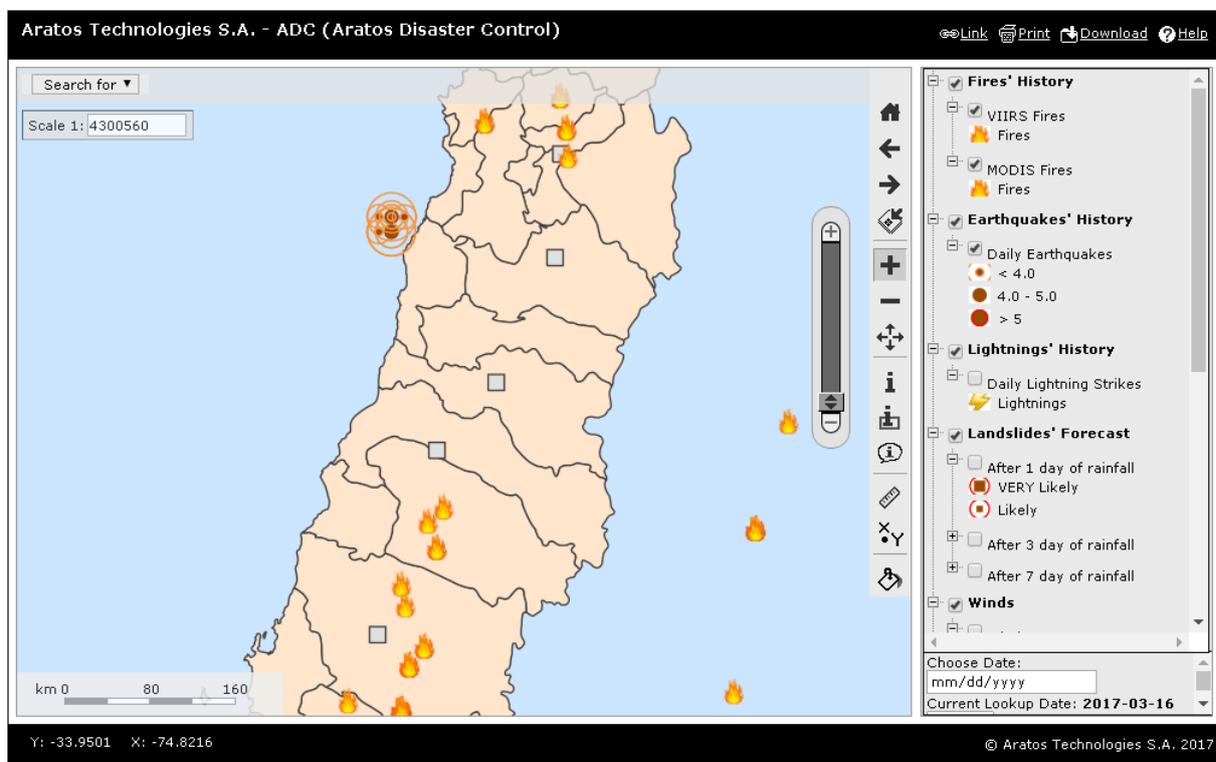


## Aratos Disaster Control (ADC) South America-Chile Demonstration Use Case

Aratos Disaster Control (ADC) is offering its disaster prediction and monitoring capabilities in a global scale. We have created a specific use case scenario focusing on Chile, South America, implementing a specific subset of our satellite data layers mainly concerning wildfires.

ADC is a holistic open platform for integration of satellite data with reliable, rapid, and safe client-server architecture, capable to provide valuable information for preventing from, responding to and recovering from natural disasters. The main interface of ADC platform that is presented below provides the user with all kinds of geographically depicted data.



### History Layers

The History Layers of ADC offer the ability to search by calendar date for past natural disaster events until real time detections (by choosing current date).

#### Fires

The Fires' History Layer provides fire detection data from two different satellite Instruments; VIIRS and MODIS. MODIS is a fire detection instrument on board the satellites Aqua and Terra and produces the reports of detected fires with a spatial resolution of 1km. VIIRS is a fire detection sensor on board the Suomi National Polar-orbiting Partnership (SNPP) satellite and is complementary to the MODIS instrument, detecting fires with a higher spatial resolution of 375m.

## Earthquakes

The Earthquakes' History Layer provides information on recent and past Earthquakes, regarding their epicenter, depth in km and magnitude of each earthquake.

## Lightnings

The Lightnings' History refers to detected Lightning Strikes and Thunders observed in past and recent dates.

## Forecast Layers

These Layers provide information on predictions about specific natural hazards.

### Landslides

This ADC demo version provides predictions on potential landslides after 1, 3 or 7 consecutive days of rainfall.

### Satellite Indexes

These Data Layers refer to data directly received from Satellite sensors regarding their real time position over the Earth.

### Winds

Tropospheric winds derived globally using the tandem configuration of METOP-A and METOP-B AVHRR instruments. Information about detected winds refer to their speed in m/s and direction in true degrees mode as well as the most recent detection time frame for the specific latitude/longitude spot. For a detected fire, wind speed and direction monitoring indicate potential spatial spread of the fire.

### Soil Moisture

The Soil Moisture product is derived from the Advanced SCATterometer (ASCAT) data. This product provides an estimate of the water saturation of the 5 cm topsoil layer, in relative units between 0 and 100 [%]. Low values of Soil Moisture indicate a higher danger for a wildfire to burst and spread, whereas highly moisturized soil protects against wildfires.

### Temperatures

The Microwave Humidity Sounder (MHS) is an instrument used to provide input to the retrieval of brightness temperatures. High brightness temperatures indicate greater risk of potential wildfires to burst and spread. These data readings are depicted in Kelvin degrees of Temperature.

## Static Maps

These maps provide general static information data about the observed area.

### NASA Earth Observations

3 different low-resolution maps are provided in this demo version regarding Land Cover Classification, Topography and Population Density.

### Administrative Data

This data consists of a Country Map with subdivision outlines, a Background Image Map of Shaded Relief, Water and Drainages and some Cities across the country.



## **Aratos Disaster Control: Next minute of disaster total view**

Natural disasters happen due to natural phenomena (e.g. earthquakes, floods) which have harmful repercussions to human activities. The lack of planning or the lack of a suitable system for the management of crisis, worsens the human weakness in case of natural disasters and leads to financial, structural and human losses.

Aratos has developed a complete disaster management system, Aratos Disaster Control that can be used as an ideal tool for planning, disaster monitoring, and evaluation after crisis. Moreover Aratos Disaster Control can provide near-real time images and data from satellite sources concerning ongoing and past natural disasters (fires, earthquakes, landslides, etc.), various natural phenomena and weather conditions (wind, temperature, etc.) changes in an interactive map environment, 24/7.

More information can be found at the website: [www.aratosdisastercontrol.com](http://www.aratosdisastercontrol.com) .

For specific requests for any place worldwide you can contact us to discuss further.



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