

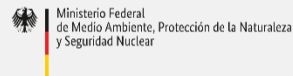
3rd Weekly Report of the 2019 Fire Season in the Selva Maya

08th April 2019

Developed by:



With the support of:



Scope

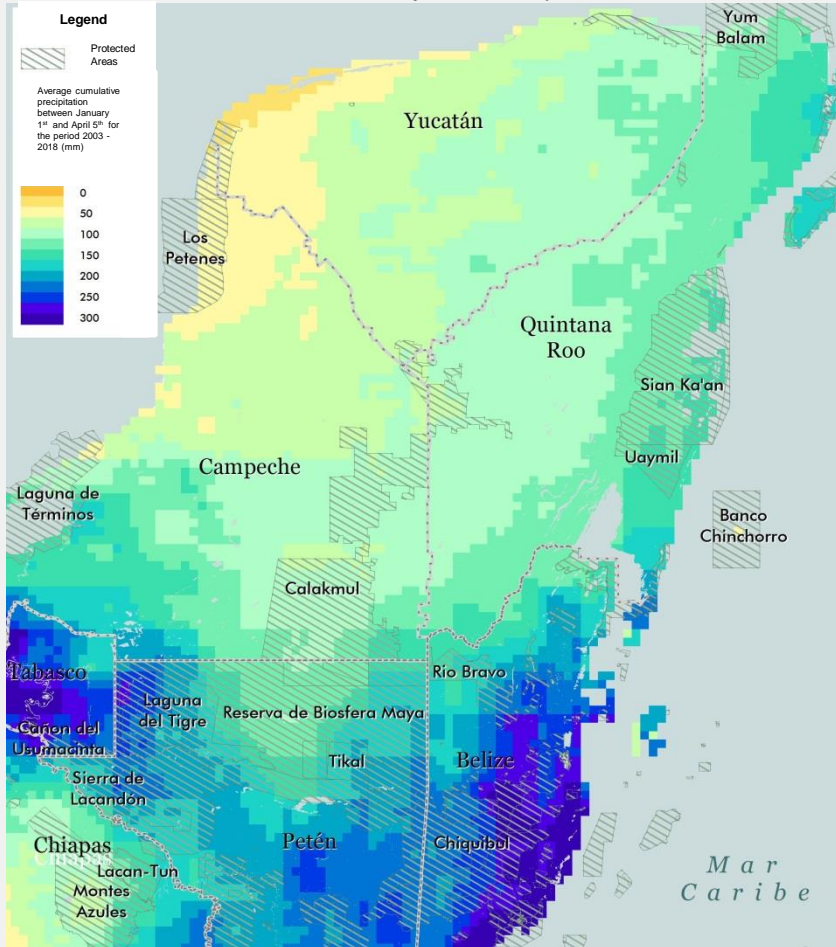
This report aims to support professionals in charge of prevention, mitigation and the fighting of wildfires during the 2019 fire season in the Selva Maya.

