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Weekly analysis of wildfires in the Amazon region: July 27-August 2, 2020

2020



GWIS
Global Wildfire Information System



JRC121532

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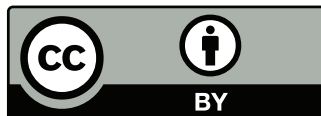
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Contents

Scope of this report and executive summary 1

1 Wildfires in the Brazilian Legal Amazon Region 2

2 Wildfires in Brazil..... 3

3 Wildfires in Bolivia 4

4 Wildfires in Colombia..... 5

5 Wildfires in Paraguay 6

6 Wildfires in Peru 7

7 Wildfires in Venezuela 8

8 Fire danger and fire weather forecast in the Amazon region 9

Scope of this report and executive summary

This report describes the trends of wildfires in the Amazon in 2020 through the comparison with the fire activity in the region in previous fire seasons. The report has been produced by the European Commission's Joint Research Centre (JRC) within its activities on the development of a Global Wildfire Information System (GWIS)¹. Most of the Amazon region is in Brazil, specifically in the Brazilian Legal Amazon (BLA)², and include areas in Peru, Bolivia, Ecuador, Colombia, Venezuela, Guyana, Suriname and French Guiana. Paraguay has been included in this report due to the high fire activity observed this year, even though it is not part of the Amazon region. Figure 1 shows the geographical extent of the countries analyzed in this report.

- The Brazil Legal Amazon shows a similar trend as those in previous years, with a significant increase recorded last week with almost 1Mha burned and almost 2500 fires. About 4 Million ha have been burnt so far in the region in 2020.
- The 2020 wildfire season in Brazil is similar to those of past years. However, the number of fires is higher in July compared with the two previous years. More than 1Mha burned last week with 3352 new fires. In Brazil, 1.2 Mha of burnt areas have been mapped in June 2020, above the values of 2019. Overall, 6.3 Mha of burnt areas have been mapped in GWIS until August 2nd, 2020
- Bolivia had above normal fire activity until May, while burnt areas by August 2nd, 2020 are at around 1.3 Mha, which is average when compared to the past years.
- In Colombia, the current fire season has been more severe than the last two years, 2018 and 2019, with larger burnt areas and a higher number of fires. Nearly 3 Mha have burnt in the country until August 2nd, 2020.
- Paraguay, with 2.4 Mha burnt until August 2nd, 2020, shows high fire activity than in 2018 and 2019, and an increase of burnt areas between March and June, reaching values about 2 times those of the past years.
- Peru shows slightly above average fire activity, with about 396000 ha of burnt areas mapped until August 2nd, 2020.
- Venezuela, with about 6.8 Mha burnt in the country until now, showed high fire activity until August 2nd, 2020.
- This week, fire danger conditions are expected to be high to extreme in central Brazil, north of Paraguay and southeastern Bolivia where several fires bigger than 10000ha already took place in the last 30 days.



Figure 1. Areas analyzed in this report: Brazil Legal Amazon, Brazil, Bolivia, Colombia, Paraguay, Peru and Venezuela

¹ <https://gwis.jrc.ec.europa.eu>

² The Brazilian Legal Amazon is a geopolitical region in Brazil, established in the article 2 of the complementary law 124, of 2007, that includes 772 municipalities over 9 states. It comprises approximately five million square kilometres, which correspond to 59% of the Brazilian territory ([IBGE, 2019](#))

1 Wildfires in the Brazilian Legal Amazon Region

Figure 2 shows the trends on the extent of burnt areas and the number of fires since January 1, 2020 until the current date produced by the Near-Real Time (NRT) process in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 4044745 ha has been burnt since January 1st until August 2nd, 2020, with 939733 ha burnt in the last week.

The number of fires recorded in GWIS in the last week was 2445, which shows an increasing trend similar to 2019, although the number of fires is higher in 2020. The number of thermal anomalies until August 2, 2020 (1031816) shows a typical trend in the region as compared to the trends in the period 2012-2019, with an increase of fire activity in the last week (247408), with respect to the previous ones.

