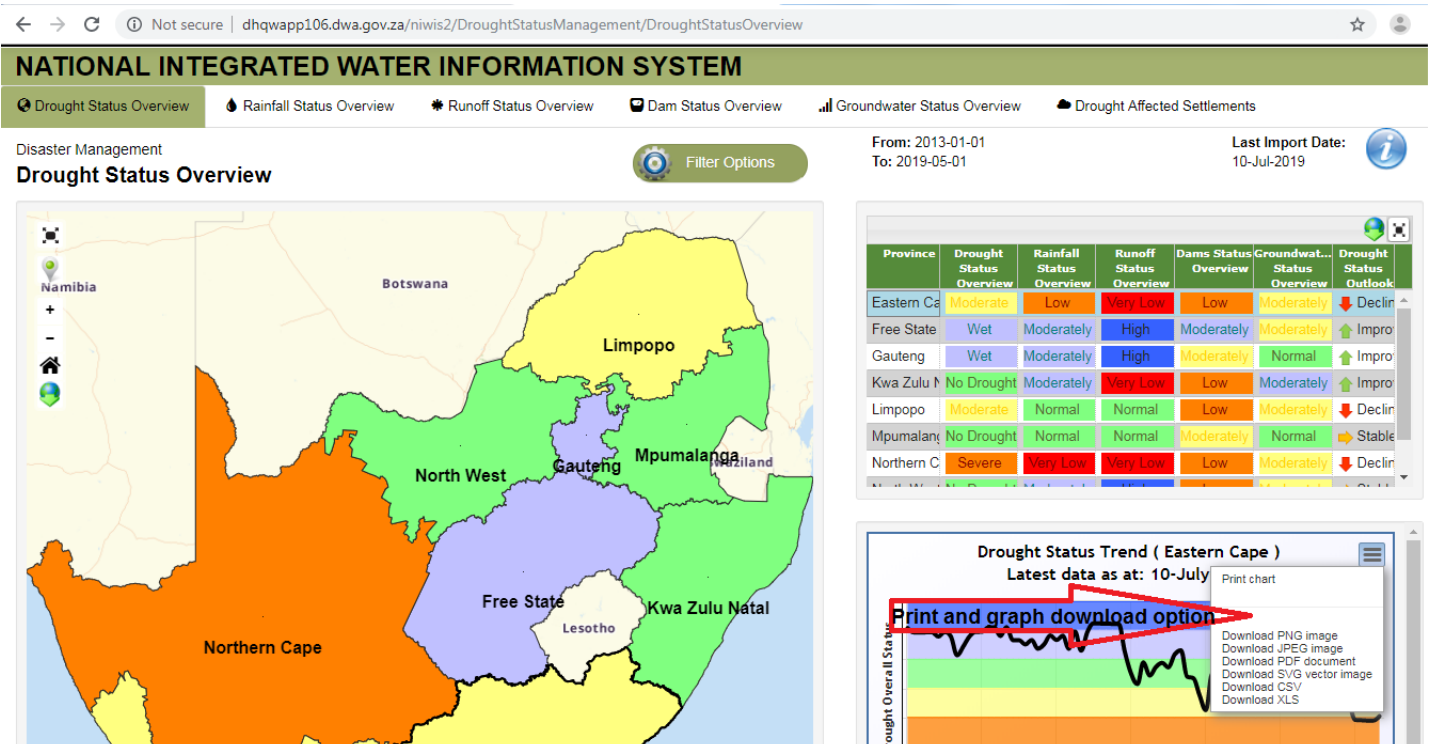


Figure 13: Map Shows the print and graph download options for the chart

The arrow in Figure 14 below shows the various graph options on the chart, but this is available only on some of the dashboards.

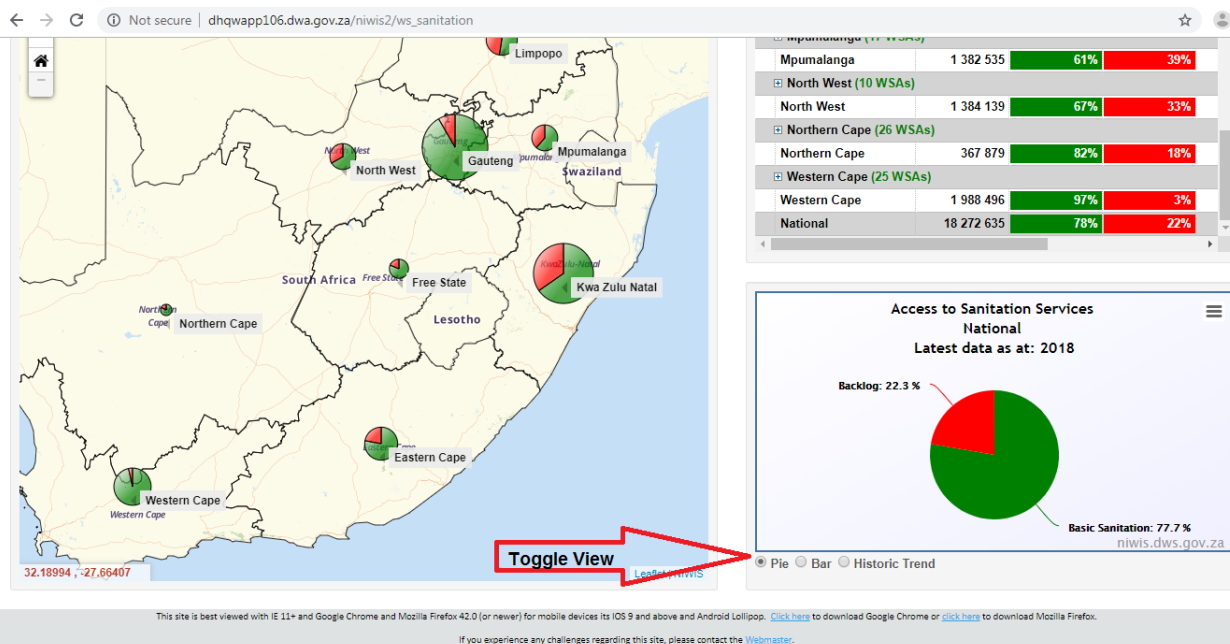



Figure 14: Shows graph toggle view options

You can download data from the table as indicated below by the red arrow. To download data, Click download CSV . Now you can **open** data file in the location options as shown below in figure 16.

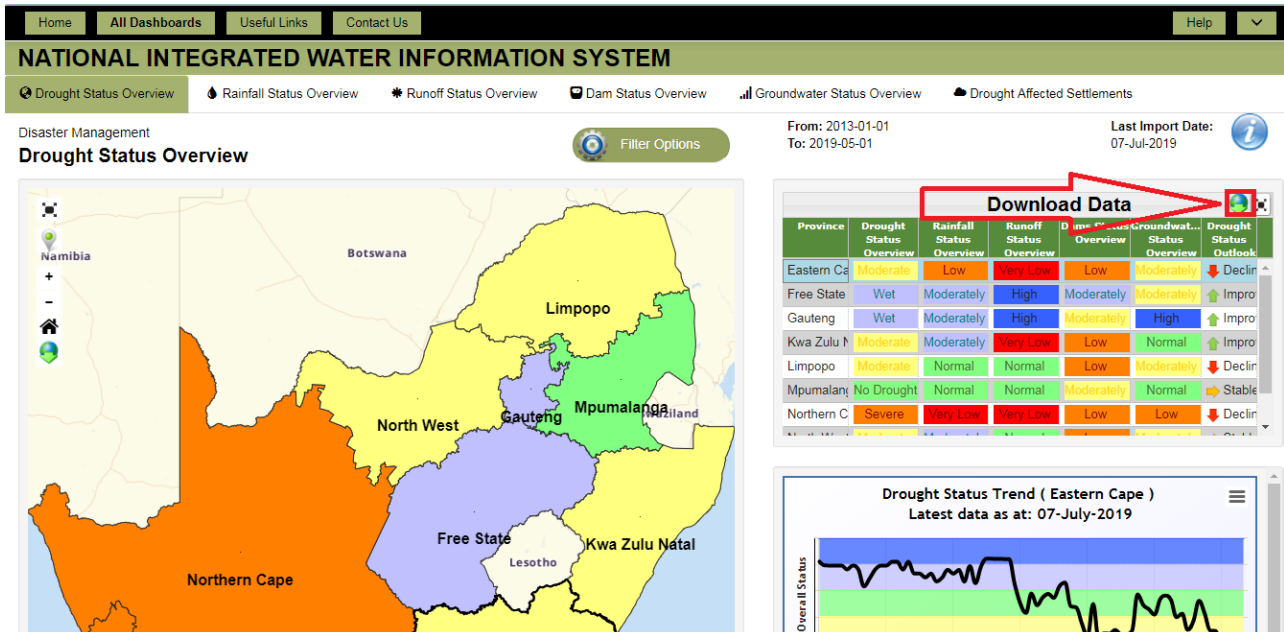


Figure 15: Shows the data download option.

