

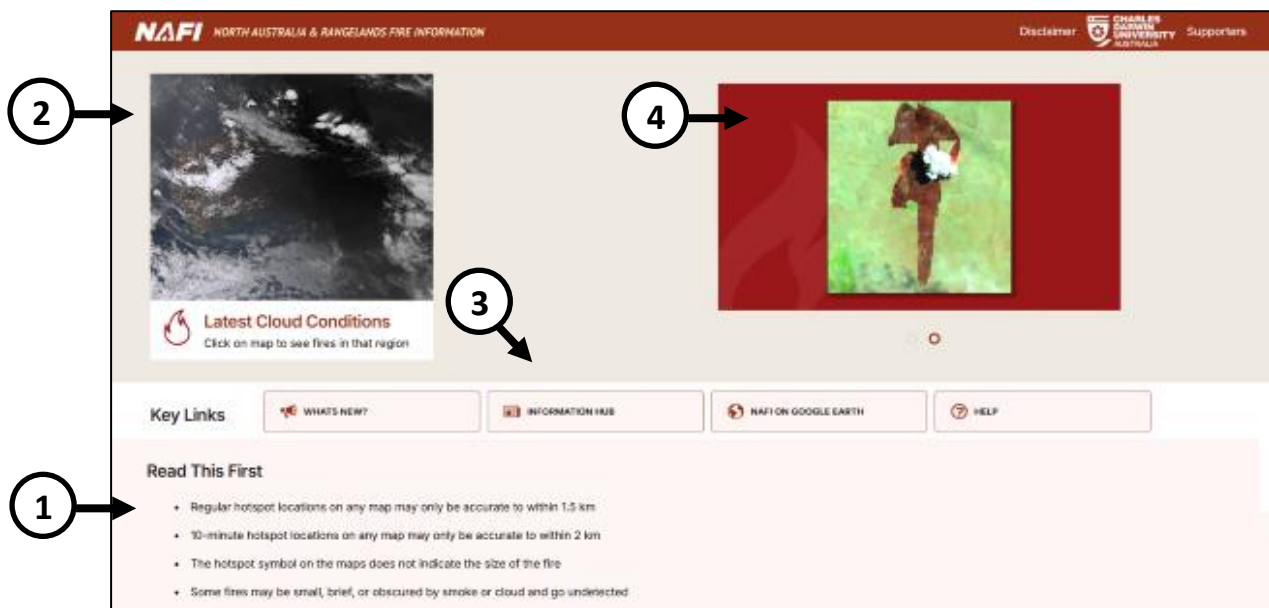
Using NAFI 4

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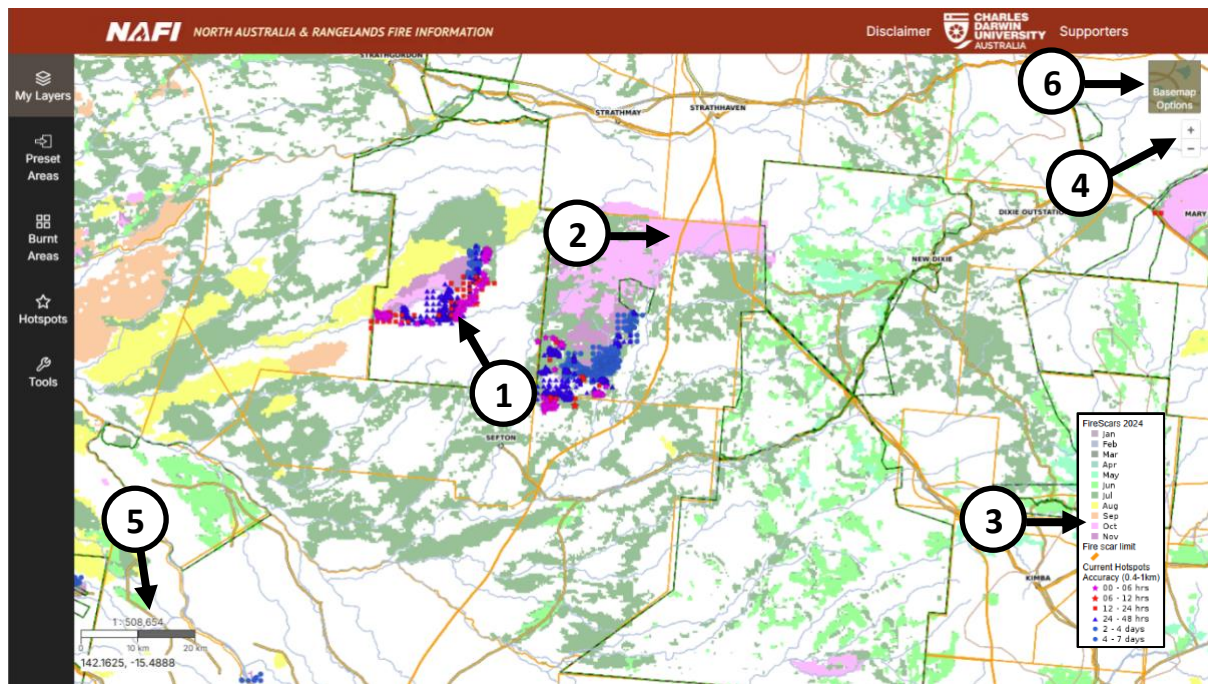
Using NAFI 4 – viewing maps of current fires

