

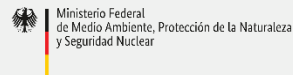
# 10<sup>th</sup> Weekly Report of the 2019 Fire Season in the Selva Maya

May 27th 2019

Developed by:



With the support of:



# Scope

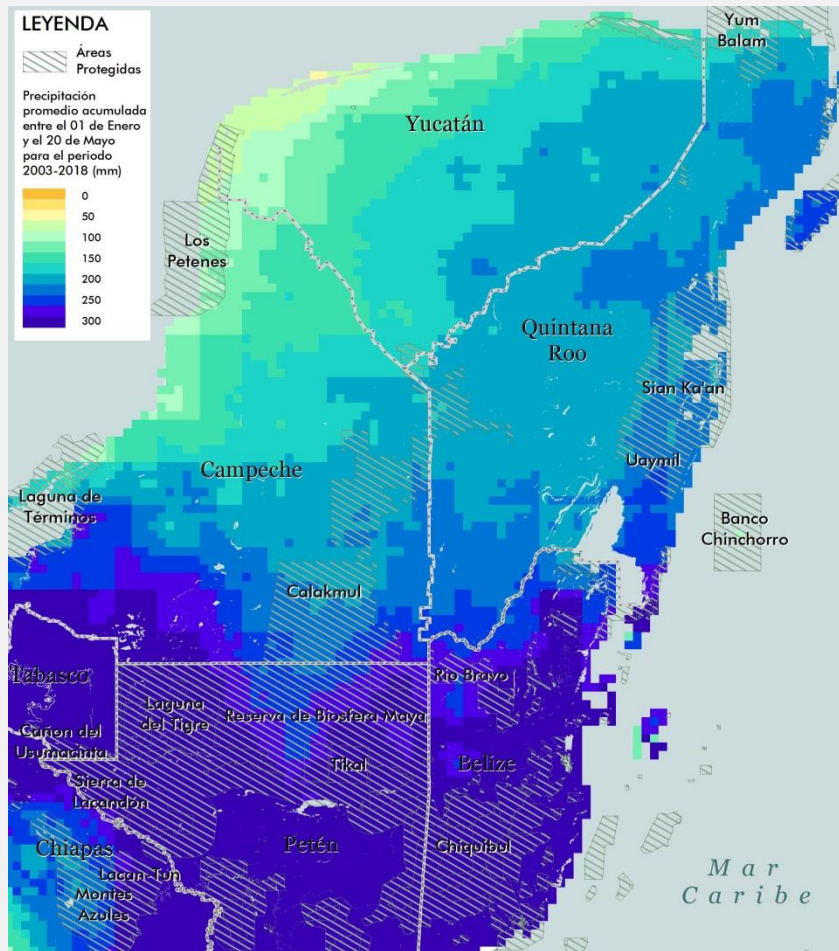
This report aims to support professionals in charge of prevention, mitigation and the fighting of wildfires during the 2019 fire season in the Selva Maya.