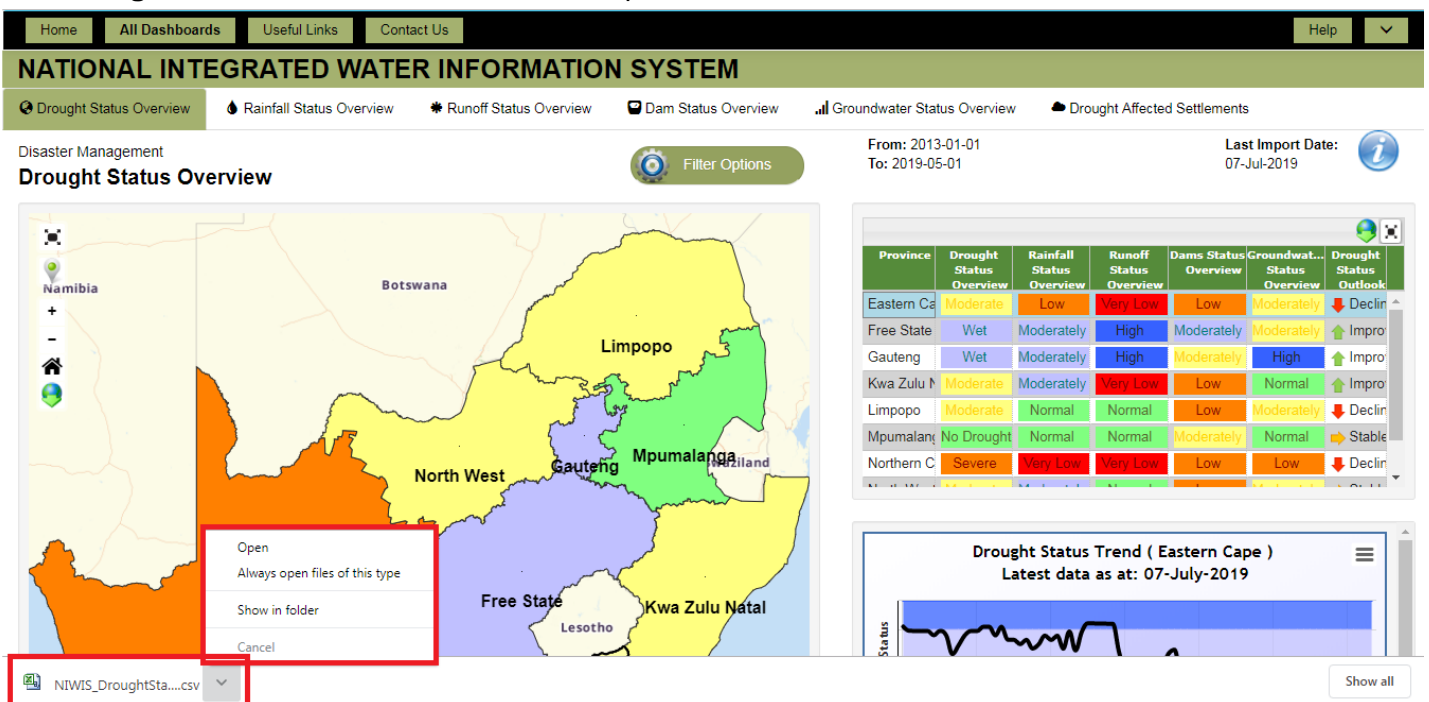


Figure 16: Shows how to open the file

1.8 How do I select a province/area on the map?

You can select a province or area by hovering over the map as show below in **Figure 17**. Click on the map

or area selected, and automatically the table will be highlighted showing the selected area. An area on the map can also be selected by selecting the area in the table as shown in **Figure 18**.

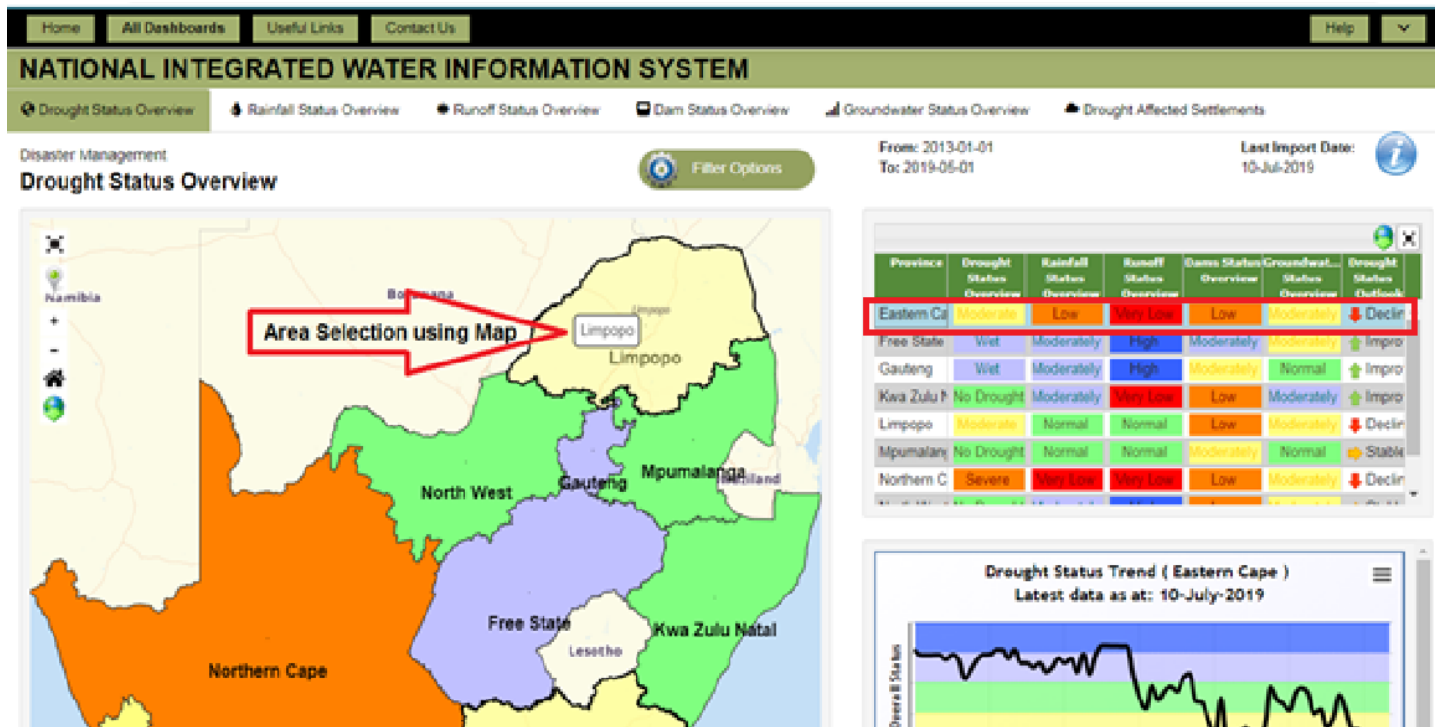


Figure 17: Area selection using the map

Or you can select a province/area by clicking on the table as shown in **Figure 18** below.

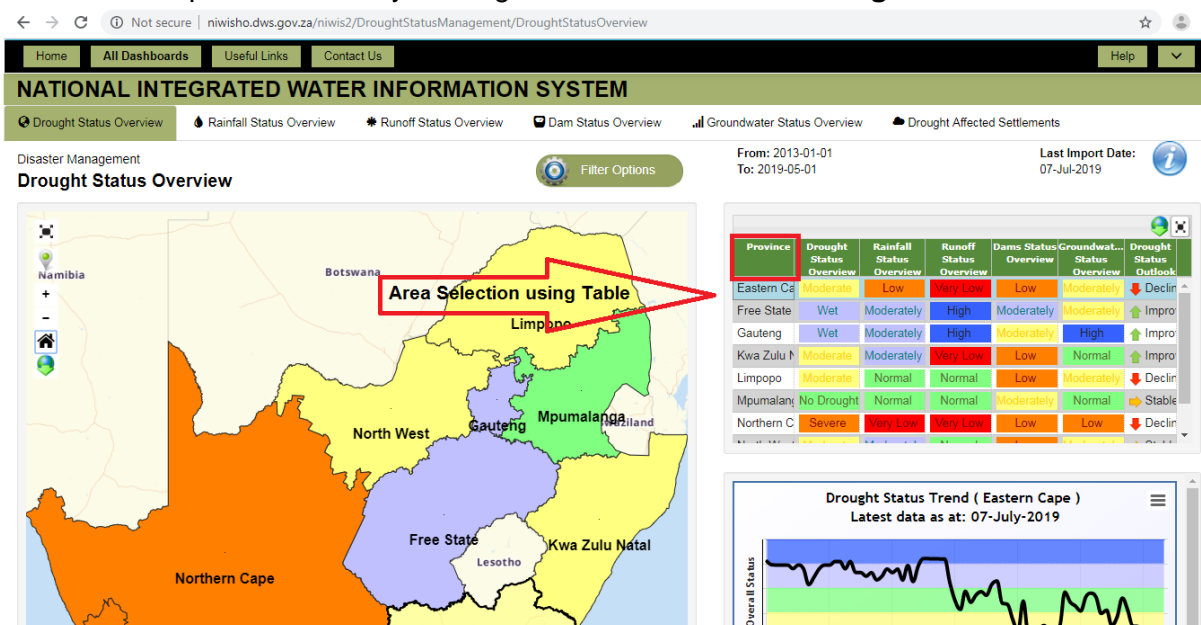


Figure 18: Area selection using the table

1.9 The NIWIS demonstration is also available in the video as shown in Figure 18 below.

Click the drop-down Help menu at the far right as shown below **Figure 19**.