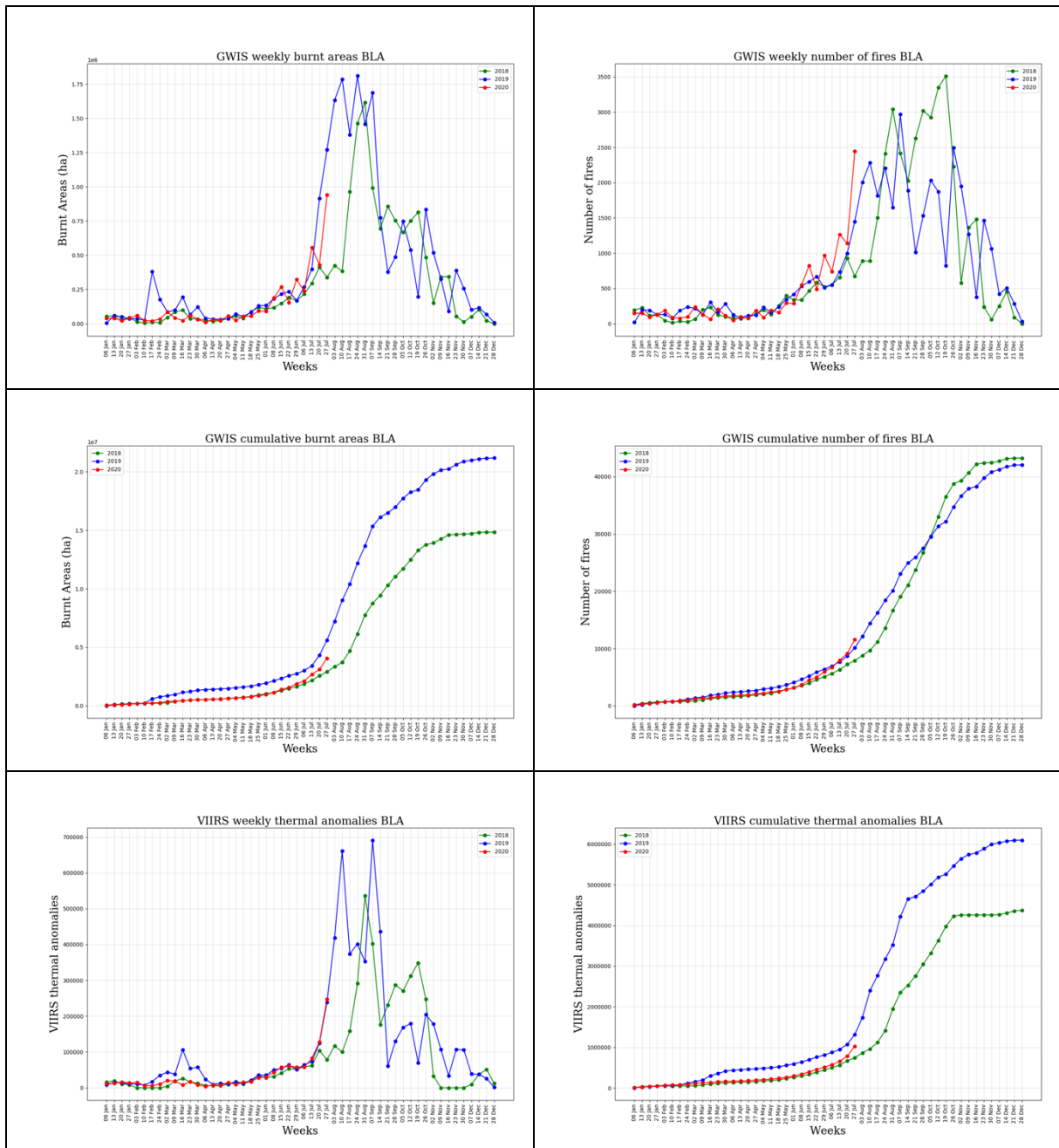


Figure 2. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

2 Wildfires in Brazil

Figure 3 shows the trends on the extent of burnt areas and the number of fires since January 1, 2020 until the current date produced by the Near-Real Time (NRT) process in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 6333299 ha has been burnt in Brazil since January 1st until August 2nd, 2020, with 1190219 ha burnt in the last week.

The number of fires recorded in GWIS in the last week was 3352, which shows an increasing trend higher than the previous years. The number of fires in 2020 up to August 2 is higher than that of 2019. The number of thermal anomalies until August 2, 2020 (219365) shows a typical trend in the region as compared to the trends in the period 2012-2019, with an increase of fire activity in the last week (38777), with respect to the previous ones.