## Contents

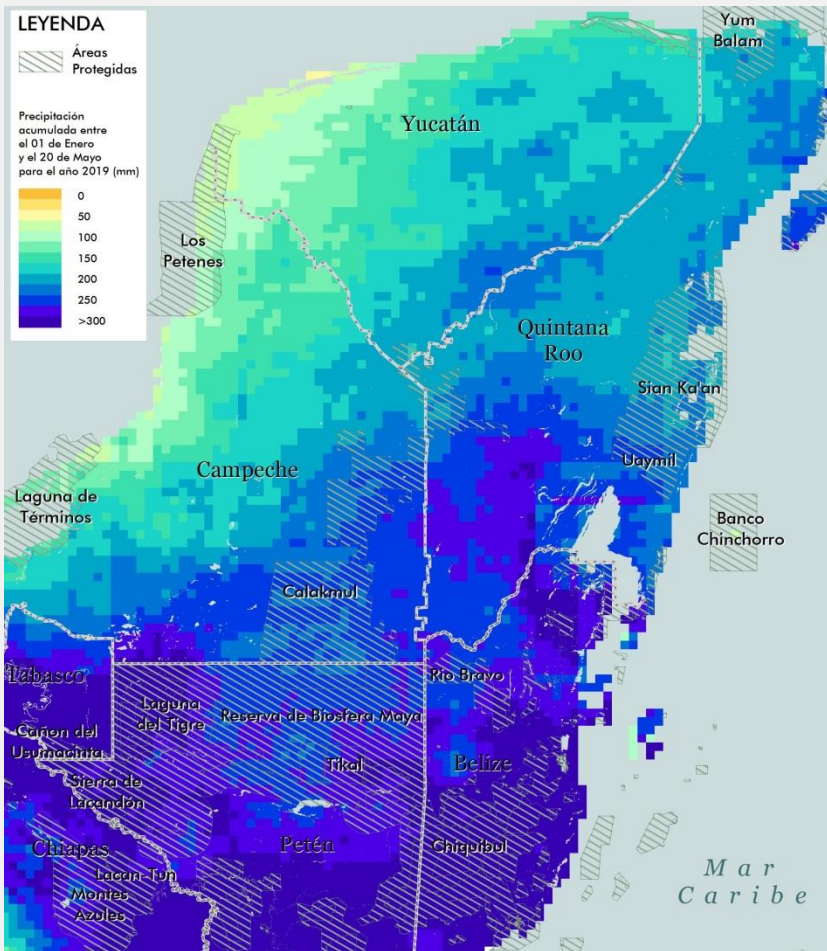
- Cumulative precipitation
- Precipitation forecast
- MODIS Hot Spots
- VIIRS Hot Spots
- Conclusions

# Cumulative Precipitation: 2019 Values versus Historic Average

Average cumulative precipitation **2003-2018**  
between January 01st and May 20th



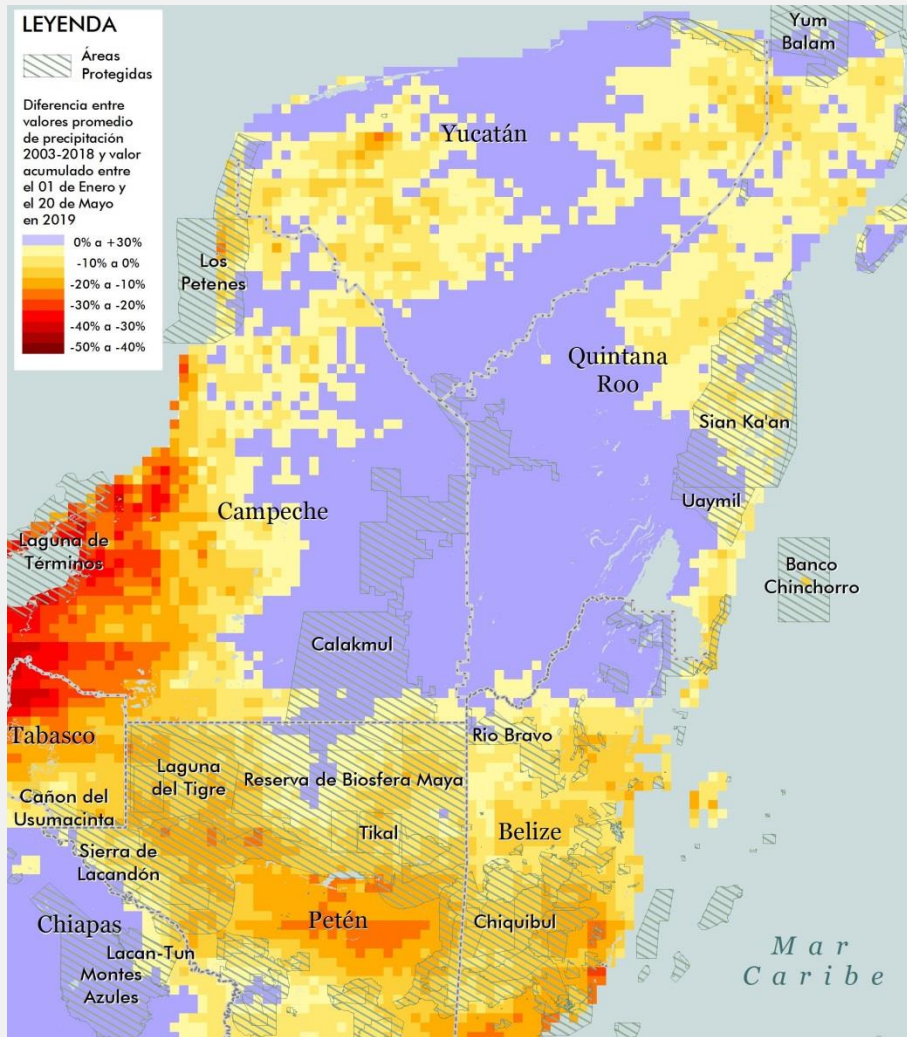
Cumulative precipitation between January 01st and  
May 20th, **2019**