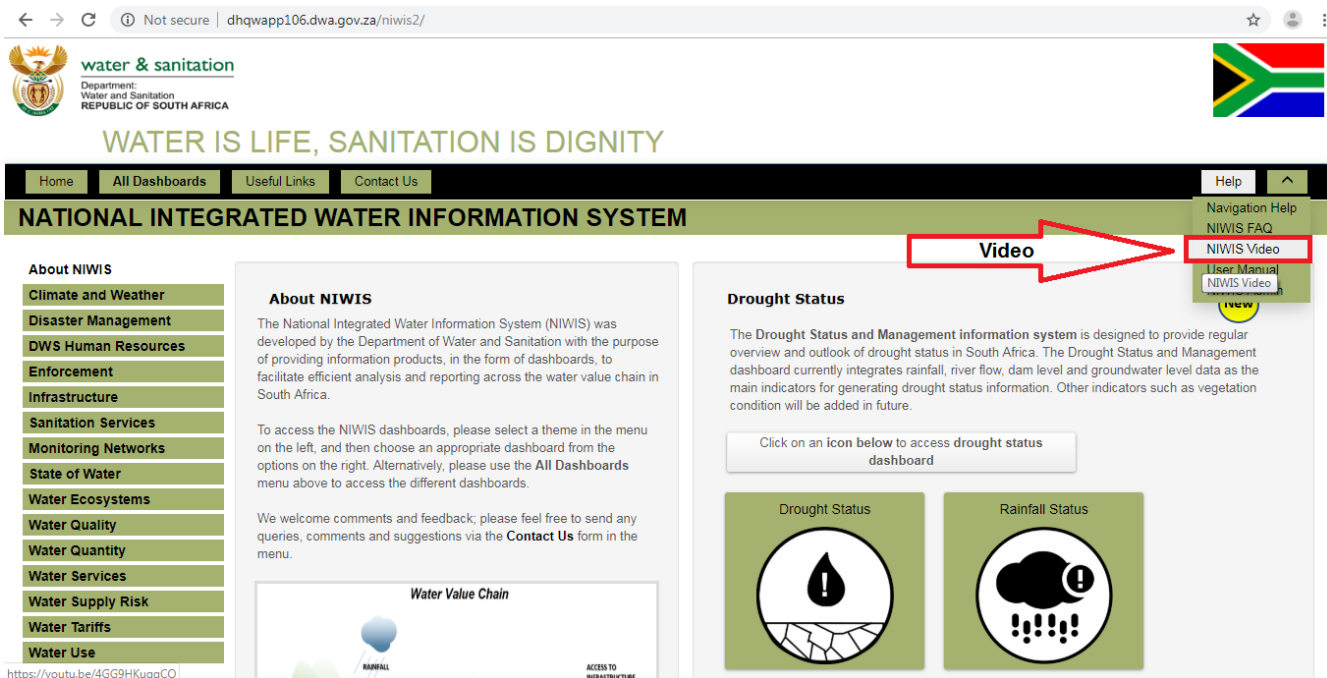


Figure 19: NIWIS video

2. SECTION B

2.1 The use of mobile devices

Please Note: only the public link (<http://niwis.dws.gov.za/>) can be accessed when using mobile devices. When using the mobile devices (e.g. cell phone) the menu maybe hidden as shown in **Figure20**; depending on the size of the screen of the device in use. However when hovering a mouse/cursor on a menu bar the menu option will appear as shown in **Figure 21**.

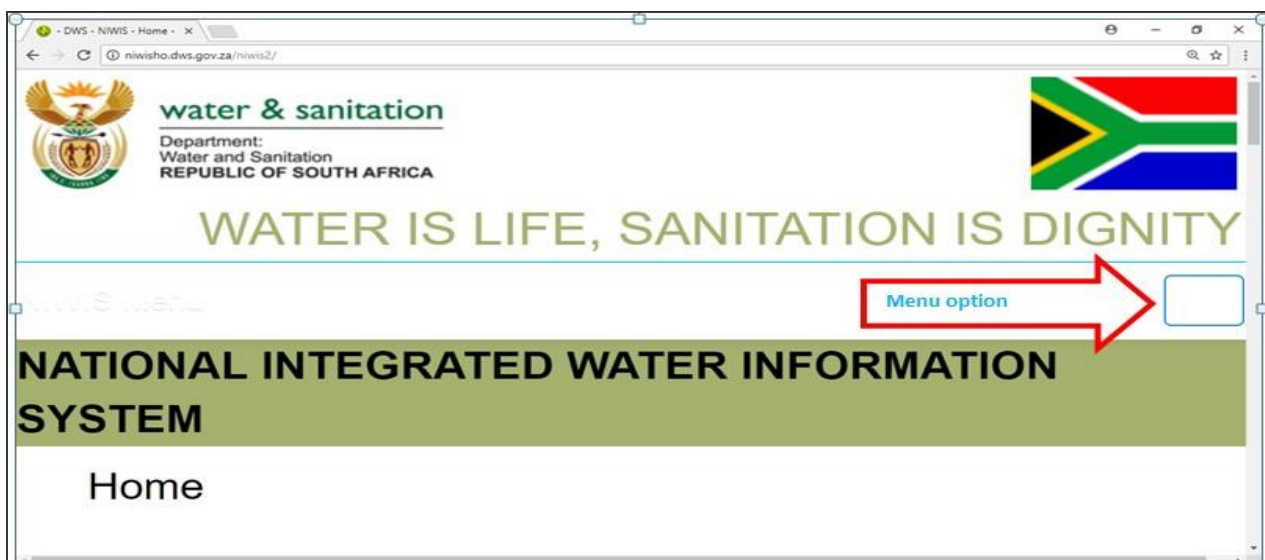




Figure 20: The hidden menu option

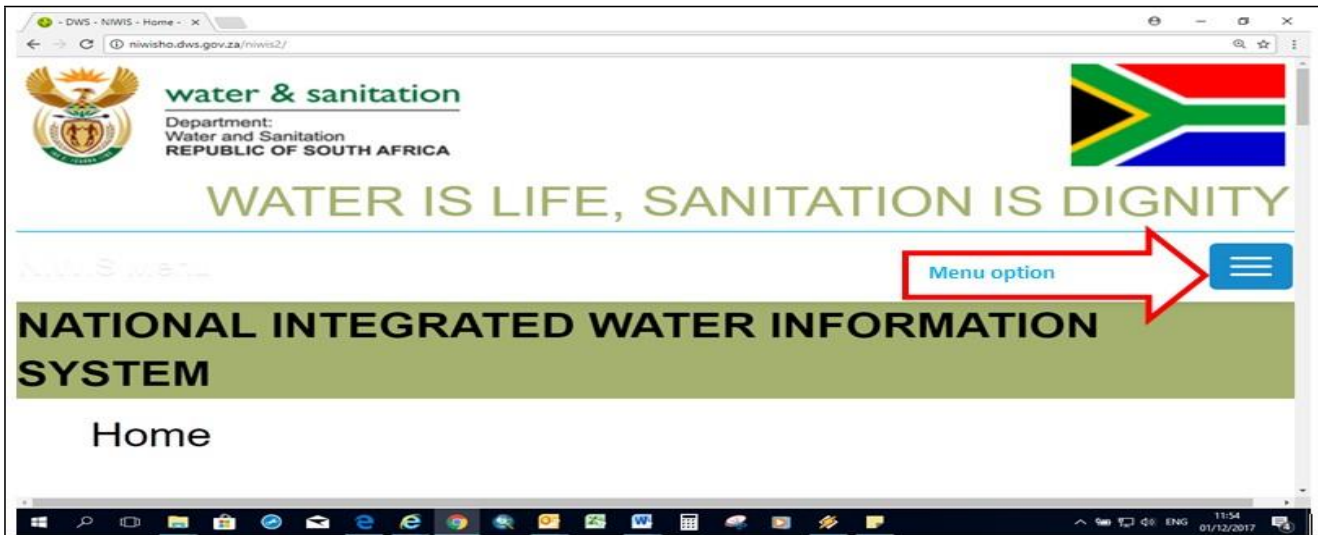


Figure 21: Hovering the mouse on the menu

When clicking on the menu options, the list of categories of dashboards will appear as shown in **Figure 22**. Please note that the information will remain the same as when using a computer, only the view may change. Similarly to a computer view, the categories can be expanded by clicking the dropdown arrows as shown in **Figure 22**.

