

Guidance for Firecast Users- How to use alternative fire monitoring platforms

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Introduction

There are many fire monitoring platforms available. This is not a comprehensive guide to fully using every platform, but instead a resource to replicate some of the key Firecast functions on some of the main platforms available. Not all Firecast functionality is available on these platforms.

Contents Overview:

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- 4) Creating Custom Fire Alerts

Alternative Platforms at a Glance

<i>Platform</i>	Coverage	Languages	View Live Fires	Download fire data	Analytics	Alerts	Upload custom layers
NASA FIRMS https://firms.modaps.eosdis.nasa.gov/	Global	Website: English Alerts: English, French, Spanish	Yes	Yes	No	Email	N
Global Forest Watch https://www.globalforestwatch.org/topics/fires/	Global	English, Spanish, Portuguese, French, Bahasa Indonesia	Yes	Yes	Yes	Email	Yes
RAISG https://ama.raisg.org/	Amazon region only	English, Spanish, Portuguese	Yes	Yes	Yes	No	No
Regional East Africa Fire Management tool http://app.rfmrc-ea.org/mburned_area_madagascar	Madagascar	English, French	Yes	Yes	No	No	No

Fire Maps: Viewing and Downloading Live/Historic Fire Data

Global Forest Watch:

1. Display fires: <https://www.globalforestwatch.org/topics/fires/> -- go to “explore fires” and fires will be automatically displayed

Or

1. Navigate to www.globalforestwatch.org.
2. Navigate to “Map” at the top of the page. This will bring you to a web map with “Tree cover gain – 2000 – 2020”, “Tree cover loss – 2001 – 2022”, and “Tree cover – 2010” displayed.
3. Hover over the tab on the left that reads “Forest Change” and select “Fire Alerts (VIIRS)” toggle. MODIS data is not available on GFW and will be decommissioned by NASA next year. A screenshot of the page with VIIRS fires toggled on and tree cover toggled off can be found below.



4. Optionally, toggle off or on additional land cover or base layers to provide context for the fire alerts. These can be found in the “Forest Change”, “Land Cover”, “Land Use”, “Climate”, and “Biodiversity” tabs.
5. Select desired date range from Legend/Analysis tab to show fires within your time of interest. From the drop-down tab, you can also filter between ‘all’ VIIRS alerts and solely ‘high confidence’ alerts.



6. The button allows you to control the opacity/transparency of the layer.



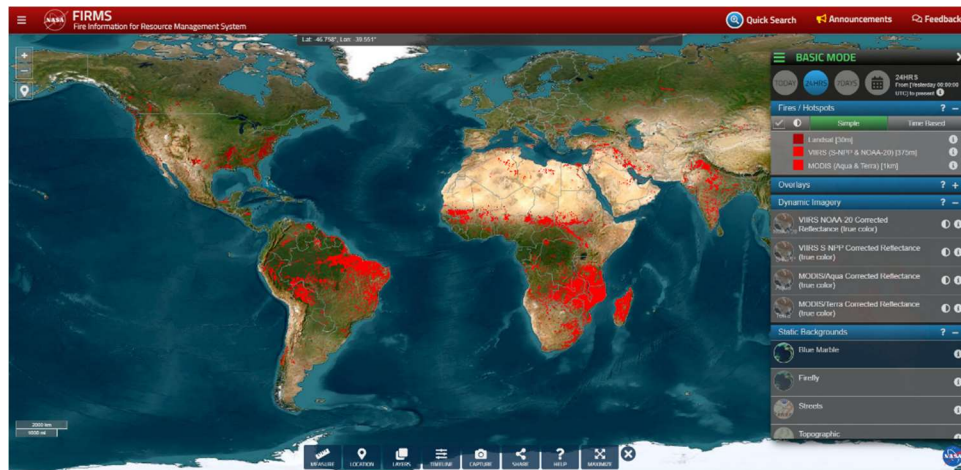
7. The button displays specifications and citations for the VIIRS layer you are viewing.