Data source: Climate Hazards Group InfraRed Precipitation with Station data (CHIRPS), <http://chg.geog.ucsb.edu/data/chirps/>

The comparison between the average cumulative precipitation (January 01<sup>st</sup> and May 20<sup>th</sup>) of 2003-2018 and the cumulative of the same time range for 2019 now shows that **the cumulative precipitations have leveled out** across large regions of the Selva Maya, although there are **still areas with significant reductions in rainfall**.

# Cumulative Precipitation: 2019 Values versus Average Value



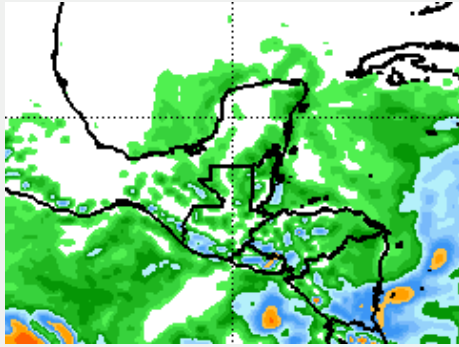
Cumulative rainfall between January 01st and May 20th, 2019

Campeche	-4%
Chiapas	+8%
Quintana Roo	+5%
Tabasco	-19%
Yucatán	-1%
Belize	-8%
Petén	-12%
Selva Maya	-3%

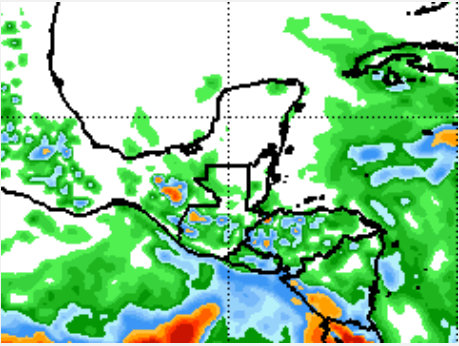
The difference between the cumulative precipitation from Jan. 01<sup>st</sup> – May 20<sup>th</sup> against the average from 2003 – 2018 is now more even, with large regions presenting positive values (more precipitation than the average). The values with the highest negative difference are found in Tabasco (-19%) and Petén (-12%).