The North Australian & Rangelands Fire Information (NAFI) Website provides maps of fires based on satellite images to help fire managers across regional and remote Australia. The home page has a number of features to help you get the fire map you need:








- 1** **Read this advice on uncertainty first.** The satellites used are only capable of mapping the approximate location of active fires and their detection of fires is affected by cloud cover and other factors
- 2** **Quickly view recent fire activity.** You can also bring up maps of recent fire activity by clicking on the satellite image. You will get a fire map across the broad region you click on: e.g. across the Top End of the NT. The satellite image also shows the current cloud conditions – courtesy of Geoscience Australia’s Sentinel website.
- 3** **There are quick links** to the latest updates on the site, an information hub on how to get more out of maps for fire management, how to view NAFI on *Google Earth* and help information
- 4** **A slide show** highlights useful tools and features of the NAFI service.

The Fire Maps















The maps of recent fire activity show:

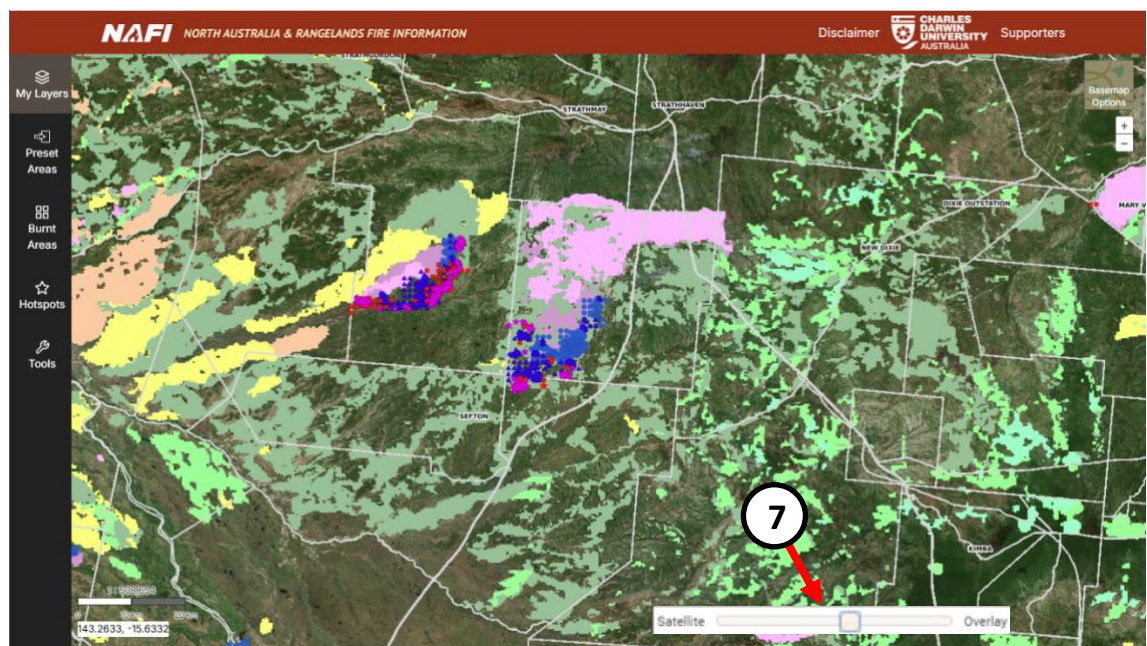
- Actively burning fires from the last two days are displayed as coloured points, or “hotspots” with the pink and red hotspots indicating more recently detected burning fires and the blue hotspots indicating fires detected earlier as shown below.