NEED A SCREENSHOT FOR PHONE USERS

3 SECTION C

3.1 Introduction

In addition to the above, NIWIS has further developed over 40 information products (dashboards), each of which is meant to answer a specific water related question. In the order of the categories mentioned above, the dashboards would be providing answers to the following questions, and for each of the question highlighted, the corresponding dashboard would be depicted as a guide. Each dashboard, amongst the list to follow, would have a caption, briefly explaining each dashboard and what it is meant to address. Moreover, for the purpose of this manual, not all the dashboards would be presented here.

3.2 The Health Risk Related To Using Untreated Water from Rivers And Dams Dashboard:

Where are the Water Quality Health Risk areas of SA Rivers and Dams?

Therefore, click on **All Dashboard tab from the menu bar**, then the user selects the **water quality category** and then chooses **health risk related to using untreated water in Rivers and Dams**. The map shows the position of 10 monitoring stations with the worst water quality, based on the SA water quality guidelines. The monitoring stations names and the number of samples is each risk category is displayed in the table next to the map. The map filter offers the water quality variables in order from worse to better to choose from.

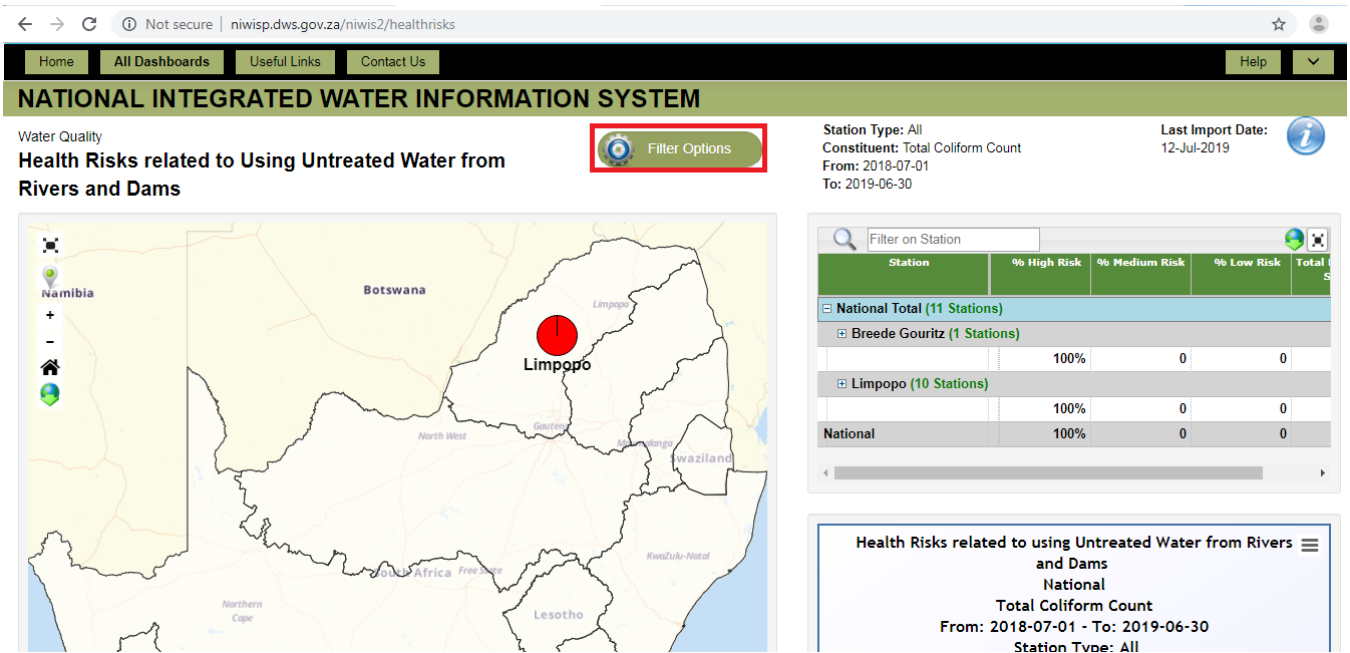


Figure 22: Health Risk related to Using Untreated Water from Rivers and Dams

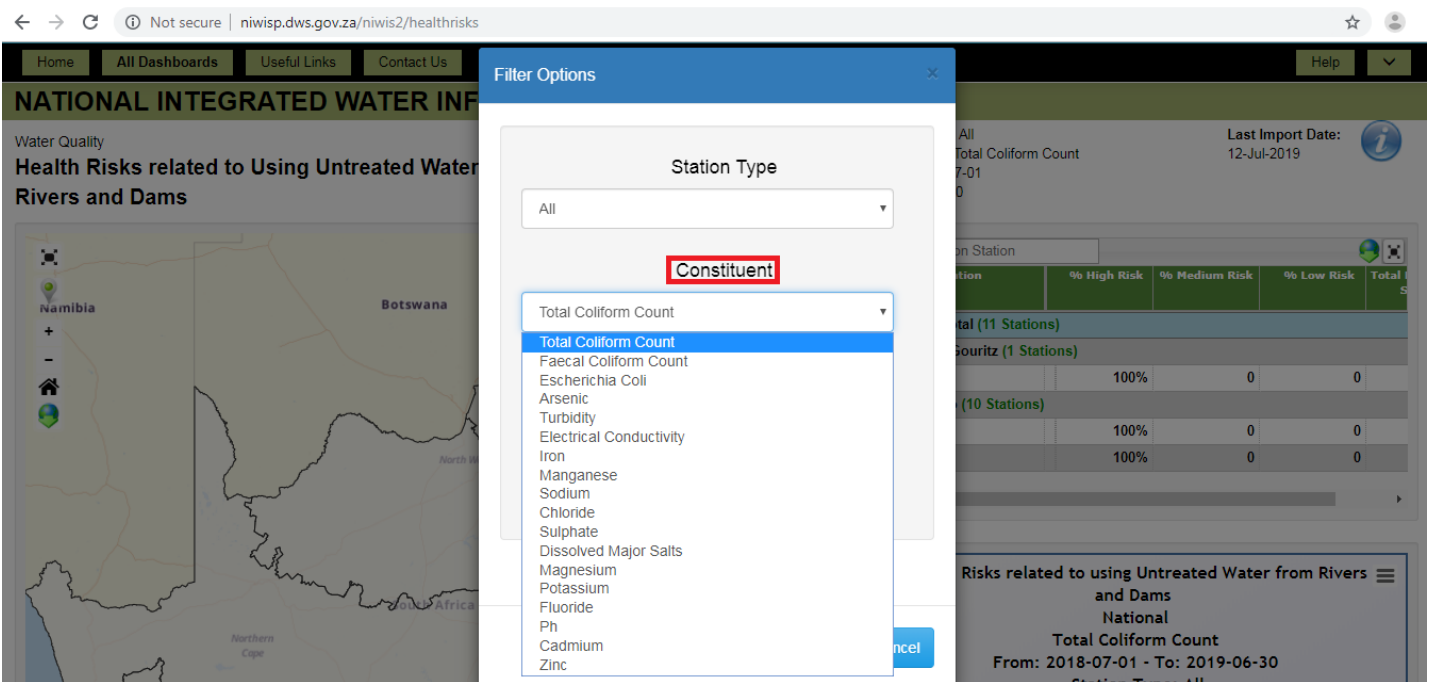


Figure 23: Map filter offers constituent/variable to choose from.

The user can also zoom into the area with worst water quality and select one of the points on the map to highlight it in the table. The monitoring point at Limpopo shows 100% high risk for all? Total Stations (99%) as shown in **Figure 24** below.