# Precipitation Forecast

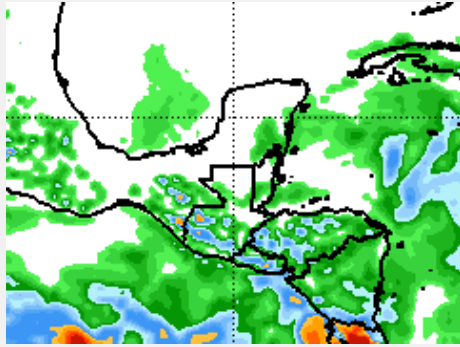
Tuesday, May 28th



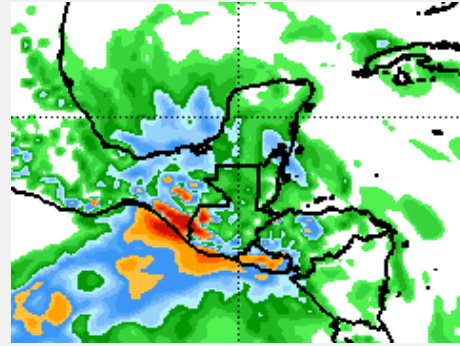
Friday, May 31st



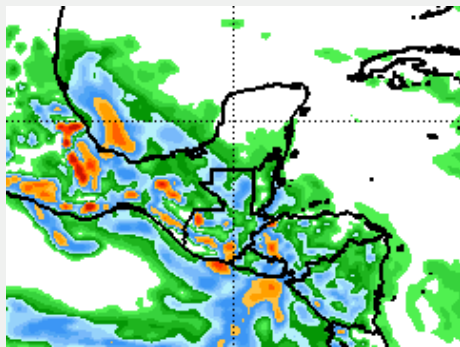
Wednesday, May 29th



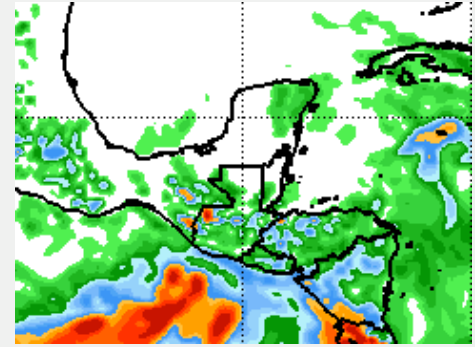
Saturday, June 1st



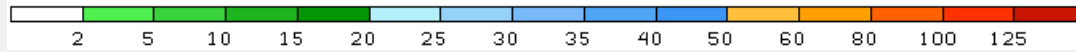
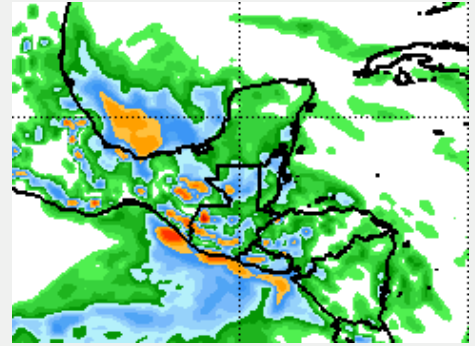
Monday, June 3rd