1. Use this link to navigate straight to NASA FIRMS basic fire map
<https://firms.modaps.eosdis.nasa.gov/map/#d:24hrs;@0.0,0.0,3.0z>

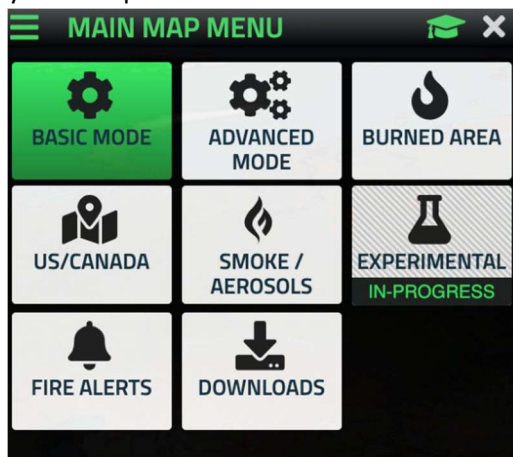
Or

1. Navigate to NASA FIRMS homepage at <https://firms.modaps.eosdis.nasa.gov/>. Select the “Fire Map” dropdown and click “Global”. This will display global MODIS and VIIRS fire data seen below.

You can select “USA & Canada” or go to <https://firms.modaps.eosdis.nasa.gov/usfs/map> if you specifically want to look at fires in these two countries.



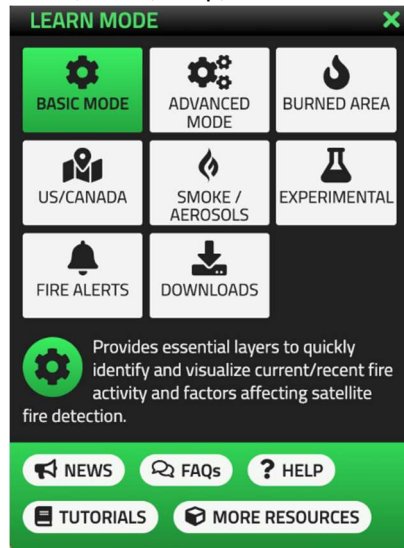
2. Basic modes pre-selects the most commonly viewed layers in FIRMS. This is aimed at new users. By selecting the options within the “Overlays”, “Dynamic Imagery”, or “Static Backgrounds” sections of the legend, you can view additional layers (such as protected areas¹, basemaps, and other imagery) that will provide context for the fire data.
3. If you select the three horizontal lines in the upper left corner of the legend (see image below), you can opt to select from the other modes.





If you select “learn mode” by clicking on the mortar board cap icon  (left of the X in the top

¹ Protected Areas from the World Database of Protected Areas

right corner of the legend box), you can see a brief description of each mode as well as links to News, FAQs, Help, Tutorials and More Resources.



Within this menu, select “Advanced Mode.”

4. Advanced Mode allows users to turn on and off specific satellites within the VIIRS and MODIS instruments. You can also view Geostationary data, MODIS Burned Area data, NRT (near real-time) data, among many other datasets. The information icon  displays specifications and citations for the layer you are viewing.
5. Under Fires/Hotspots there is an option to view the fires as simple/time based or custom.
 - Simple enables layers to be turned on or off
 - Time Based color codes the fires by time since detection
 - Custom enables you to customize the display further (by clicking on the plus symbol )
6. Alternatively, you can select “Downloads” within the menu reached by clicking the three horizontal lines. This allows you to download historic fire data for your area of interest.
7. In the Downloads page, select “Create New Request”. Enter all required information, including area of interest (world, country, custom region, or protected area), your fire data sensor of choice, the date range, the export format, and your email address. Then click “Submit”.
8. This download request will be processed, and you will receive an email with a link to download your data when it is ready.