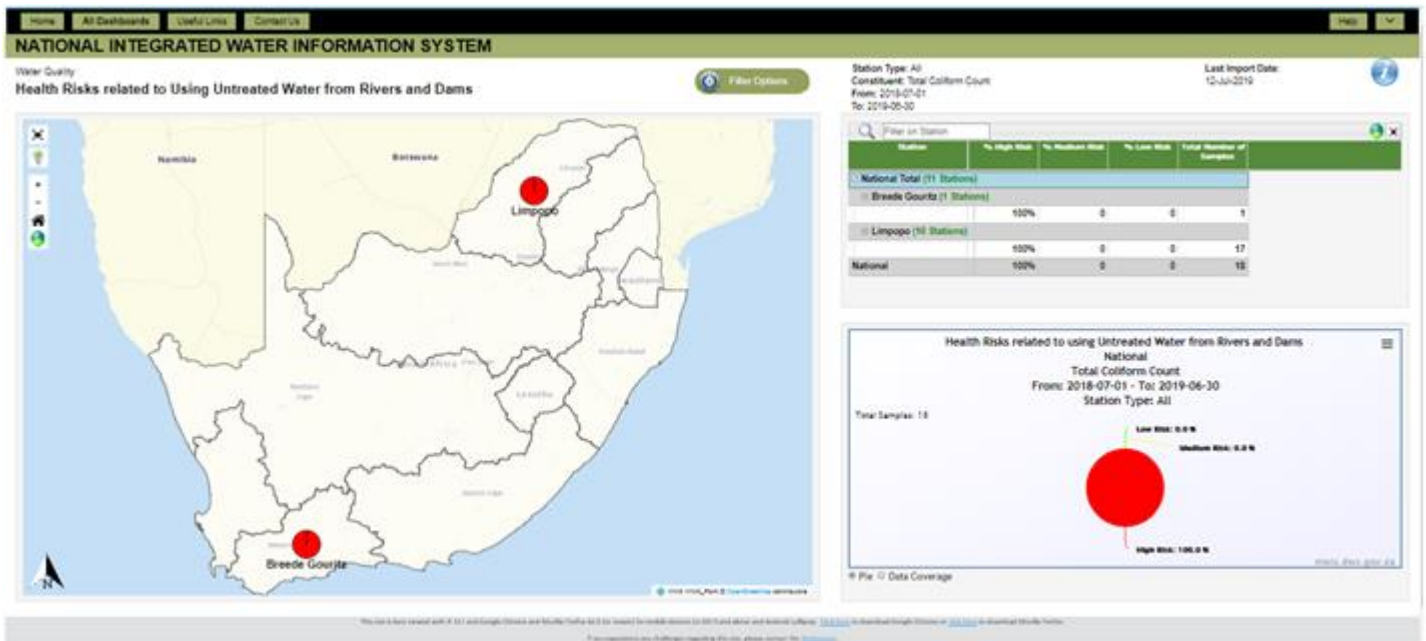


Figure 24: Zooming into the specific area/point in the dashboard

3.3 Surface water storage dashboard:

Which WMA has the lowest % Full Supply Capacity and where are the problem areas?

Therefore, click on **All Dashboard tab from the menu bar then select Water Quantity category** and choose **Surface Water Storage**. The map displays the % Full Supply Capacity (FSC) in each Water Management Area. It can be seen that only one WMA still has a % FSC that is Moderately High.

On the graph the user can see the current and previous years values or select to see the trend over 5 years.

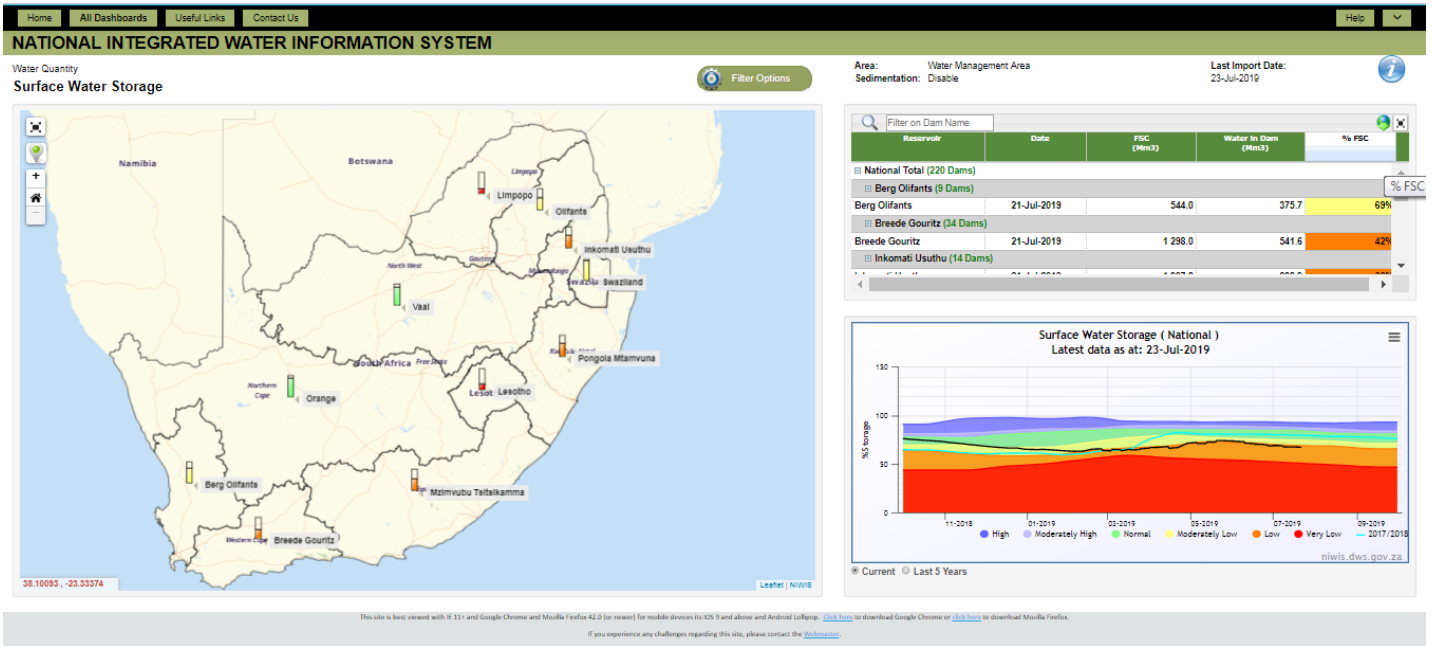


Figure 25: Surface water storage dashboard

The user can also zoom into an area on the map as shown in the figure below (**Figure 26**) or select a WMA from the table to see the % FSC of each dam in the area. The table values are colour coded. In the table it can be seen that, e.g. Olifants Dam has a % FSC of only 58%.

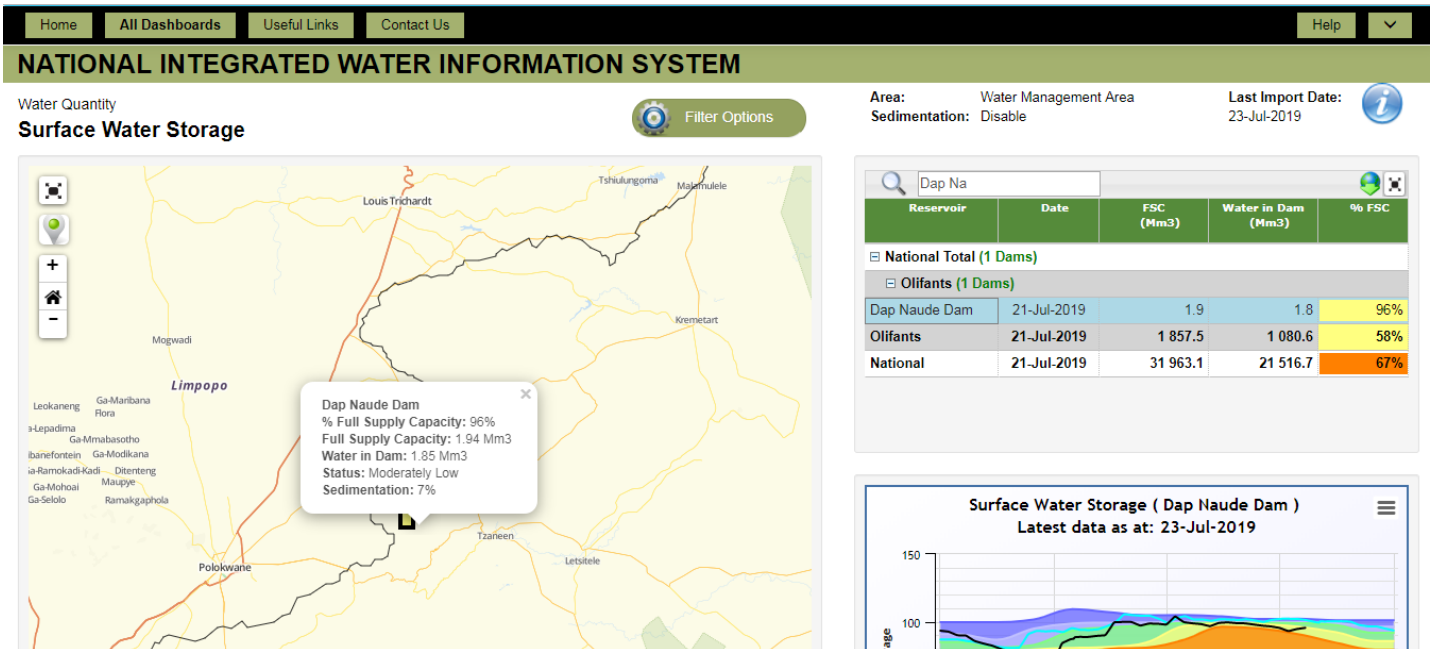


Figure 26: Zooming into the specific area/point in the dashboard

3.4 River Flows dashboard:

What is the Status of River Flows in SA and where are areas of concern?

Therefore, click on **All Dashboard tab from the menu bar and select the Water Quantity category** and then choose **River Flows**. The dashboard displays the status of River Flows in each WMA as well as a National summary in the table and chart. From the figure below, the pie chart indicates that **nationally** the majority of stations fall in the Very Low flow category.