Contents

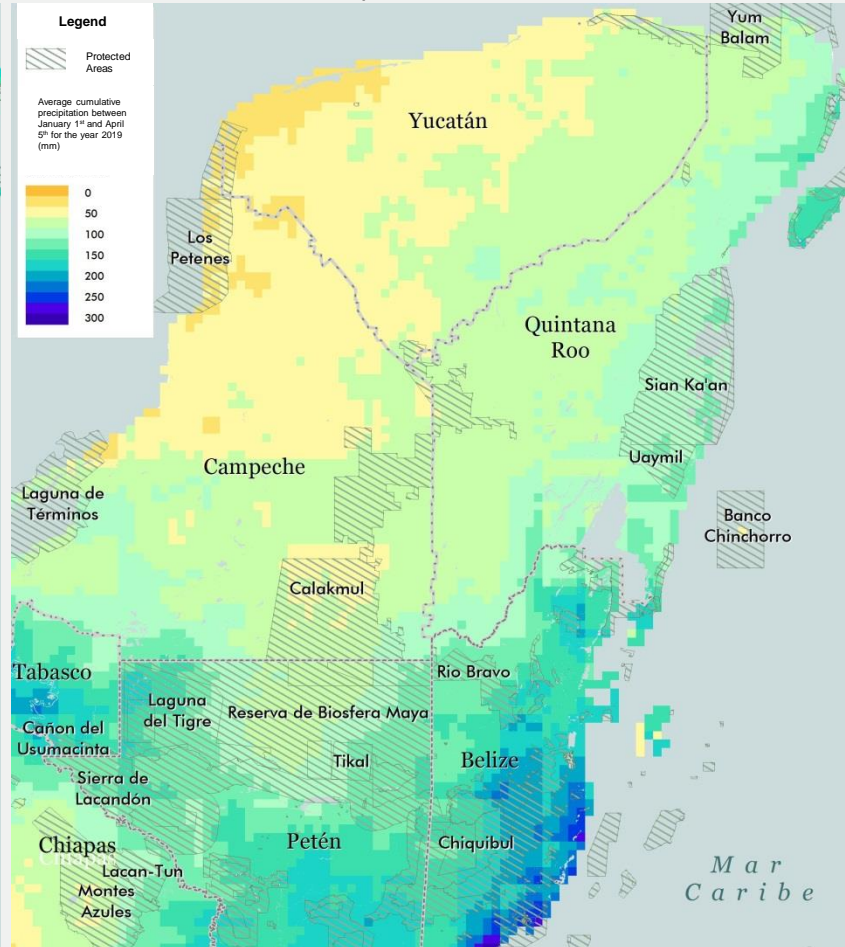
- Cumulative precipitation
- Precipitation forecast
- MODIS Hot Spots
- VIIRS Hot Spots
- Conclusions