Thursday, May 30th

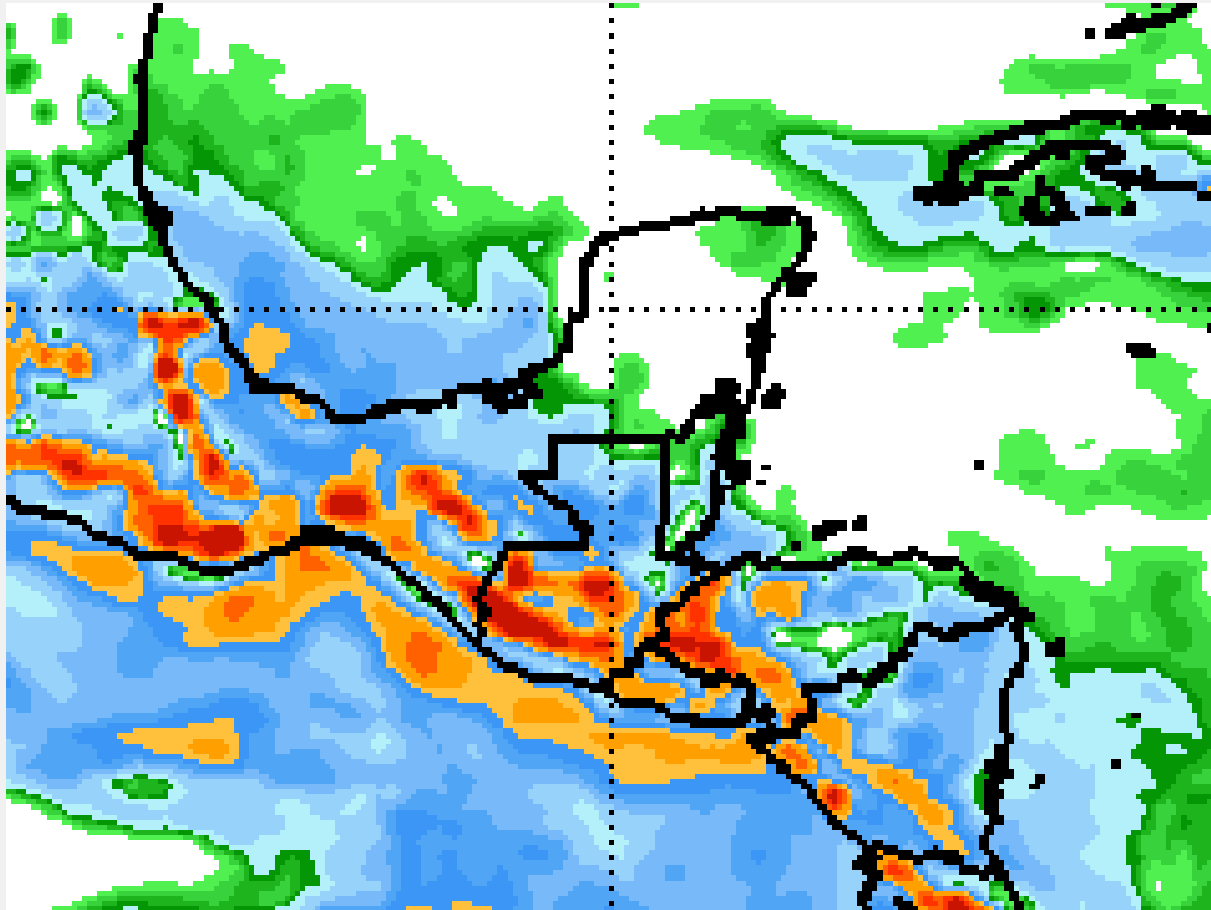


Sunday, June 2nd



The precipitation forecast for the next seven days indicates that widespread rainfall can be expected as of June 1<sup>st</sup>, which at a local level can be very heavy. Forecasts are fairly reliable up to 3 or 4 days. For this reason it is worth visiting up to date forecast sites every few days. The forecast presented above can be accessed [HERE](#)

# Precipitacion Forecast



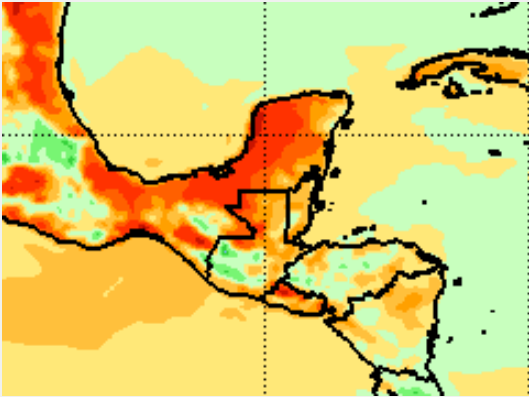
Tuesday, May 28th – Monday, June 3rd



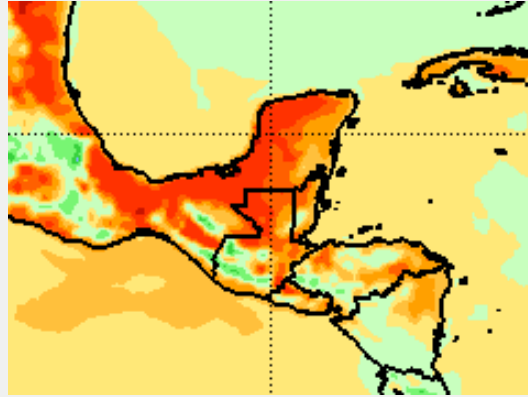
The forecast for June 4<sup>th</sup> – 10<sup>th</sup> shows widespread and heavy rainfall for southern Selva Maya, while north Campeche, Yucatan and Quintana Roo are more likely to have local and moderate rainfall. In order to always be up to date with the latest values – entre [HERE](#) for the update of the image above.