**For more information on using the FIRMS interface view the [NASA Earthdata webinar: Discover Enhanced Wildfire System Capabilities with NASA’s FIRMS](https://www.earthdata.nasa.gov/learn/webinars-and-tutorials/webinar-firms-18-10-2023) (<https://www.earthdata.nasa.gov/learn/webinars-and-tutorials/webinar-firms-18-10-2023>)

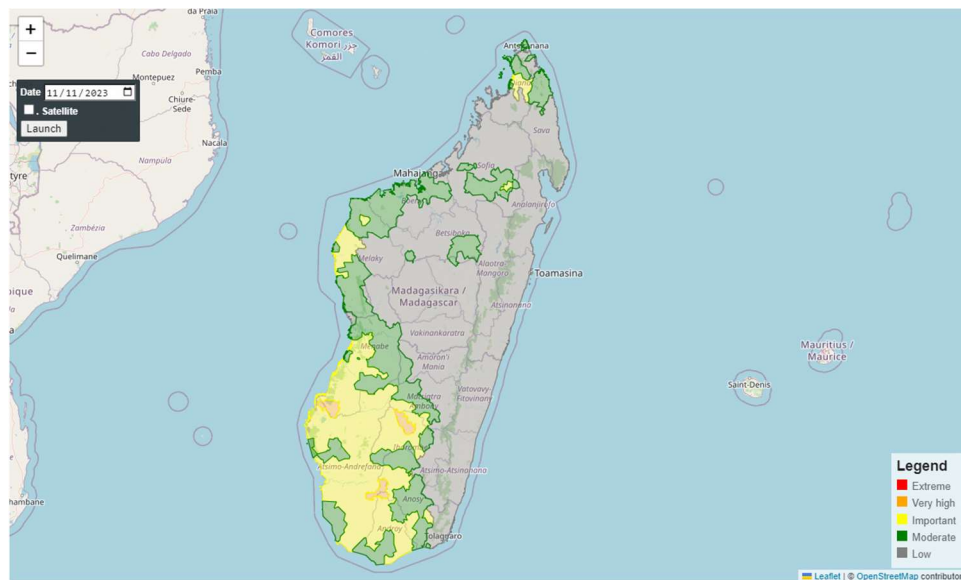
**FIRMS FAQs can be found at: <https://www.earthdata.nasa.gov/faq/firms-faq>

REGIONAL EAST AFRICA FIRE MANAGEMENT RESOURCE CENTER (BETA VERSION):

1. Use this link (http://app.rfmrc-ea.org/one_day_forecast_madagascar) to navigate straight to the 1 Day Fire Danger Forecast fire map.
2. In the legend (see below), select your date of interest, your basemap, and click “Launch”.



3. This map shows the fire risk for your day of interest across Madagascar. The methodology for the data creation can be found on the same web page below the map.



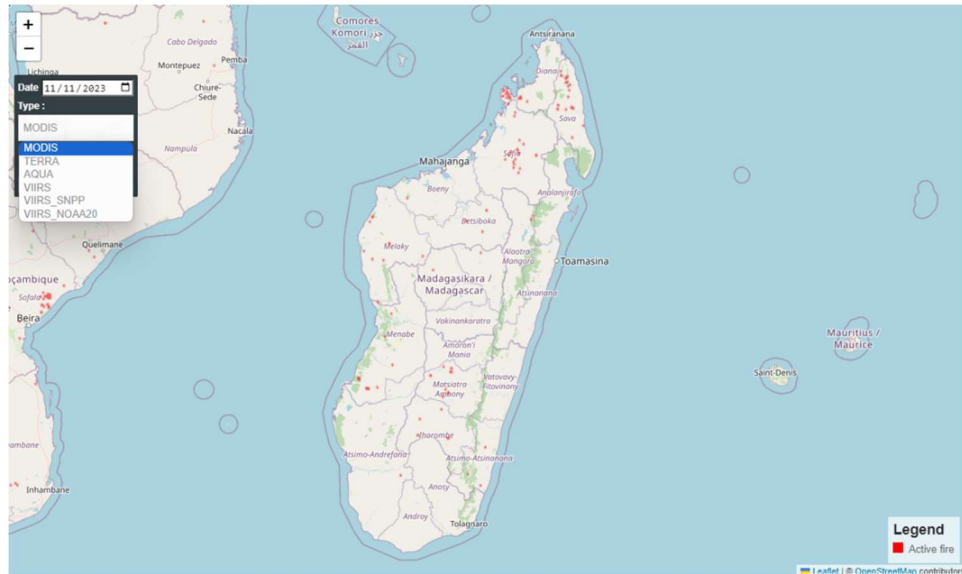
4. At the top of the page (see below), you can select three additional fire data products that you can visualize on a map.