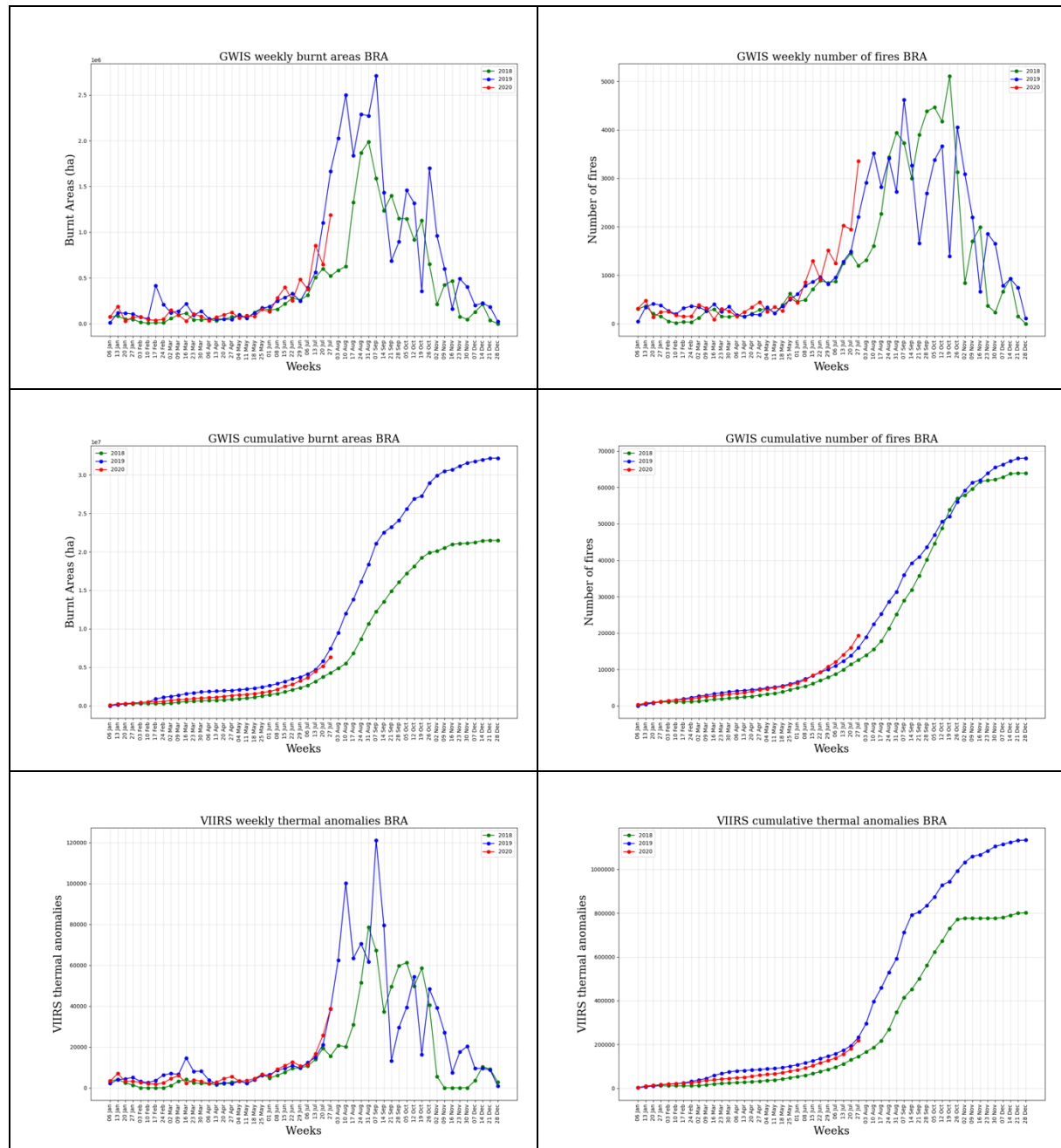


Figure 3. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

3 Wildfires in Bolivia

Figure 4 shows the trends on the extent of burnt areas and the number of fires since January 1, 2020 until the current date produced by the Near-Real Time (NRT) process in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 1290842 ha has been burnt in Bolivia since January 1st until August 2nd, 2020, with 227244 ha burnt in the last week. The total burnt area in 2020 is currently below the values of 2019.

The number of fires recorded in GWIS in the last week was 649, which shows an increasing trend similar to 2019. The trend of 2020 in number of fires resembles that of 2019. The number of thermal anomalies until August 2nd, 2020 (43585) shows a typical trend in the region as compared to the trends in the period 2012-2019, with an increase of fire activity in the last week (6966), with respect to the previous ones.