# Maximum Temperature Forecast

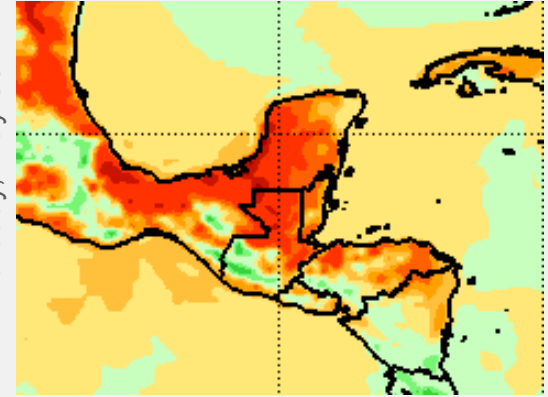
Tuesday, May 28th



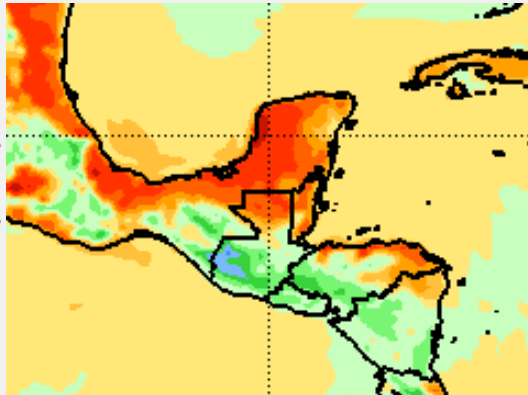
Wednesday, May 29th



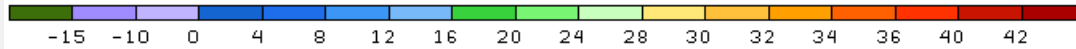
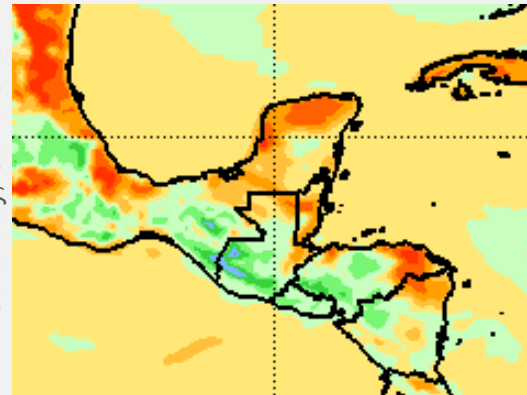
Thursday, May 30th



Friday, May 31st



Saturday, June 01st



The maximum temperature forecast for the next five days shows values around 36°C in western Selva Maya and close to 32°C in the rest of the region, with values dropping down to 26°C in the south of the Selva Maya as well as in the Campeche-Yucatán-Quintana Roo region.

# 2019 Hot Spots

Two sources of hot spot data are presented in the weekly report. The first source being **MODIS** (Moderate Resolution Imaging Spectroradiometer) and the second **VIIRS** (Visible Infrared Imaging Radiometer Suite). Described below are some of the characteristics of both data sources and their differences regarding fire monitoring.

## MODIS

- MODIS refers to a set of sensors on board of two satellites (Terra and Aqua) launched in 1999 and 2002. The operation of both sensors allows global coverage of the Earth every 1-2 days and up to 4 overflights in any area near the Equator.
- The MODIS product used for near-real-time fire monitoring has a spatial resolution (pixel size) of approximately 1000 m
- The MODIS fire database line extends from 2003 to the present and is a valuable tool for the inter-annual comparison of the intensity of fire burning seasons. For this reason, all the information products that make this comparison will be based on MODIS in all future reports.