REGIONAL EAST AFRICA FIRE MANAGEMENT RESOURCE CENTER

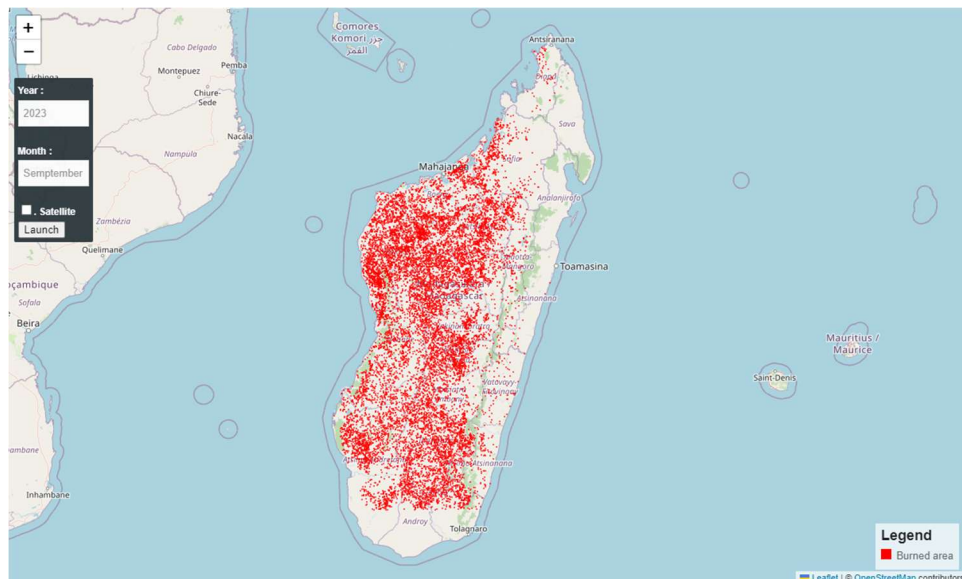
1 Day Fire Danger Forecast | **Active Fire Data** | Monthly Burned Area Monitoring | Annually Burned Area Monitoring