-  Fires detected in the last six hours
-  Fires detected in the last 6 - 12 hours
-  Fires detected in the last 12 – 24 hours
-  Fires detected in the last 24 – 48 hours
-  Fires detected in the last 2 – 7 days

- Areas of land burnt in the current calendar year are shown as coloured patches with the colour corresponding to the month in which they were detected as being burnt – and the warmer colours (yellow, orange, pink and purple) allocated to those warmer months where fires are generally more intense.

 January	 May	 September
 February	 June	 October
 March	 July	 November
 April	 August	 December

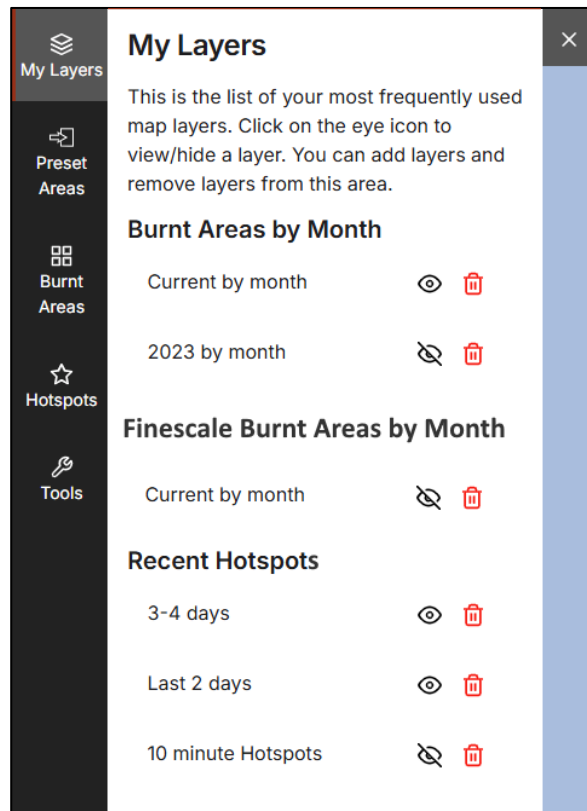
- ③ The Legend shows the symbols used for the currently displayed map layers. You can minimise the legend by clicking the X at the top.
- ④ The map navigation is similar to that used on *Google Maps* with + and – buttons for zooming in and out of the map. Moving the cursor pans the maps and the scroll wheel on your mouse can also be used to zoom in and out.
- ⑤ The distance scale of the map is displayed in the bottom left. Below that the latitude and longitude of the centre-point of the displayed map is shown in decimal degrees
- ⑥ You can choose from different background map options by clicking on the small image in the upper right of the map. You can choose from line/topo maps (default), line maps, and topo maps as well as the Bing satellite image.



- ⑦ If you select the Google satellite image as a background, you can use the slider bar at the bottom of the screen to fade the fire scars so that the background features become easier to see behind the fire scars.

! YOU NEED TO REFRESH THE MAPS TO SEE THE LATEST HOTSPOTS. The hotspots are usually updated a few times a day (see *More about hotspots*) but if you leave a NAFI fire map displayed for a long time hoping to see the hotspots update you will be disappointed – nor will moving the map about by small distances (panning) update the information as this also draws on stored maps to make panning quick. To see the latest hotspots, you need to either zoom in or out or pan by a large distance to get the maps to update. If you visit the site briefly for the latest hotspots, and then close the site and visit it again later, it will also display updated maps.



My Layers




You can change the fire information NAFI displays by using the menu on the left, and the place to do this is the “My Layers” menu at the top. Click on this area and it will expand out.

“My Layers” has been set up with the map layers most users will use most frequently – but these layers can be changed by the user.