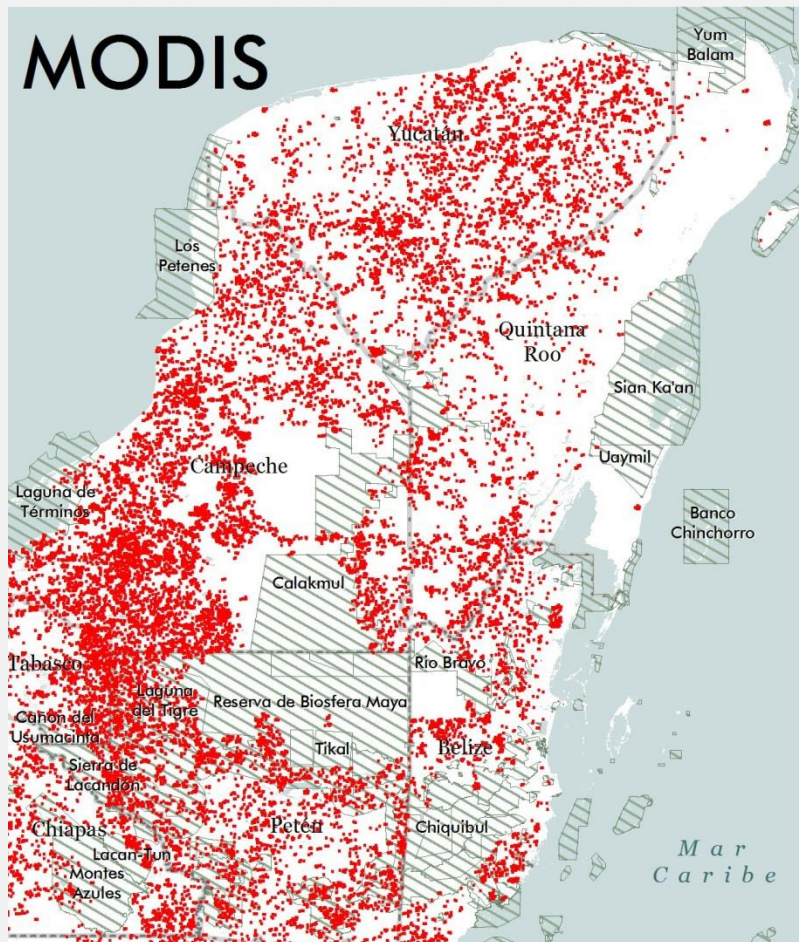
## VIIRS

- VIIRS is a set of sensors on board of the Suomi-NPP polar orbit satellite, a joint initiative of NASA and NOAA. In theory there is global data coverage every 12 hours, hence, 2 daily passes.
- The VIIRS product used for near real-time fire monitoring (VNP14IMGTDL\_NRT) has a spatial resolution (pixel size) of approximately 375 m.
- VIIRS and MODIS complement each other in the detection of fires and both satellites compare well with each other, but the higher spatial resolution of VIIRS improves the detection of small fires.
- VIIRS provides data since 2012. However, complete hot spot data are available only since 2015, so that the historical baseline provided by the MODIS data is of great importance, mainly to allow inter-annual comparison.



# MODIS Hot Spots

The MODIS satellite sensors allow the detection of "hot spots" in the landscape, which mostly reflect fires.