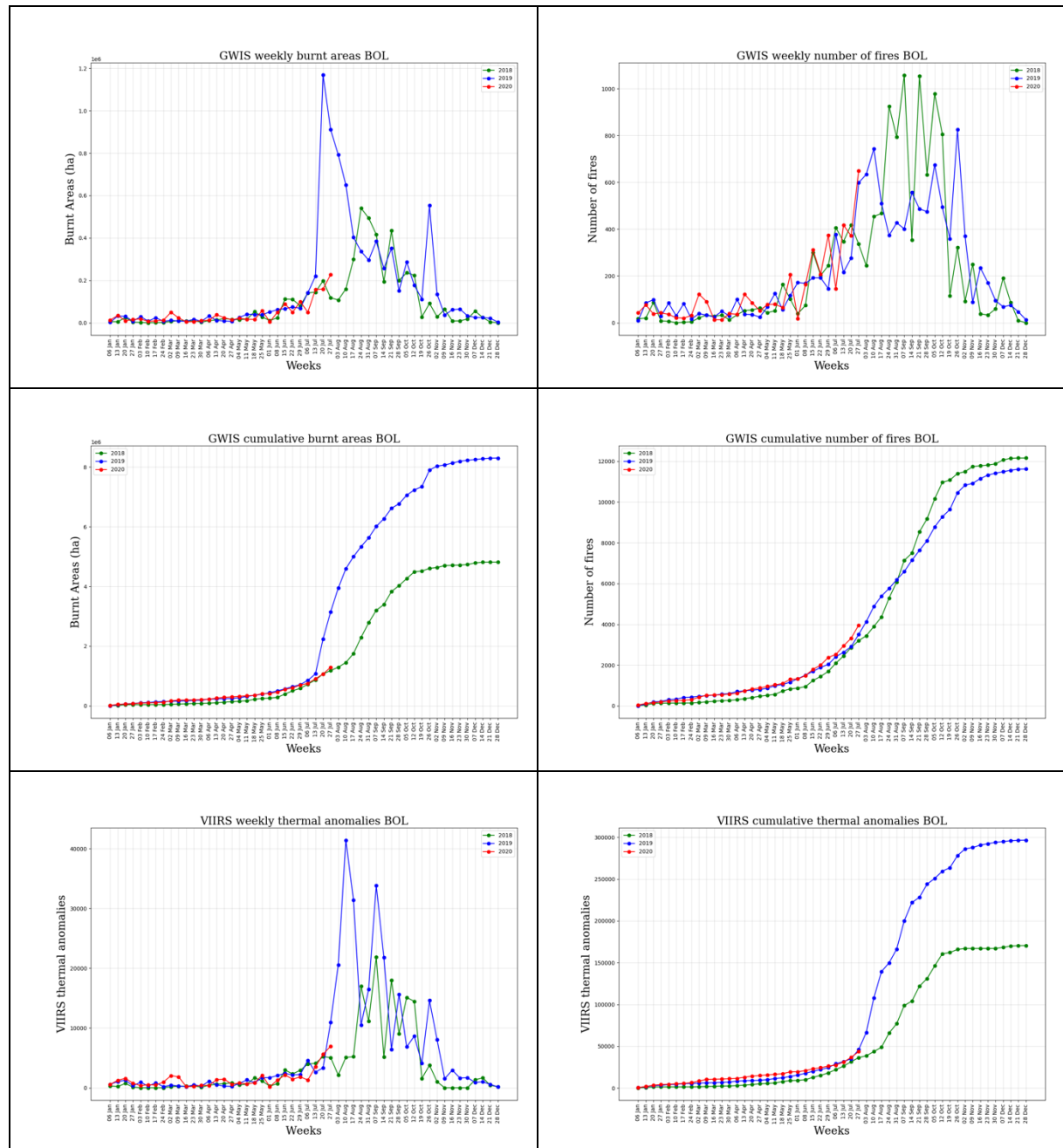


Figure 4. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

4 Wildfires in Colombia

Figure 5 shows the trends on the extent of burnt areas and the number of fires since January 1, 2020 until the current date produced by the Near-Real Time (NRT) process in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 2956975 ha has been burnt in Colombia since January 1st until August 2nd, 2020, with 44896 ha burnt in the last week. The total burnt area in the country remains approximately 28% above the values of the previous two years.

The number of fires recorded in GWIS in the last week was 199, which shows a stable trend in the last weeks with a slight increase last week. The number of fires is approximately 28% higher than that of last year. The number of thermal anomalies until August 2nd, 2020 (105104) shows a typical trend in the region as compared to the trends in the period 2012-2019, with an increase of fire activity in the last week (1335), with respect to the previous ones.