To the right of each layer are icons:

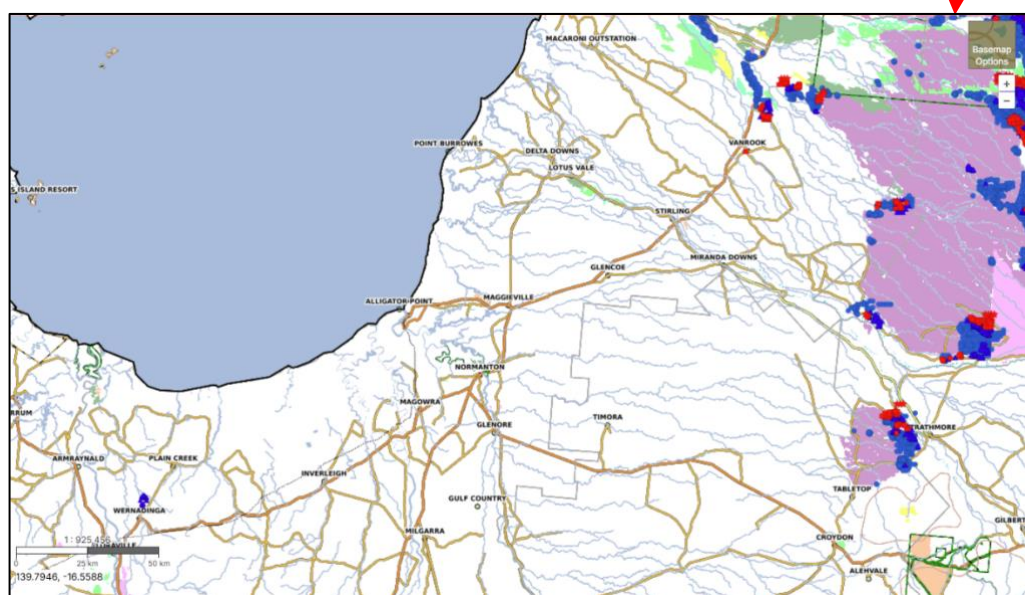
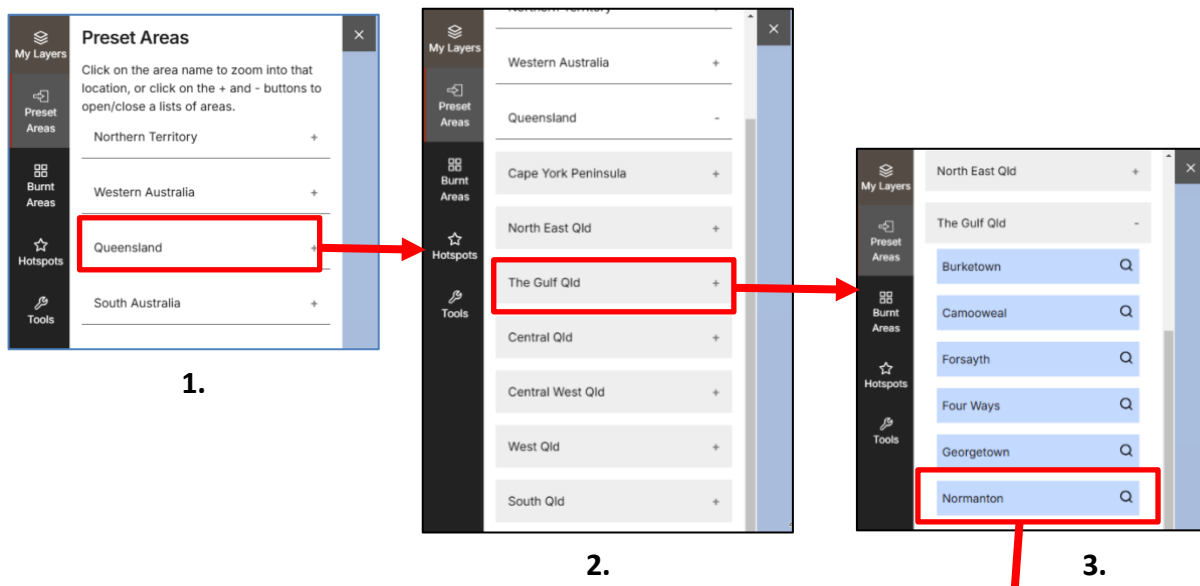
 The Open Eye icon tells you the layer is visible on the NAFI map. You can click on this to hide the layer.  .Clicking on the Shut Eye icon will make the layer visible again.

 To remove a layer from “My Layers” click on the trash can. The layer will still be available in either the “Burnt Areas” or “Hotspots” menus to restore to “My Layers”.

Preset Areas

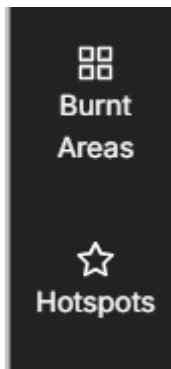
The Preset areas menu allows you to quickly navigate to an area of interest on the map.