Cumulative Precipitation: 2019 Values versus Historic Average

Average cumulative precipitation **2003-2018**
between January 1st and April 5th

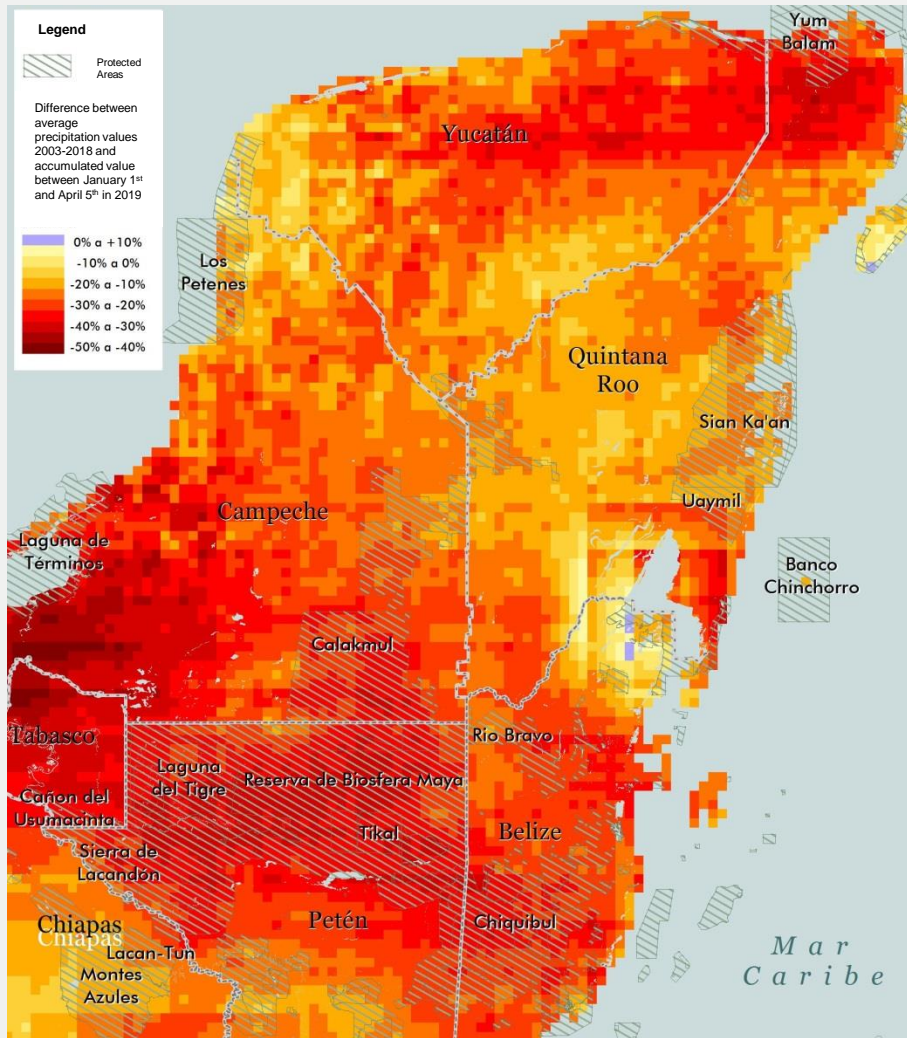


Cumulative precipitation between January 1st and
April 5th, **2019**



The comparison between the average cumulative precipitation (January 1st and April 5th) of 2003-2018 and the cumulative of the same time range for 2019 shows an **overall reduction in the amount of precipitation throughout the Selva Maya.**