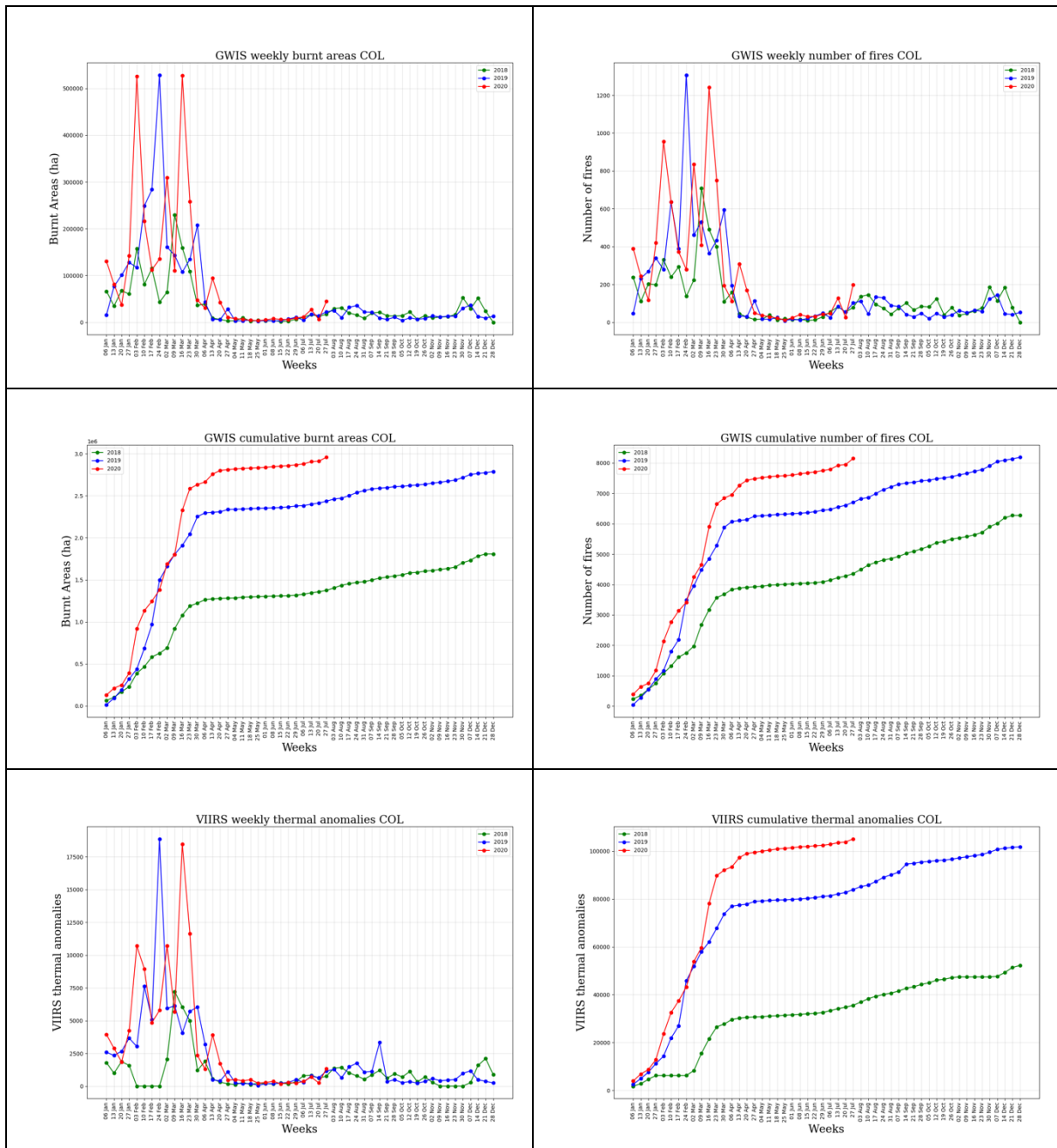


Figure 5. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

5 Wildfires in Paraguay

Figure 6 shows the trends on the extent of burnt areas and the number of fires since January 1, 2020 until the current date produced by the Near-Real Time (NRT) process in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 2423426 ha has been burnt in Paraguay since January 1st until August 2nd, 2020, with 150778 ha burnt in the last week. This value more is more than double of that in the previous two years.

The number of fires recorded in GWIS in the last week was 429, which is above the values of the last two years. The number of thermal anomalies until August 2nd, 2020 (78382) shows a typical trend in the region as compared to the trends in the period 2012-2019, with an increase of fire activity in the last week (3800), with respect to the previous ones. The number of fires in the country remains more than twice that of the previous two years.