1. Open the Preset Areas menu on the left and select the State/Territory your area is in.
2. The menu will then show a list of regions – select the one your area is in.
3. You can then choose from a list of sub-regions
4.and this sub-region will display on the NAFI map.



4.

Using the Burnt Areas and Hotspots menus



With these menus you can view map layers of burnt areas from different years along with multi-year burnt area fire histories, and you can also view maps of hotspots (the location of active fires) from different years.

For each burnt area and hotspots map layer you have three options:

2023 by month



You can get information on what the layer displays using the info button.

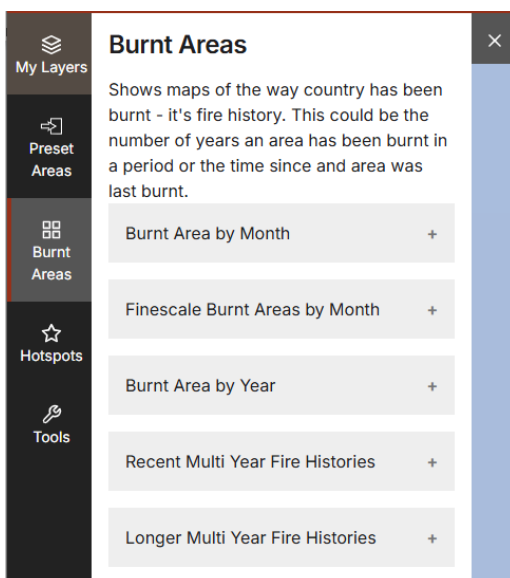


You can choose to add the layer to your “My Layers” list by clicking on the plus button. Adding a layer to this area will allow you to easily use it every time you jump on NAFI. Added map layers will display a green tick.



You can display the layer on NAFI by clicking on the toggle button. A displayed map layer will have its toggle shifted to the right and be highlighted in green.

Burnt Area Layers











The Burnt Areas menu allows you to display different fire histories of what’s been burnt.

Some maps only show a single year of fire history displayed either as single colour or with different colours for each month. You can also display single year fire histories that use fine scale mapping for some areas.

You can also display multi-year fire histories that show the frequency of burning and the time since an area was last burnt.

Click on the headings to reveal the different layers.

Burnt Areas by Month

Burnt Area by Month		-
Current by month	  <input checked="" type="checkbox"/>	
2023 by month	  <input type="checkbox"/>	
2022 by month	  <input type="checkbox"/>	
2021 by month	  <input type="checkbox"/>	

These map layers show the areas burnt in a given year – from 2000 to the current year to date.











Each burnt area is mapped using 250m x 250m pixels and coloured by the month in which it was detected as being burnt by the satellite imagery that the mapping is based on.

The months burnt later in the year are coloured with warmer colours (yellow, orange, pink and purples)

while those burnt earlier the year have cooler colours (mostly greens and blues). This is because in most of the country NAFI covers, fires later in the year tend to burn more intensely than those early in the year.

These layers are displayed as semi-transparent as they are often used with current fires and you need to see the landmarks in burnt country.

Finescale Burnt Areas by Month









Finescale Burnt Areas by Month		-
Current by month	  <input type="checkbox"/>	
2023 by month	  <input type="checkbox"/>	
2022 by month	  <input type="checkbox"/>	
2021 by month	  <input type="checkbox"/>	
2020 by month	  <input type="checkbox"/>	

These map layers show the areas burnt in a given year mapped at a finer scale than the regular burnt area using 20m x 20m pixels across selected areas in the NT and WA or using 10m x 10m pixels across Qld.

They cover the years 2020 to the current year to date.

They use the same colour scheme by month as the regular 250m mapping (see above) and are also displayed as semi-transparent.

Burnt Areas by Year







Burnt Area by Year		-
2024	  <input type="checkbox"/>	
2023	  <input type="checkbox"/>	
2022	  <input type="checkbox"/>	
2021	  <input type="checkbox"/>	

These map layers show the areas burnt in a given year – from 2000 to the current year to date.

Each burnt area is mapped using 250m x 250m pixels and use the same colour for a given year.

They are not displayed as semi-transparent but with solid colour. This is so layers for different years can be displayed on top of each other which allows you to produce a time-since-last burnt multi-year fire history for various date ranges.