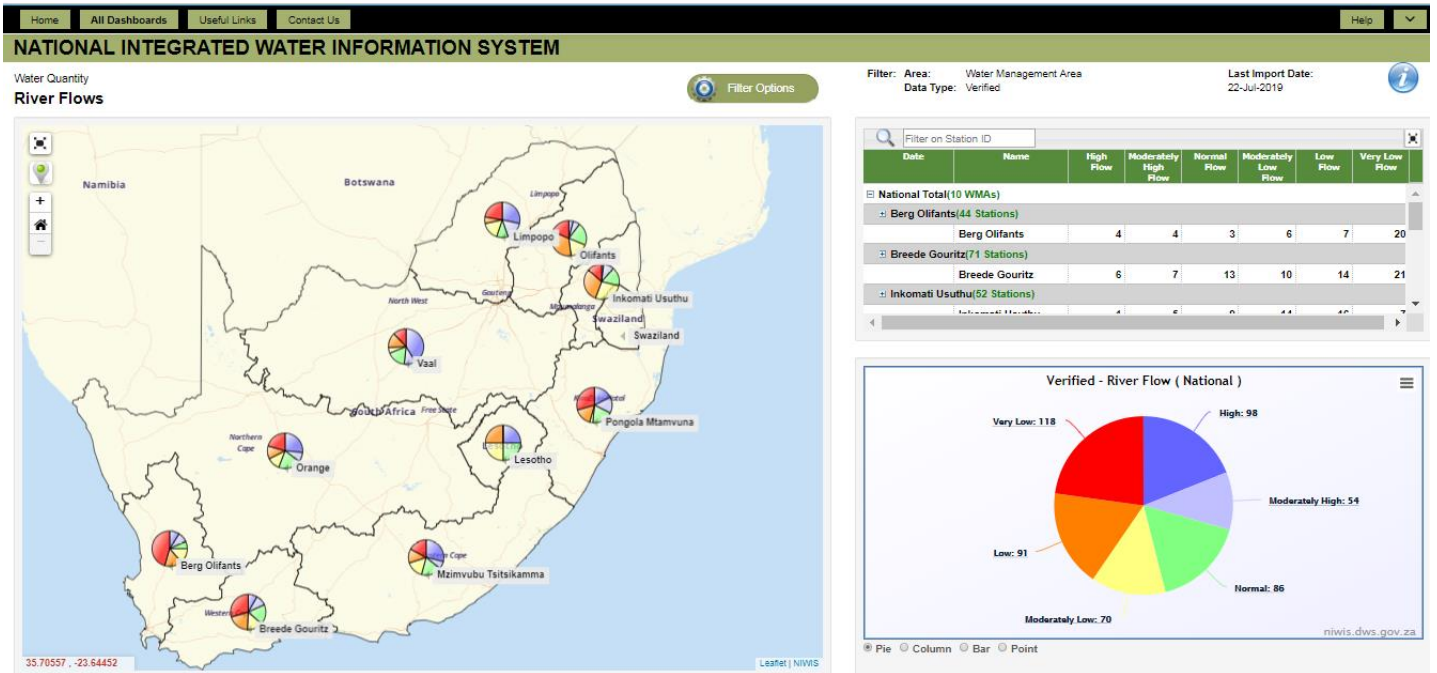


Figure 27: River Flows dashboard

As shown in the figure below, the user can also zoom into the WMA with the lowest values and select a station to see the flow in cubic meters per second at the station. The stations in the table are colour coded corresponding to the categorization on the map, e.g. W5H006 indicated – Very low Flow; the graph displays the current and previous years as well as the river flow at the station over a period of time.

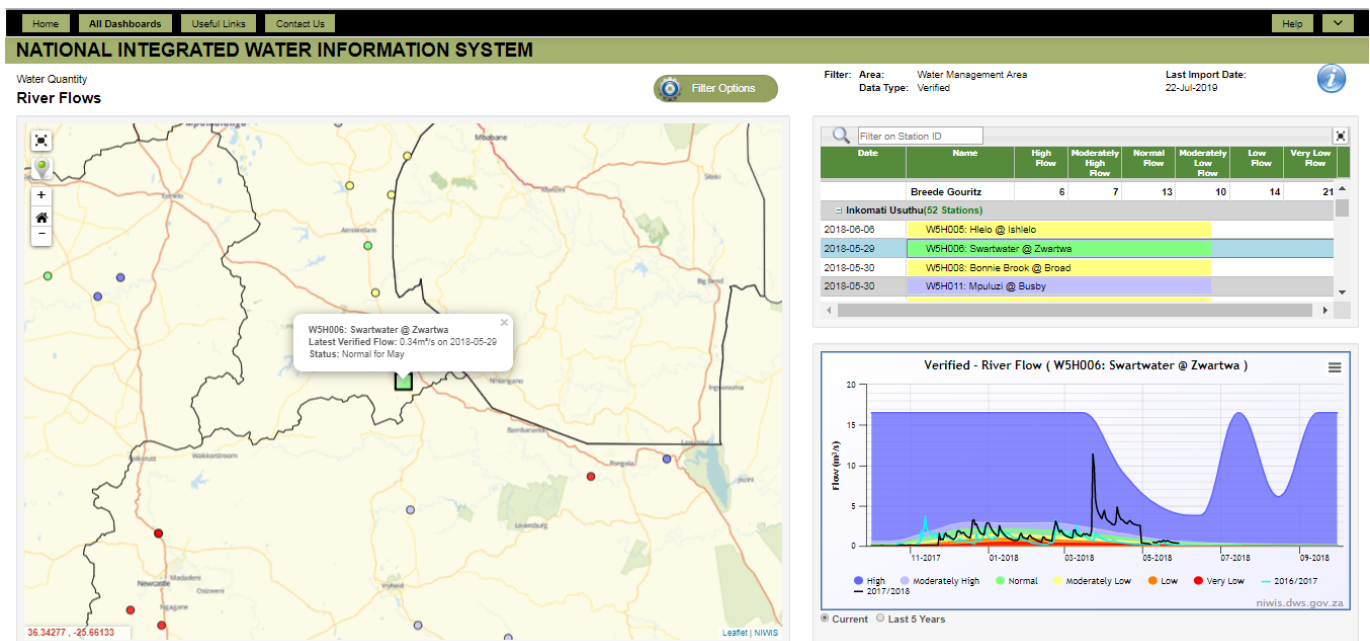


Figure 28: Zooming into the specific area in the dashboard

3.5 Groundwater reserve dashboard:

How many Groundwater Reserves have been done?

Click on **All Dashboard tab from the menu bar and under the Water Ecosystem category** then select **Groundwater Reserve**. The map displays all the quaternary catchments where groundwater reserves have been done as well as a summary for each **WMA**. The **percentage Desktop, Rapid, Intermediate** and **Comprehensive Reserves** that have been done are displayed on the pie chart

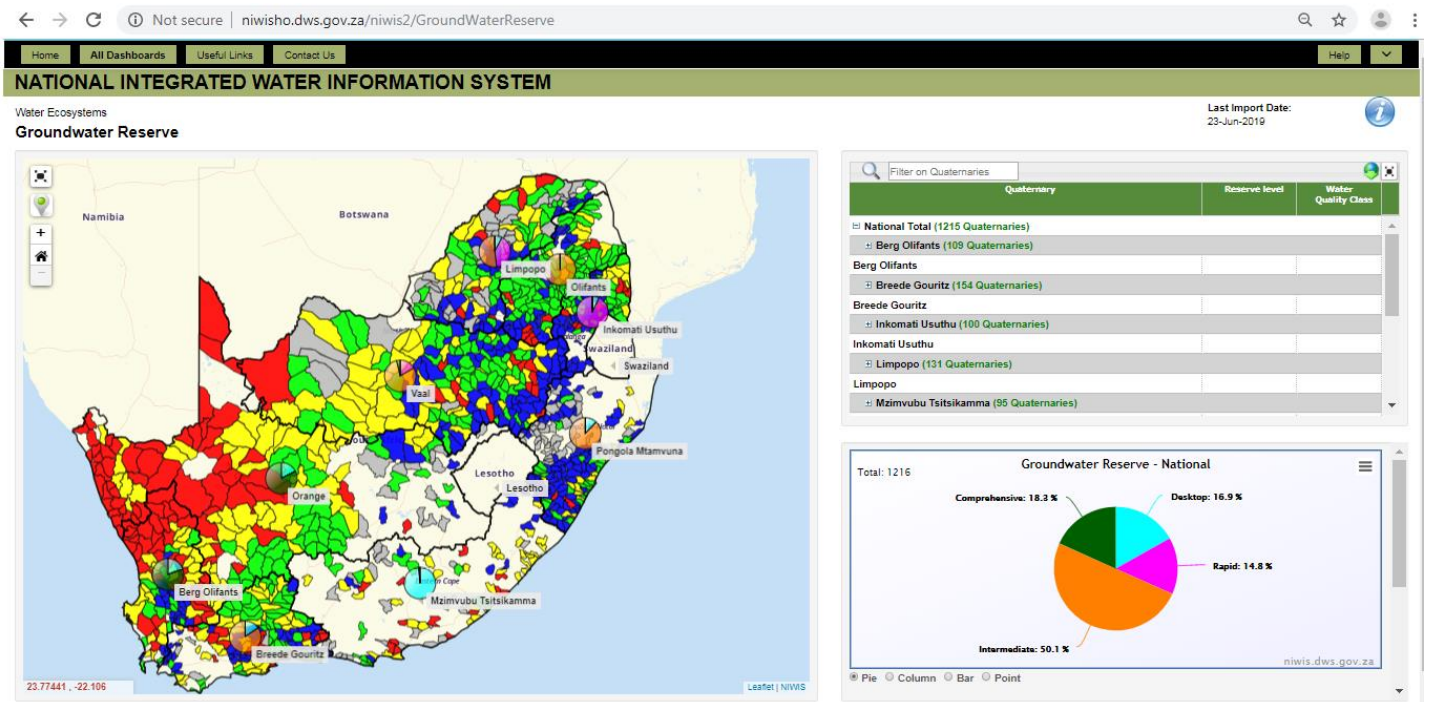


Figure 29: Groundwater reserve dashboard

Figure 30 shows that when the user zoom into an area of the reserves that have been done in each quaternary catchment and the Reserve level can be seen:

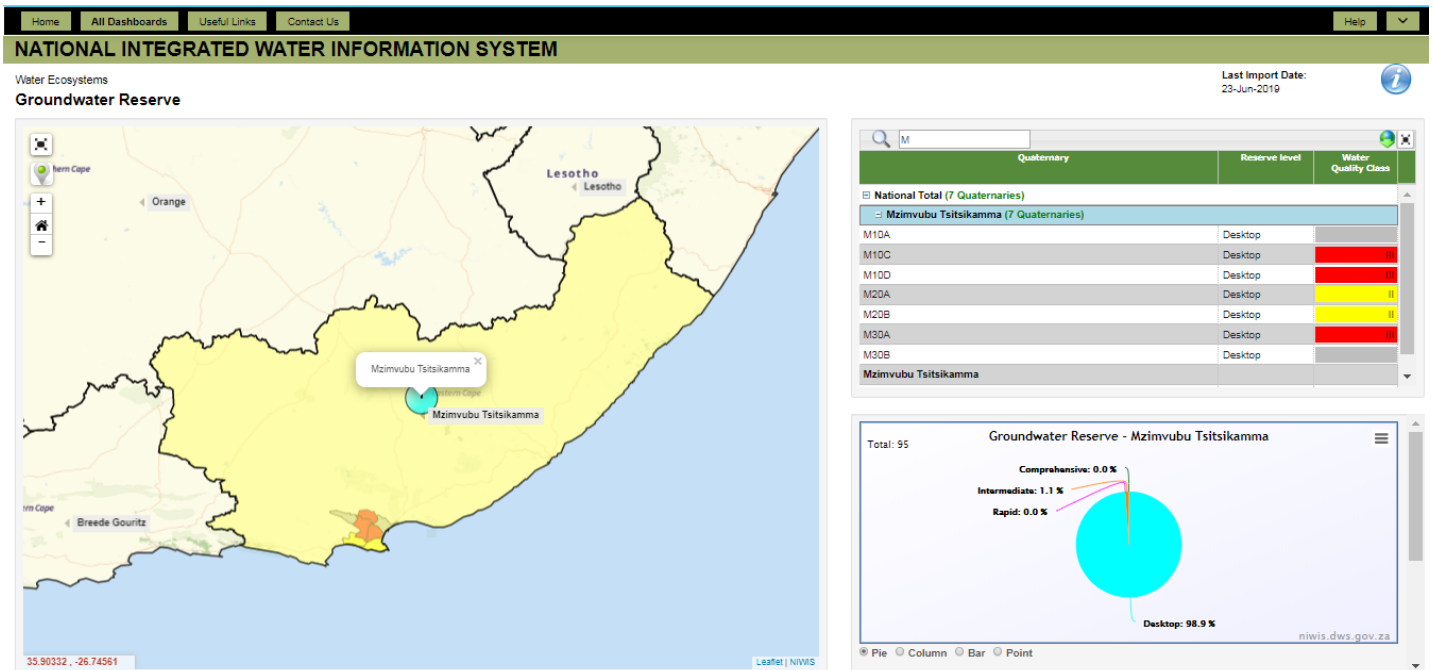


Figure 30: Groundwater reserve dashboard

3.6. Water Supply Reliability Dashboard:

What percentage of the population has access to Reliable Water Supply in SA and where are the problem areas?

Click on **All Dashboard tab from the menu bar and then under the Water Services category select Water Supply Reliability**. The map displays the reliable water supply in each province. The number and percentage (%) of population as well as households are displayed. This is divided into Urban and Rural values.

As indicated by the red arrow in the **Figure 31**, it shows that, nationally, 63% of SA population has access to reliable water supply. From Limpopo and Mpumalanga (Crisis) have the lowest percentages. The Western Cape has Good Reliable Water Supply.

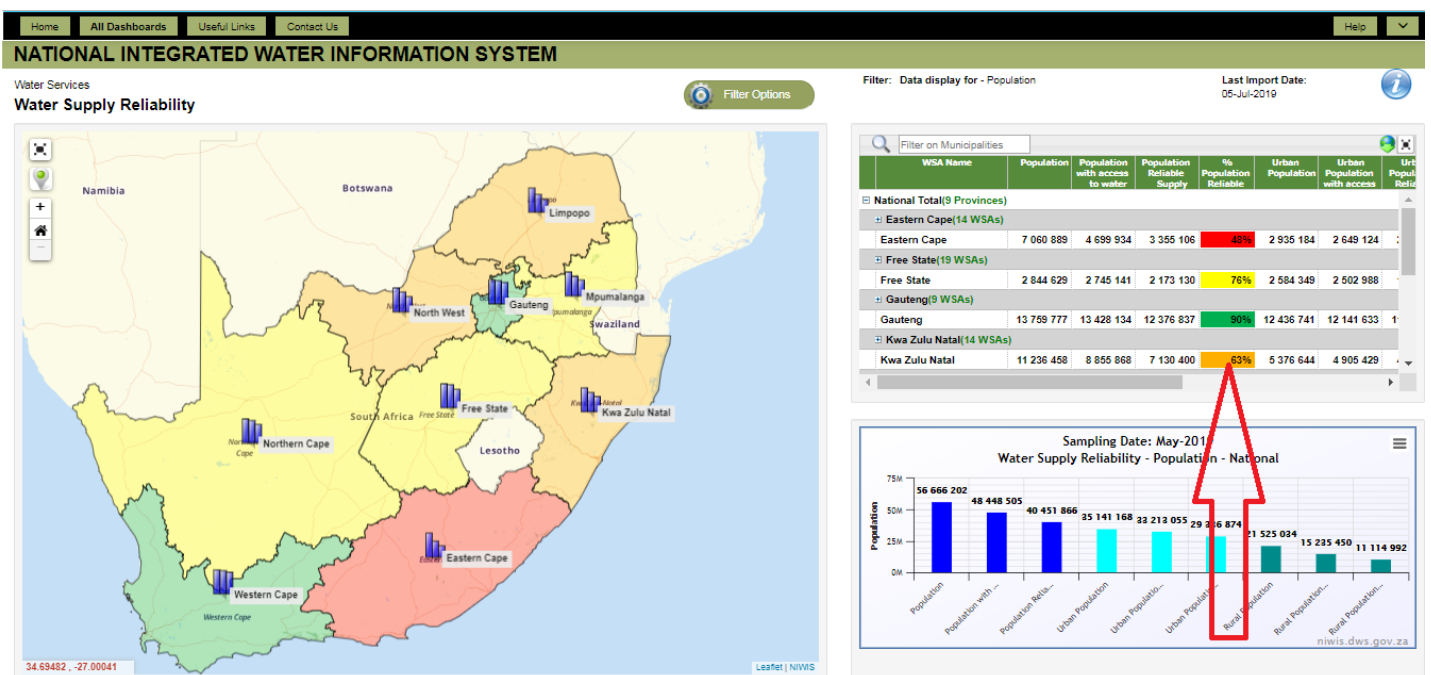


Figure 31: Water supply reliability

The user can also zoom into a province (**Figure 32**) with lowest percentages and view the population and households numbers with access to reliable water supply values for each Local Municipality. In this case as seen in **Figure 32**, the Greater Sekhukhune District only 40% of the population has access to reliable water supply.