Cumulative Precipitation: 2019 Values versus Average Value

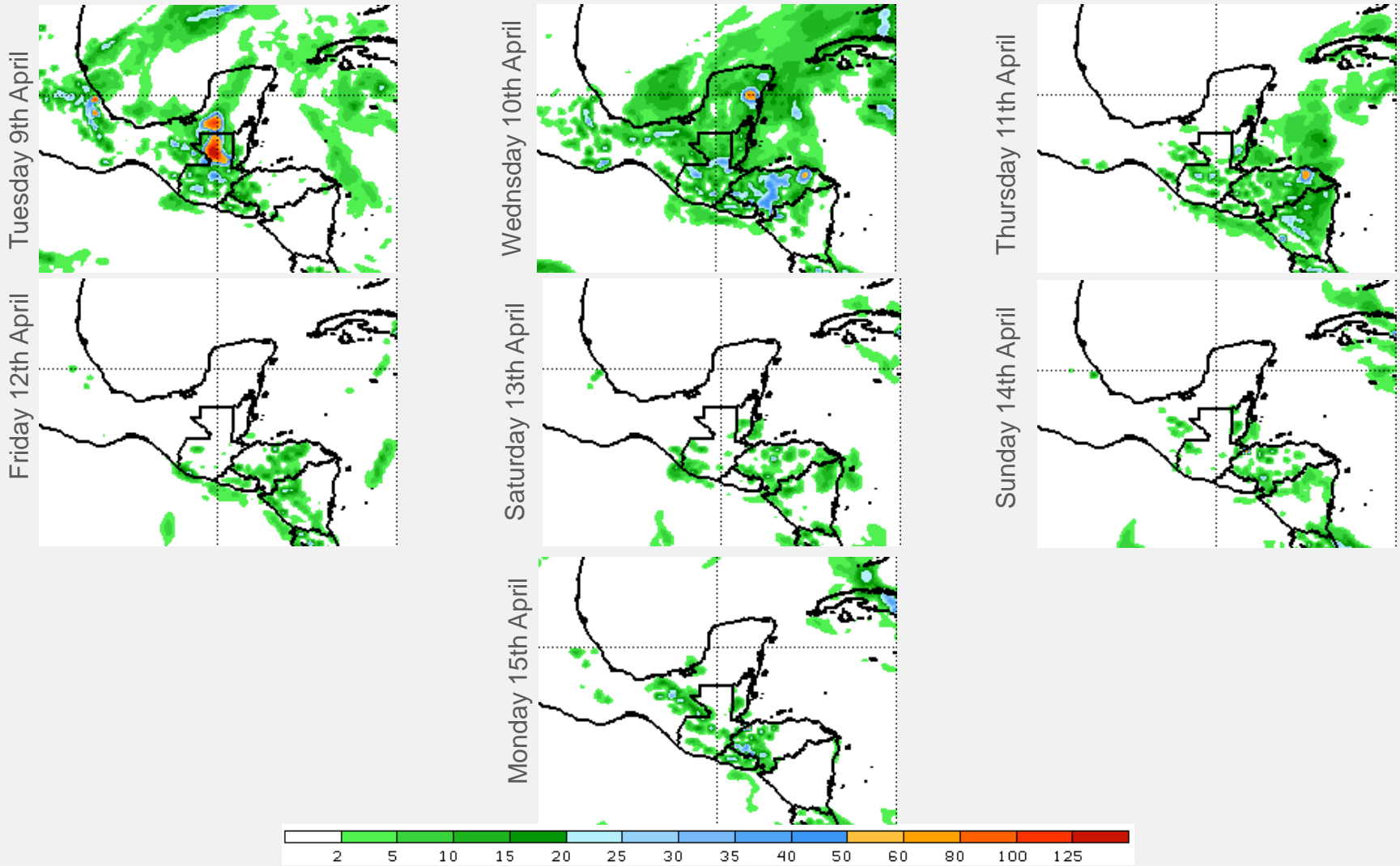


Accumulated rainfall between January 1st and April 5th, 2019

Campeche	-28%
Chiapas	-22%
Quintana Roo	-22%
Tabasco	-38%
Yucatán	-24%
Belize	-26%
Petén	-30%
Selva Maya	-26%

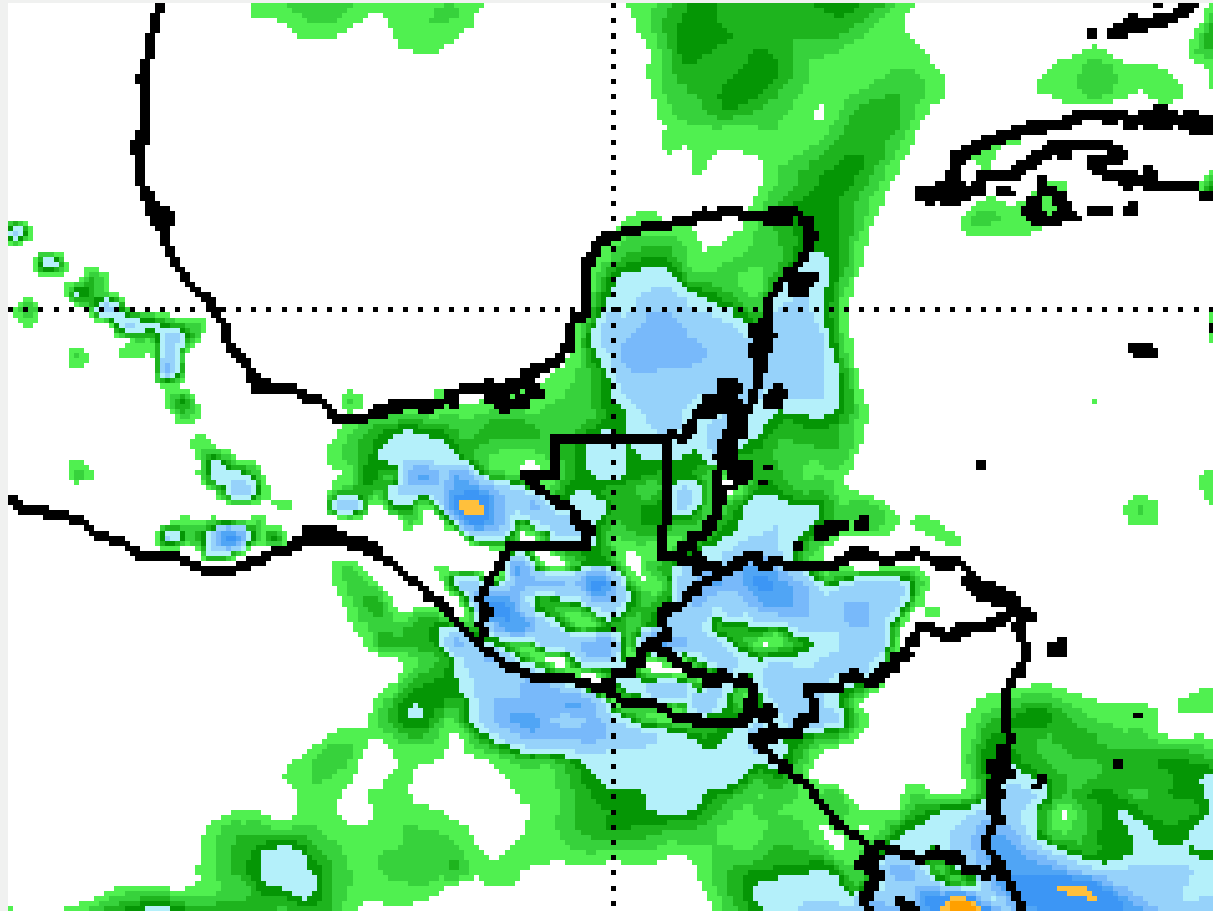
The difference between the cumulative precipitation in early 2019 (Jan. 1st – Apr. 5th) against the average from 2003 – 2018 is **negative throughout the Selva Maya**. The strongest deviations from average rainfalls are found in Tabasco (-38%) and Petén (-30%).