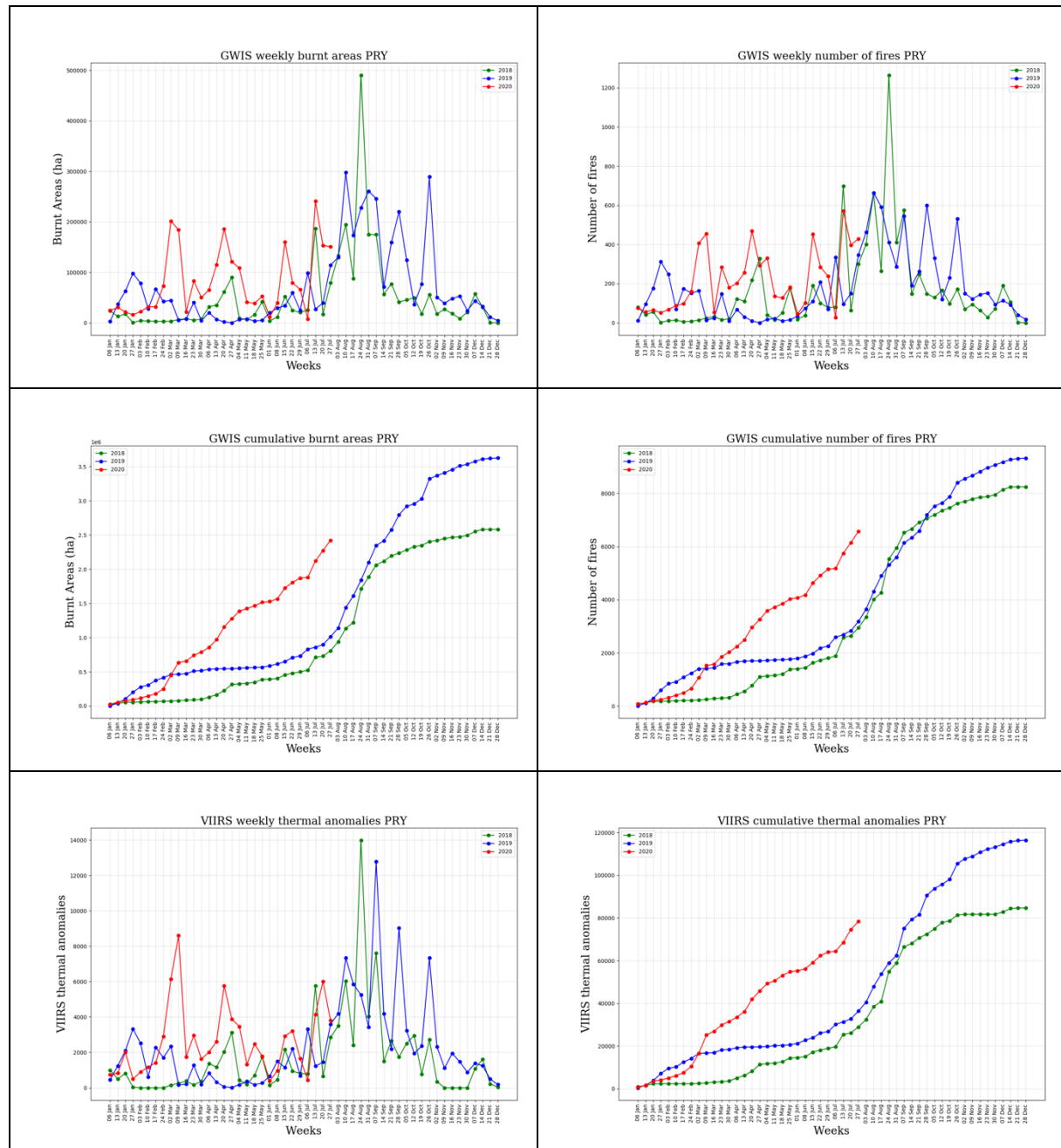


Figure 6. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

6 Wildfires in Peru

Figure 7 shows the trends on the extent of burnt areas and the number of fires since January 1, 2020 until the current date produced by the Near-Real Time (NRT) process in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 396328 ha has been burnt in Peru since January 1st until August 2nd, 2020, with 102656 ha burnt in the last week.

The number of fires recorded in GWIS in the last week was 414, showing higher number of fires than the previous week being above of the last two years. The number of thermal anomalies until August 2nd, 2020 (18252) shows a typical trend in the region as compared to the trends in the period 2012-2019, with an increase of fire activity in the last week (2707), with respect to the previous ones.