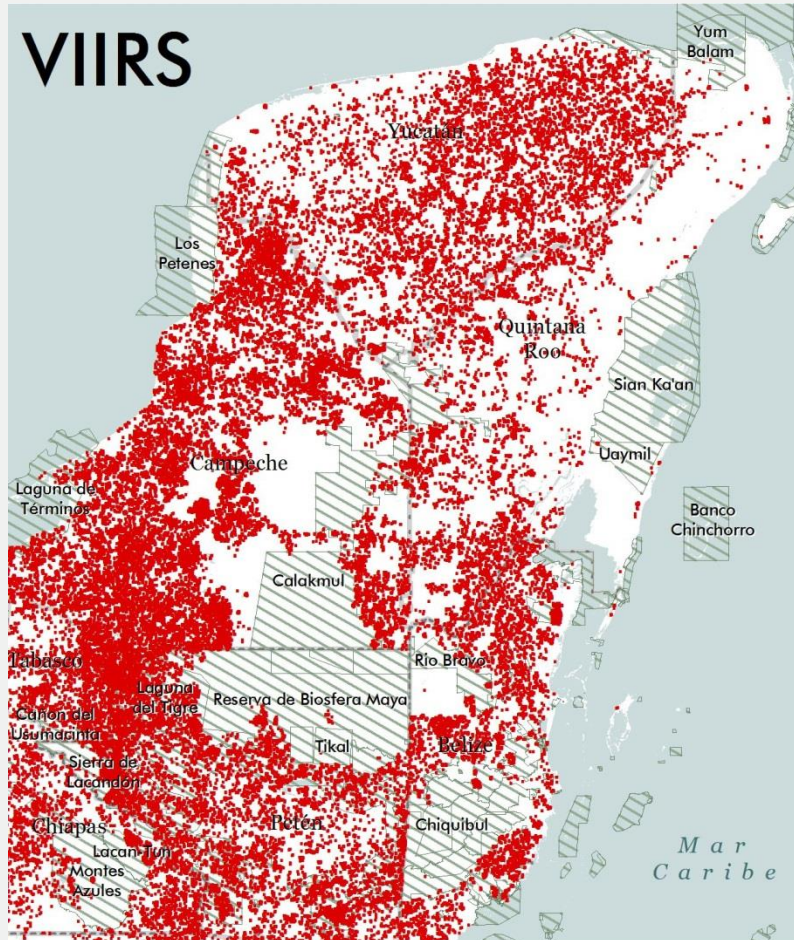


Total number of MODIS hot spots registered until May, 26<sup>th</sup>

Campeche	7680
Chiapas	1106
Quintana Roo	1619
Tabasco	1092
Yucatán	3949
Belize	1486
Petén	3840
Selva Maya	20772

# VIIRS Hot Spots

The VIIRS satellite sensors allow the detection of "hot spots" in the landscape, which mostly reflect fires.



Total number of VIIRS hot spots registered until May 26<sup>th</sup>

Campeche	26804
Chiapas	3534
Quintana Roo	5782
Tabasco	3762
Yucatán	12192
Belize	6549
Petén	14251
Selva Maya	72874

## Conclusions

- The cumulative precipitation in 2019 between January 01<sup>st</sup> and May 20<sup>th</sup> is now closer to the average for the same period between 2003 and 2018. The largest reductions to date, in the amount of precipitation for this period, are recorded in Tabasco (-19%), and Petén (-12%). Chiapas and Quintana Roo already report a positive difference with respect to the average.
- Precipitation forecasts for the next two weeks indicate widespread rainfall and heavy local rain in southern Selva Maya, while the northern parts of the states of Campeche, Yucatán and Quintana Roo are to receive moderate rainfall.
- With the available information it is recommended to maintain a **high** alert level for next week.

# # TodosSomosSelvaMaya # WeAreSelvaMaya

This report was elaborated within the framework of the project "Support for the Monitoring of Biodiversity and Climate Change in the Selva Maya". For more information please visit <http://selvamaya.info/es/proyecto-monitoreo/> or contact [giz.selvamaya@giz.de](mailto:giz.selvamaya@giz.de)

If you would like to receive further information on wildfires and related conservation issues in the Selva Maya, please register [HERE](#).



Ministerio Federal de Medio Ambiente, Protección de la Naturaleza y Seguridad Nuclear