Recent Multi-Year Fire Histories













Recent Multi Year Fire Histories			-
Burnt 2023 - 2024	 	<input type="checkbox"/>	
Burnt 2022 - 2024	 	<input type="checkbox"/>	
Burnt 2021 - 2024	 	<input type="checkbox"/>	

Each of these map layers displays more than one year of burnt area mapping. E.g. the Burnt 2023-2024 layer shows the 2024 Burnt Area by Year mapping overlayed over the 2023 Burnt Area by Year mapping.

These layers can be used to gauge the levels of grassy fuel – particularly in the high frequency fire zone of the far north. Up to three previous years of fire history can be used as this is around the maximum fuel growth expected in the monsoonal high frequency fire zone.

For longer fluke histories you can layer individual Burnt Areas by Year layers.

Longer Multi-Year Fire Histories

Longer Multi Year Fire Histories			-
Years Burnt 00-23	 	<input type="checkbox"/>	
Late burnt 00-23	 	<input type="checkbox"/>	
Last burnt 00-23	 	<input type="checkbox"/>	
Years burnt 14-23	 	<input type="checkbox"/>	
Late burnt 14-23	 	<input type="checkbox"/>	
Last burnt 14-23	 	<input type="checkbox"/>	

These map layers combine many years of burnt area mapping to produce three types of fire history:

“Years Burnt” shows the number of years an area of country has been burnt across a number of years. Also known as the fire frequency.

“Late Burnt” shows the number of years an area of country has been burnt in the Late Dry Season (August 1-Dec 31) across a number of years. Also known as the late fire frequency.

“Last Burnt” shows the number of years since an area of country was burnt across a number of years. Also known as time since last burnt.

These three types of fire history are available across two date ranges: a long term range from the year 2000 to the last completed year; and a range covering the last 10 years.

Hotspots Layers

Hotspots

Shows the locations of recently burning fires. These are detected by automated analysis of images from overpassing satellites. They colour-coded by the time they were detected.

Recent Hotspots +

Hotspots by Month +

These map layers display the locations of recently active fires using symbols that reflect the time since the fire location was detected.

Due to the satellite sensors used to detect fires, the hotspots are more coarsely located as the burnt area boundaries with accuracies ranging from 355m to 1 or 1.5km for the regular hotspots and around 2km for the 10-minute hotspots.

The hotspot layers are divided into recent hotspots from the last week and hotspots from previous years colour coded by the month of detection.

Recent Hotspots

Recent Hotspots	-
10 minute Hotspots	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Last 2 days	<input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
3 - 4 days	<input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
5 - 7 days	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>

These layers show hotspots detected in the last week.

Hotspots from the last 2 days, 3-4 days and 5-7 days are located with an accuracy less than 1km but are only updated a few times a day.

The 10-minute hotspots are detected by a geostationary satellite that can update fire locations up to once every 10 minutes. But the location accuracy is coarse at 2km and the satellite cannot easily detect smaller fires. Because of these differences compared to the regular hotspots, different symbols are used to avoid confusion.

Hotspots by Month

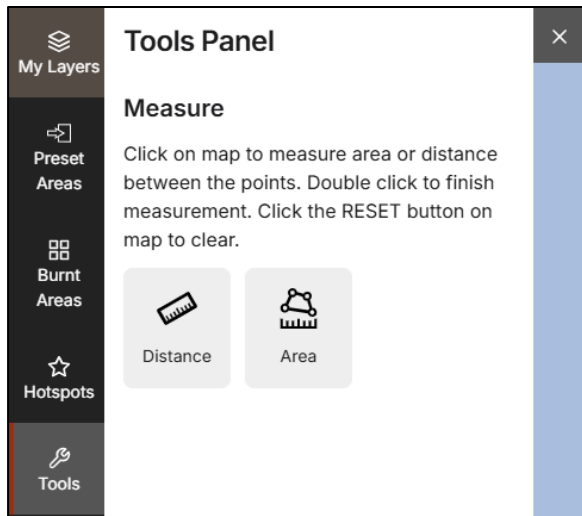
Hotspots by Month	-
2023	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
2022	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
2021	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
2020	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>

Here all the hotspots in a given year are displayed. They are colour-coded by month in a similar colour scheme to the burnt area mapping with warmer colours used for months in the late dry season.

Hotspots for Jan – Apr and Nov - Dec use the same colour.

Years available for display date back to 2004.

The Tools



This panel is where you can find tools that can get useful information from the map displays.

Over time this panel will have more tools, but it starts with tools used for measuring distances and area on the map.