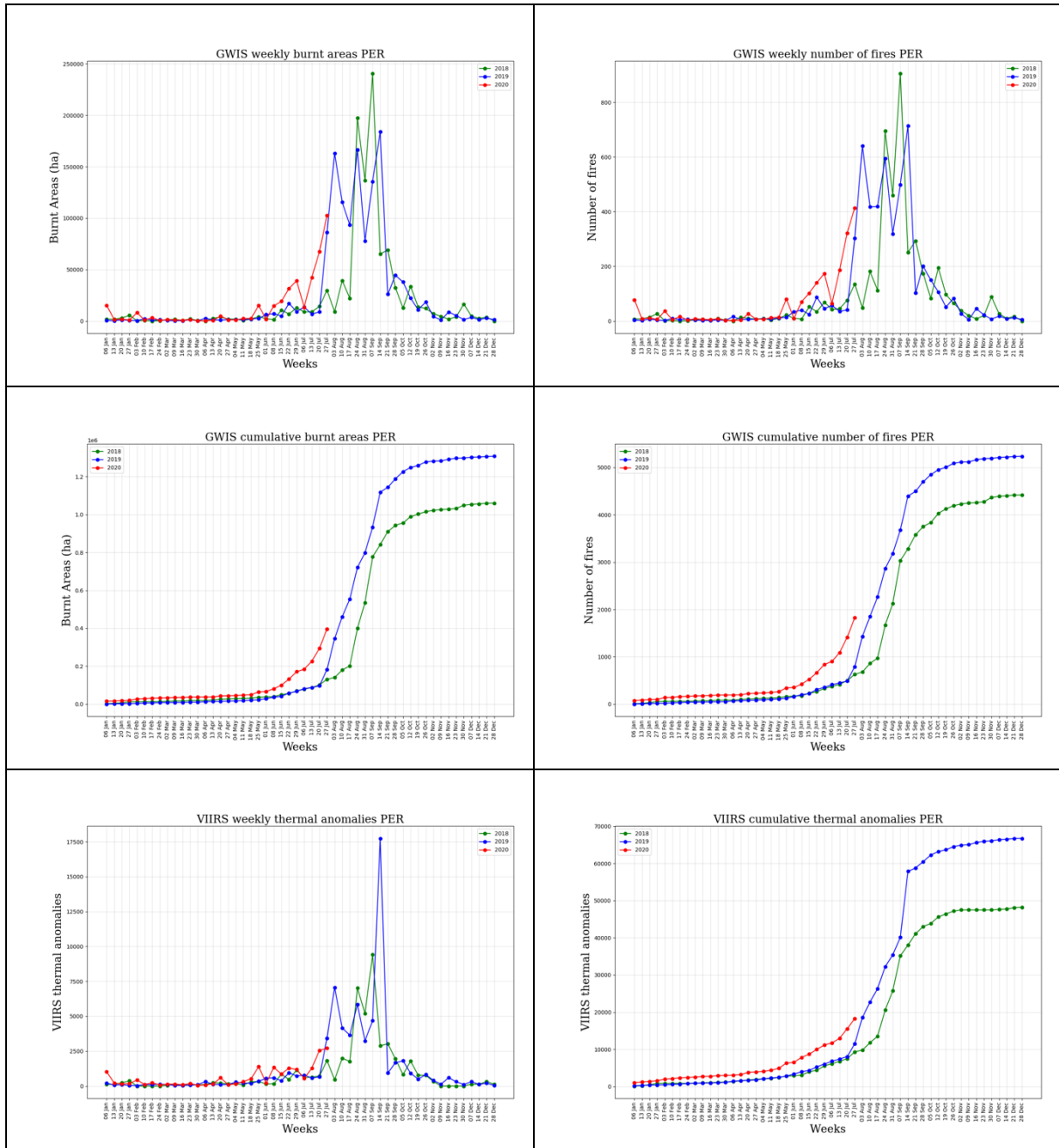


Figure 7. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

7 Wildfires in Venezuela

Figure 8 shows the trends on the extent of burnt areas and the number of fires since January 1, 2020 until the current date produced by the Near-Real Time (NRT) process in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 6693638 ha has been burnt in Venezuela since January 1st until August 2nd, 2020, with 18390 ha burnt in the last week. The values are approximately 15% higher than those in 2019.

The number of fires recorded in GWIS in the last week was 86, which shows a stable trend. The number of thermal anomalies until August 2nd, 2020 (260050) shows a typical trend in the region as compared to the trends in the period 2012-2019, with an increase of fire activity in the last week (787), with respect to the previous ones. The values are approximately 15% higher than those in 2019.