Precipitation Forecast



The precipitation forecast for the next seven days shows general rainfall, which will be potentially very heavy in Petén, Campeche (Calakmul, Candelaria, Escárcega) and Quintana Roo (Tulum, Solidaridad, Felipe Carrillo Puerto). 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



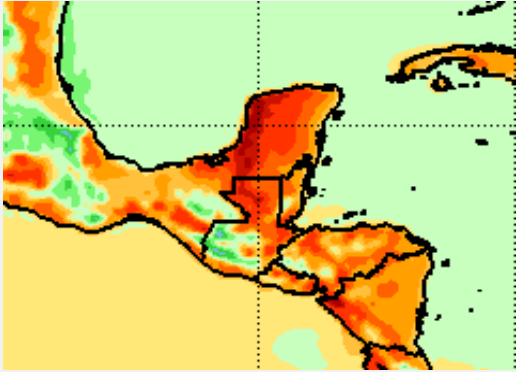
Tuesday 16th – Monday 22nd April



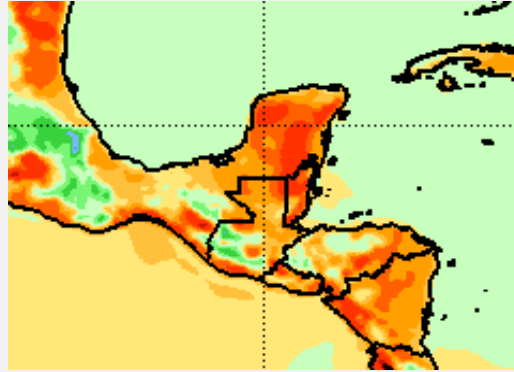
The forecast for the period from April 16th to 22nd shows general rainfall, with more intensity in the inland of the peninsula and the coast of Belize and Quintana Roo. In order to always be up to date with the latest values – entre [HERE](#) for the update of the image above.