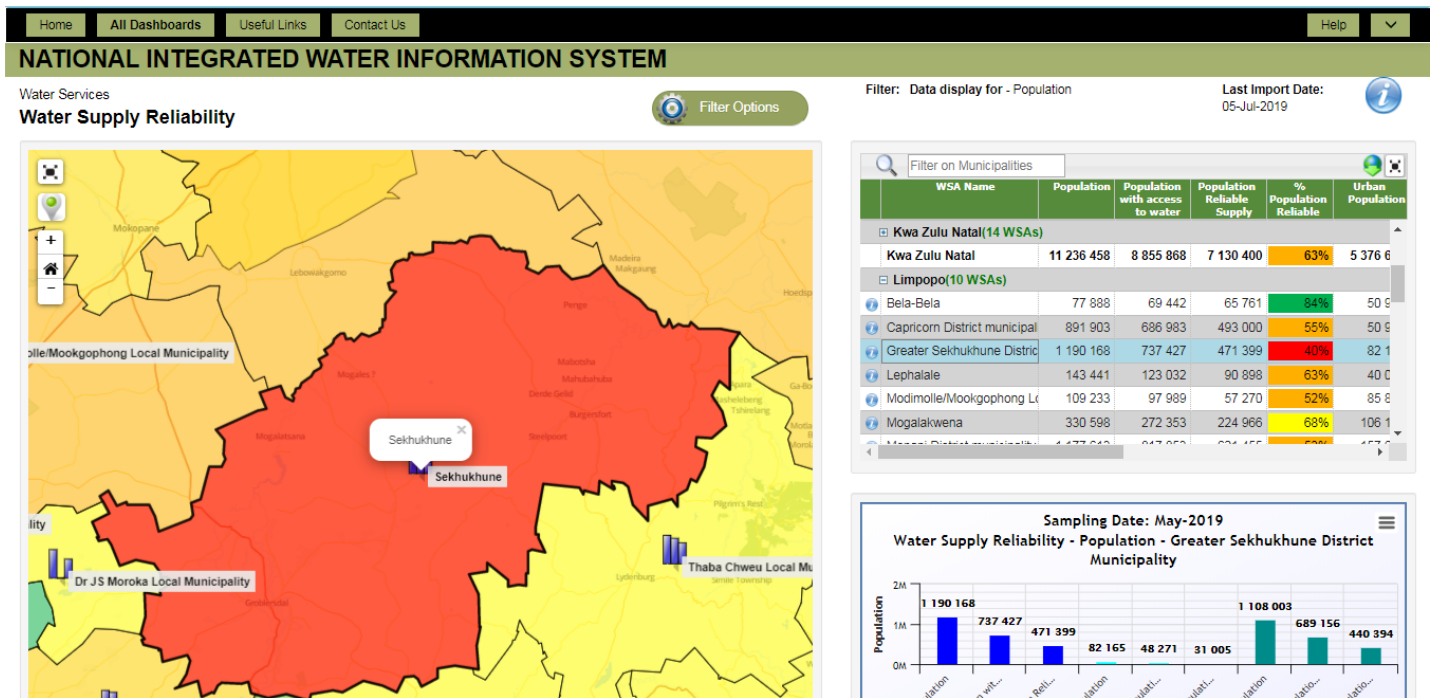


Figure 32: Water supply reliability

3.7 Drought Status Dashboard:

What is the Status of Drought in SA?

Click on **All Dashboard tab from the menu bar and then under the Disaster Management** category select **Drought Status Overview**, the **Dam Levels** and **Trends** can be accessed by choosing “**access to current dam levels**” which will navigate to the surface water status dashboard to look at current dam level information. A chart showing monthly rainfall and dam storage levels can be viewed as well as a chart showing dam storage levels.

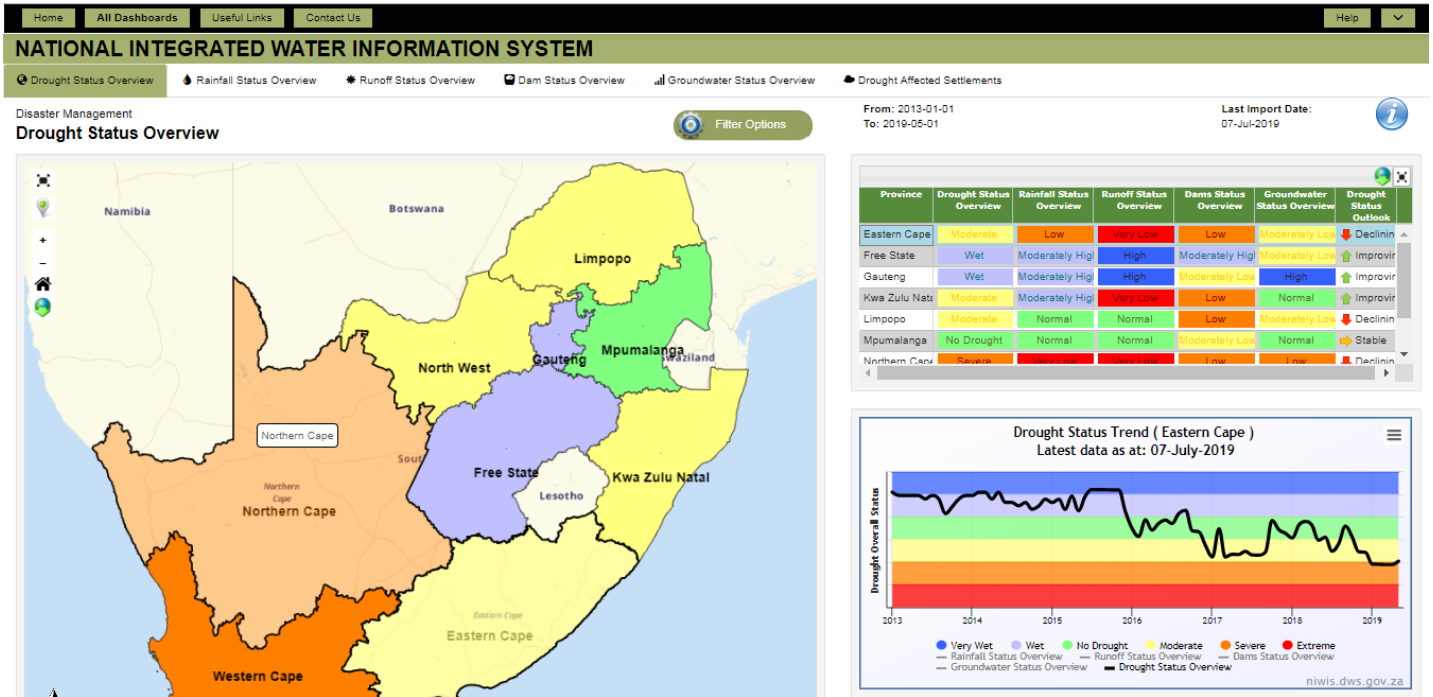


Figure 33: Drought Status Overview

Figure 34 shows that from the Rainfall Trend links, the National Annual Rainfall levels and National Monthly cumulative Annual Rainfall chart can be viewed.

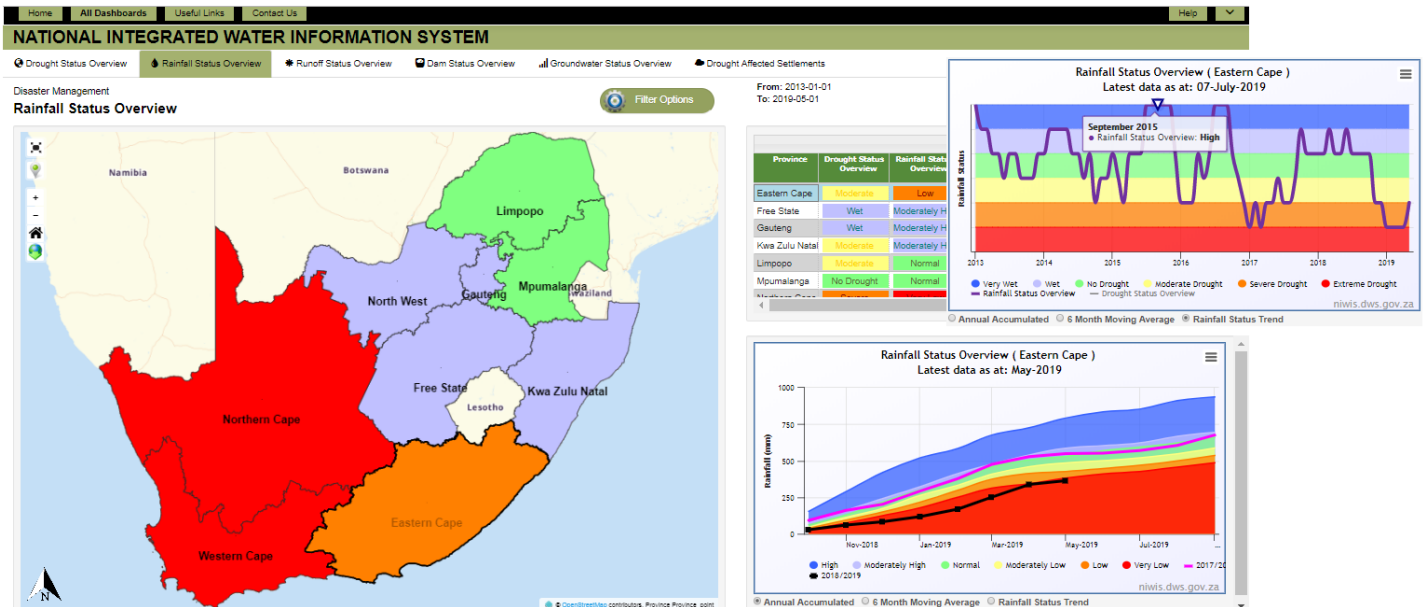


Figure 34: Drought Status Overview



4 Conclusion

This document aims to achieve the following; interaction of the system (Chapter One) and the key questions that these information products aimed to answer (Chapter Two). However the users should note that this manual will change as new information products are added or when new feature are added in the existing dashboards.