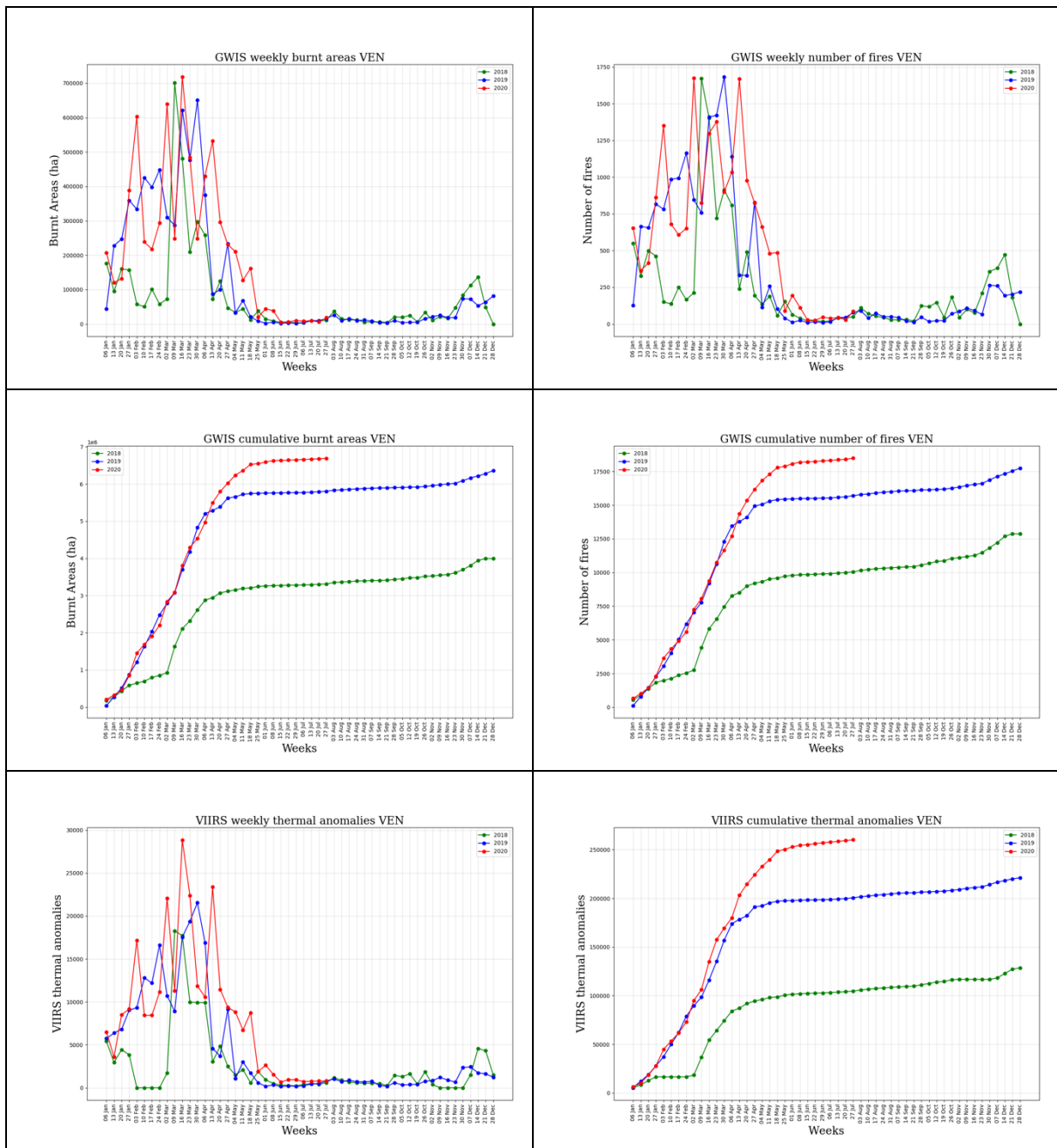


Figure 8. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

8 Fire danger and fire weather forecast in the Amazon region

This section provides information on the fire danger forecast in the Amazon region for the current week. High levels of fire danger facilitate fire ignitions and the propagation of ongoing fires. Figure 9 provides the average fire danger for the week of August 3 to August 9th, 2020. This information is based on the daily fire danger forecast that is provided online in GWIS³. According to this forecast it is expected that fire danger conditions will be extreme in central Brazil, southeastern Bolivia and north of Paraguay.

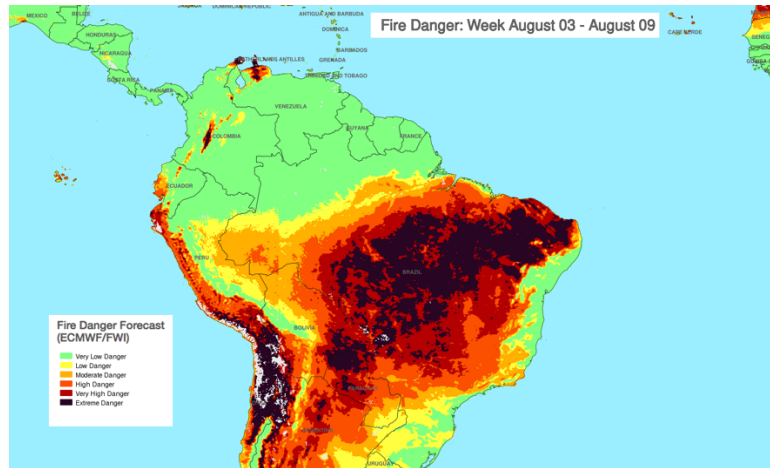


Figure 9. Average Fire danger forecast. Week, August 3-August 9th, 2020.

The weekly fire weather forecast of temperature and precipitation anomalies for this week is presented in Figure 10. The overall trend is of above average temperatures in the north of Brazil and areas of Peru and Bolivia and Paraguay, while there is slight deficit of precipitation in northern Brazil, Peru, Bolivia and Paraguay.

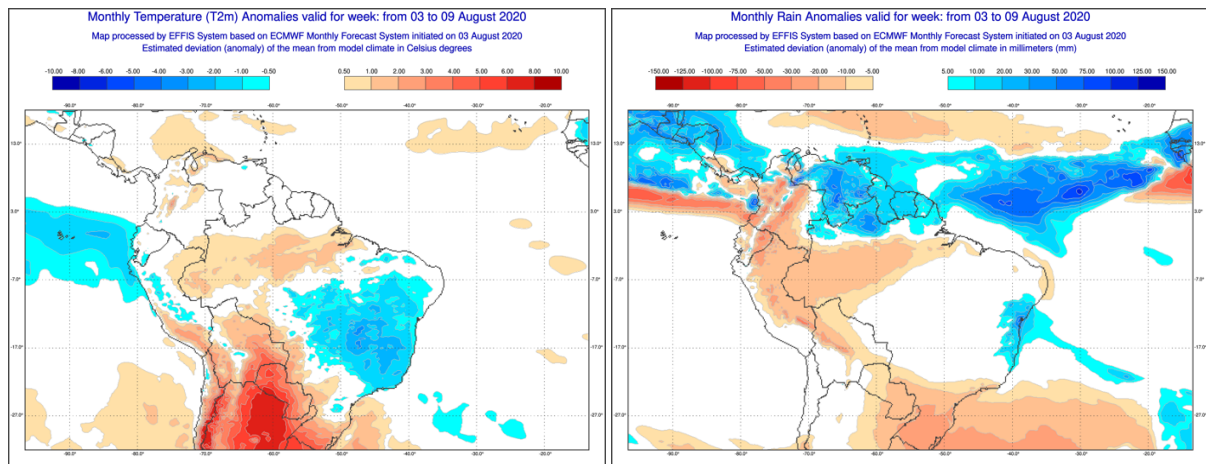


Figure 10. Fire weather anomalies of the current week, August 3-August 9th, 2020.

³ https://gwis.jrc.ec.europa.eu/static/gwis_current_situation/public/index.html

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