Maximum Temperature Forecast

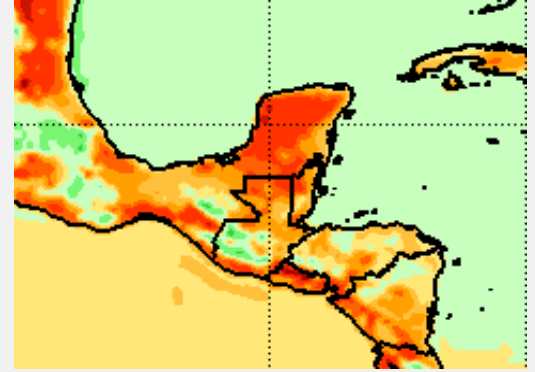
Tuesday 9th April



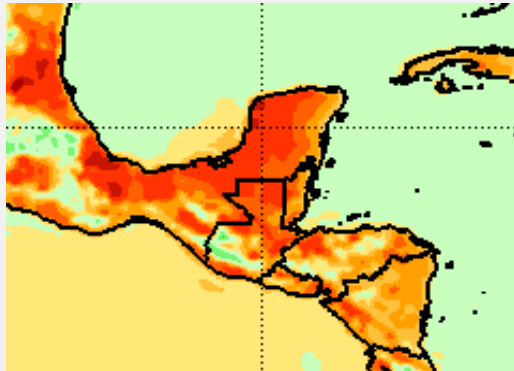
Wednesday 10th April



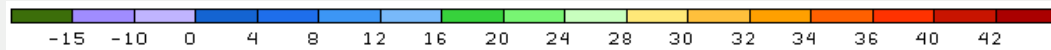
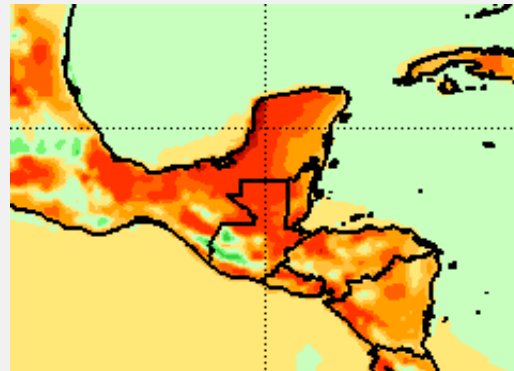
Thursday 11th April



Friday 12th April



Saturday 13th April



The maximum temperature forecast for the next five days shows values descending from maximum values above 40°C for the northwest of the Peninsula which are expected to reach between 30°C - 34°C by the end of the week.

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

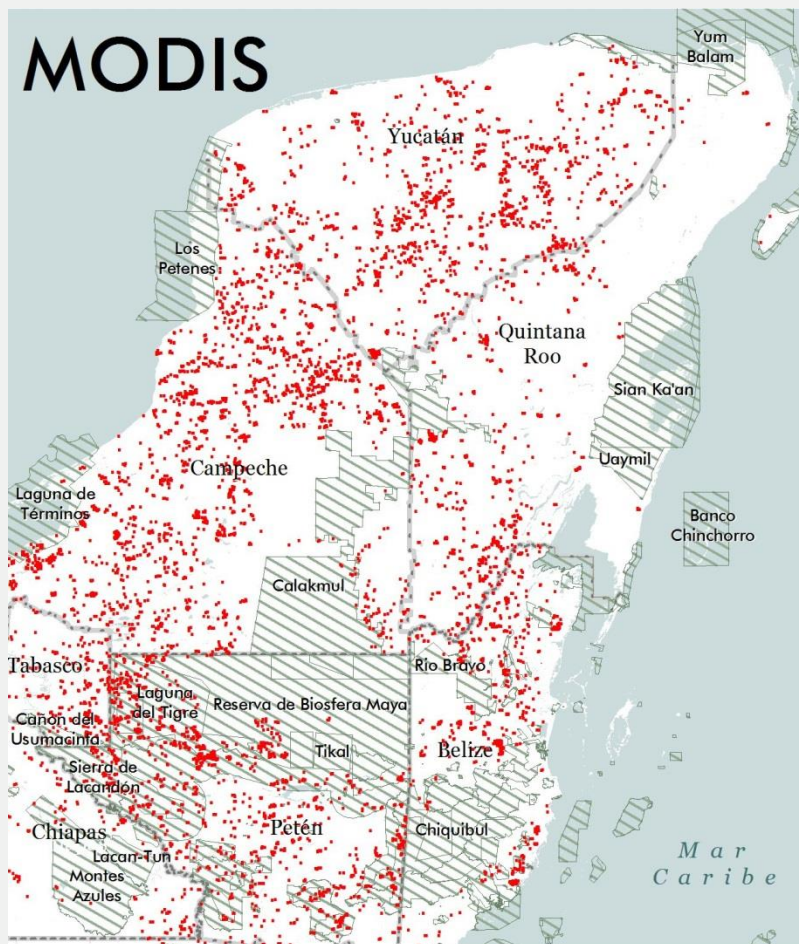
- MODIS refers to a set of sensors on board of two satellites (Terra and Aqua) launched in 1999 and 2002. The operation of both sensors allows global coverage of the Earth every 1-2 days and up to 4 overflights in any area near the Equator.
- The MODIS product used for near-real-time fire monitoring 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.