1 Day Fire Danger Forecast

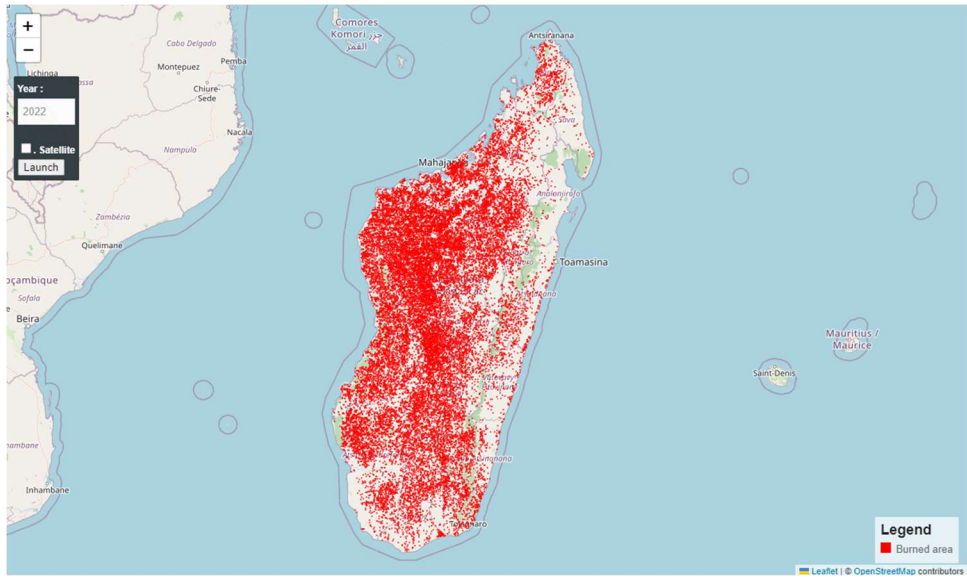
5. If you select “Active Fire Data”, you will be able to visualize MODIS and VIIRS data throughout Madagascar. (Aqua and Terra are both satellites that carry the MODIS sensor. Suomi-NPP and NOAA-20 are both satellites that carry the VIIRS instrument.) The sources for this data can be found on the same web page below the map.



6. If you select Monthly Burned Area Monitoring, you will be able to see burned areas for your selected month in Madagascar created using Sentinel-2 satellite data (see below). The methodology for this data product can be found on the same website below the burned area map.



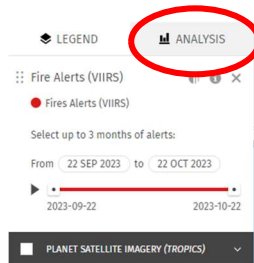
7. If you select “Annually Burned Area Monitoring”, you will be able to see burned areas for your selected year in Madagascar created using Sentinel-2 satellite data (see below). The methodology for this data product can be found on the same website below the burned area map.



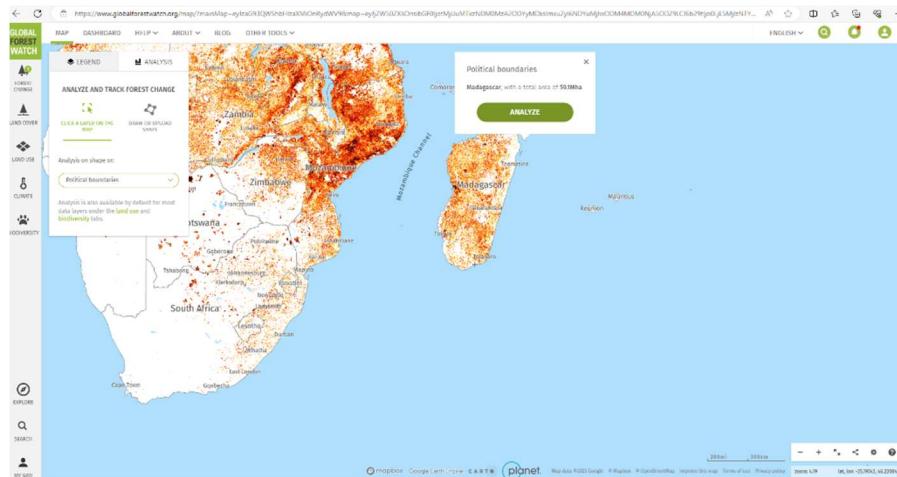
Analyzing Fire Data

Global Forest Watch:

1. Follow the steps outlined in the “Global Forest Watch” section of “Fire Maps: Viewing and Downloading Live/Historic Fire Data”.
2. Once you have displayed fires for your area and timeframe of interest, click on the “Analysis” tab in the legend - seen below.