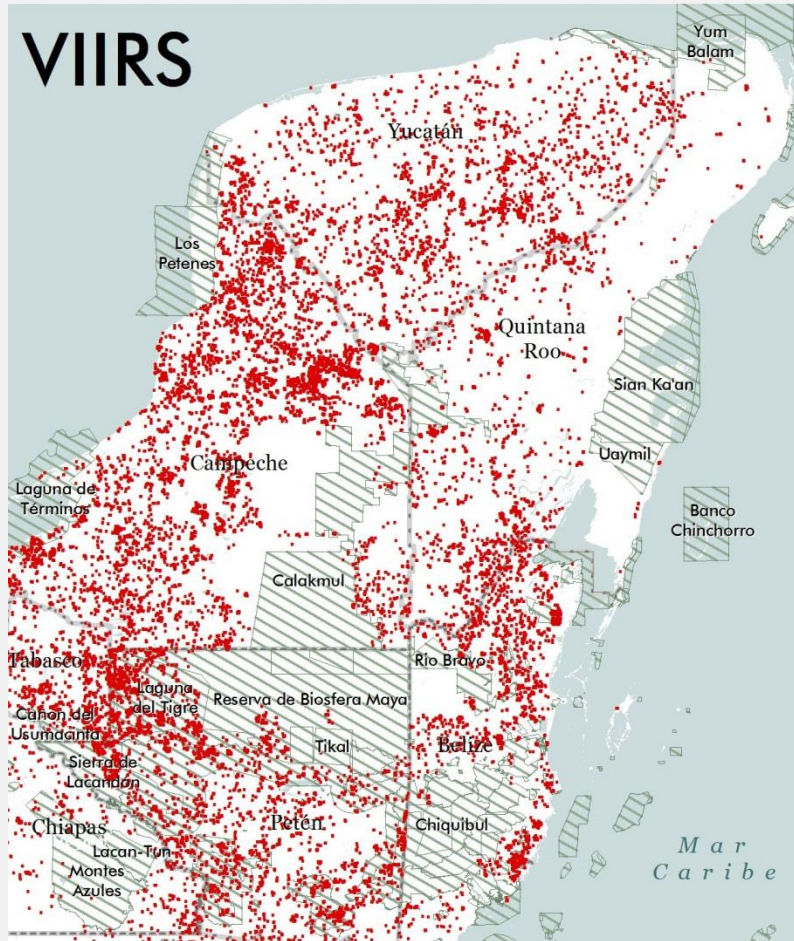


Total number of MODIS hot spots registered until April 7th

Campeche	1895
Chiapas	131
Quintana Roo	521
Tabasco	247
Yucatán	1208
Belize	549
Petén	1192
Selva Maya	5743

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 April 7th

Campeche	7341
Chiapas	415
Quintana Roo	1923
Tabasco	1107
Yucatán	3553
Belize	2493
Petén	4336
Selva Maya	21168

Conclusions

- The accumulated precipitation in 2019 between January 1st and April 5th, is generally lower than the average value for the same period between 2003 and 2018. The largest reductions in the amount of precipitation for this period are recorded in Tabasco (- 38%) and Petén (-30%).
- Precipitation forecasts for the next two weeks indicate that general precipitation will occur with regionally very intense rainfall, in some cases.
- With the information available, it is recommended to maintain a **very high** alert level in the short term and lower the alert level to **high**, in case the precipitation forecast is met.

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

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