3. Select “Click a Layer on the Map” and select the boundary of your study area on the map (e.g. along the boundary of Madagascar.) You can select pre-determined boundaries from the drop-down menu including political boundaries, terrestrial ecoregions, or river basins. You can also select previously saved ‘Areas of Interest’ from your My GFW account by navigating to the bottom left side of the screen and choosing your saved boundary.



4. Once you have selected your boundary, the analysis will start running and you can view a dashboard containing statistics about fires in your area of interest.
5. By selecting “Dashboard” at the bottom of the pop-up, you can view an entire dashboard web page dedicated to your study area. This dashboard has a lot of details, including data Firecast did not display, such as net tree cover change and forest lost due to fire.
6. Alternatively, you can select the “Draw or Upload Shape” option. You can then choose to “Start Drawing” and create a polygon representing your area of interest. You can also click “Drag and drop your polygon data file or click here to upload” to upload your own custom shapefile. When choosing this option, a pop-up showing the total number of VIIRS alerts will display. However, “Dashboard” is not available for selection for areas that are immediately created or uploaded through the “Draw or Upload Shape” option. You can select ‘Save In My GFW’ to save the area

of interest to your My GFW account and once saved, you can access the “Dashboard” for the area of interest. More on saving an area of interest can be found in the following section, Creating a Custom Fire Alert.

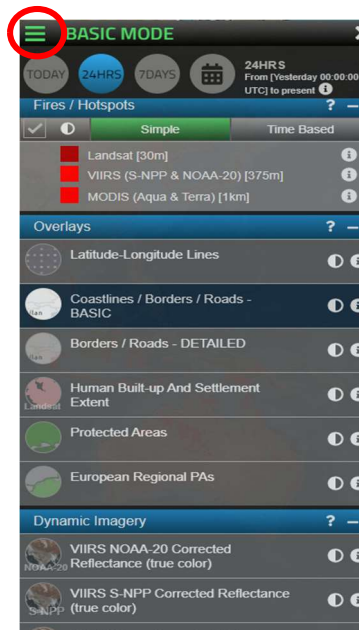
Creating a Custom Fire Alert

Global Forest Watch:

1. Follow the steps outlined in the “Global Forest Watch” section of “Analyzing Fire Data”.
2. Once you have selected, drawn, or uploaded your polygon of interest and viewed the analytics dashboard from Step 4 of “Analyzing Fire Data”, you can choose to save your polygon by selecting “Save in my GFW” at the bottom of the pop-up.
3. This option will bring you to a page called “Save area of interest” where you can name the area to your GFW account.
4. This is also where you can create email alert subscription. Towards the bottom of the “Save area of interest” page, enter your email address, how you would like to receive the alerts, the language you are interested in (available in English, French, Bahasa Indonesia, Portuguese, and Spanish).
5. Once you click “Save” you will receive alerts for your defined area of interest and your defined frequency to your email.
6. You can check back on all previously saved areas of interest by selecting the My GFW icon at the top right of the screen, where you can “View on Map,” “Edit,” or “Share.”

NASA FIRMS:

1. Follow the steps outlined in the “NASA FIRMS” section of “Fire Maps: Viewing and Downloading Live/Historic Fire Data”.
2. Within the menu reached by clicking the three horizontal lines in the upper left corner of the legend (see below), select “Fire Alerts” or go straight to <https://firms.modaps.eosdis.nasa.gov/alerts/>



3. In the resulting page, enter your email address and select "Proceed".
4. In the next page, select "Create Fire Alert". (Any previously created fire alerts connected to your email address will be listed on this page.) Fill in all required information for your Fire Alert Subscription, including an Alert Name, area of interest (world, country, custom region, or protected area), fire source, alert frequency, email preference (text and map image, or only text), language (English, French, or Spanish), and if you would like an attachment or not. Then select "Submit". This alert will be sent to you through your preferred method of communication when appropriate.

**FIRMS FAQs specific to the Email Alerts can be found here:

<https://www.earthdata.nasa.gov/faq/firms-faq#ed-email-notification>