European Commission

# JRC TECHNICAL REPORT

## Weekly & monthly analysis of wildfires in the Amazon region and South America: July 26 - August 1, 2021

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## Scope of this report and executive summary

This report describes the trends of wildfires in the Amazon in 2021 through the comparison with the fire activity in the region in previous fire seasons. It must be noted than 2019 and 2020 were critical years in terms of fire activity in many of the countries in the region. Seasonality and trends on fire activity in the countries can be found at the "country profile application" in GWIS. The current 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] and the EU Project on support to wildfire management in LAC. Most of the Amazon region is in Brazil, specifically in the Brazilian Legal Amazon (BLA)[2], and in other neighbor countries. Figure 1 shows the geographical extent of the countries analyzed in this report.

- In the **Brazil Legal Amazon (BLA)**, within Brazil, a total of 4.30 Million ha (Mha) burnt since January 1 until August 1, 2021. This value is below those of 2019 and 2020 in the same period. **Last week, 1078 fires occurred, decreasing from the peak from the last week.**
- **In Brazil, 8.36 Million ha (Mha) burnt since January 1 until August 1, 2021**, with a total of 670,057 ha burnt in the last week. The total burnt area and number of fires in Brazil are the highest values recorded since 2015 in the same period **(**2,106 fires occurred last week). The area burnt in the last week was lower than that of the same week in 2020 and similar with the values of 2019. The average size of the fires is lower than all the previous 5 years.
- **In Bolivia**, the total burnt area (2.06 Million ha (Mha)) and number of fires (5242 fires) are decreasing from the last week. The total burned area this year until now its higher than 2020.
- **In Colombia**, the total burnt area in the country (2.61 Million ha (Mha)) is above the values of 2018 and 2019 but approximately 12% below the values of 2020.The total number of fires since January 2021 its 9042, the highest value since 2015 for the same period.
- **In Paraguay**, 1.73 Million ha (Mha) burnt since January 1 until August 1, 2021. This figure is above those in 2018 and 2019 but 29 % below the values of 2020.
- **In Peru** since January 1 until August 1, 2021, the total burnt area (0.36 Mha) and total number of fires (1799) are the highest values recorded since 2015. So far, the total burned area for 2021 its 12 % higher than 2020
- **In Venezuela,** 4.15 Million ha (Mha) burnt in the current year until August 1. The value of the total burnt area in Venezuela is lower than that in 2019 and 2020.
- **In Chile,** 400 113 ha burnt in the current year until August 1, 2021. This value is 51% higher than that in 2020. The total burnt area and number of fires (1510), up until now, are the second highest values since 2015.
- **In Argentina**, a total of 1.88 Million ha (Mha) burnt since January 1 until August 1, 2021, which is less than half of what was burned in 2020. A total of 6821 fires were mapped in this period.
- **In Ecuador**, a total of 170 fires burnt 33,925 ha since January 1 until August 1, 2021. These values are similar to the values of the last five years.
- **In Uruguay**, a total of 33,242 ha burnt since January 1 until August 1, 2021. This value its higher than 2018 and 2019 but lower than 2020. 19 fires were reported last week, an increase from the previous week.
- **In French Guiana** a total of 726 ha burnt since January 1 until August 1, 2021. This value its similar with the previous years. No fires were reported last week.
- **In Guyana,** a total of 60,669 ha burnt since January 1 until August 1, 2021, a value higher than that of 2018 but lower than the values in 2019 and 2020. 3 fires were mapped last week.
- **In Suriname**, 21 fires burnt a total of 4533 ha since January 1 until August 1,2021, a value similar to that of 2018 and lower than 2019 and 2020. 3 fires were reported last week.
- This week, fire danger conditions are expected to remain extreme in great part of Brazil, will continue to be very high to extreme in the central and eastern part of Brazil and moderate to high in eastern and southwestern Bolivia, Paraguay and across Argentina.

[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)


Figure 1. Areas analyzed in this report: Brazil Legal Amazon, Brazil, Bolivia, Colombia, Paraguay, Peru, Venezuela, Chile, Argentina, Ecuador, Uruguay, French Guiana, Guyana and Suriname

# 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, 2021 produced by the Near-Real Time (NRT) fire analysis in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 4.30 Mha burnt in the BLA since January 1 until August 1, 2021, with 397,974 ha burnt in total during the last week, which is lower to the values of the same week in 2019 and 2020. The number of fires recorded in GWIS in the last week was 1078, decreasing from the previous week. The number of thermal anomalies until August 1, 2021 (121539) shows a typical trend in the region as compared to the trends in 2018 and 2020, but the values remain below. 19433 thermal anomalies were registered last week.

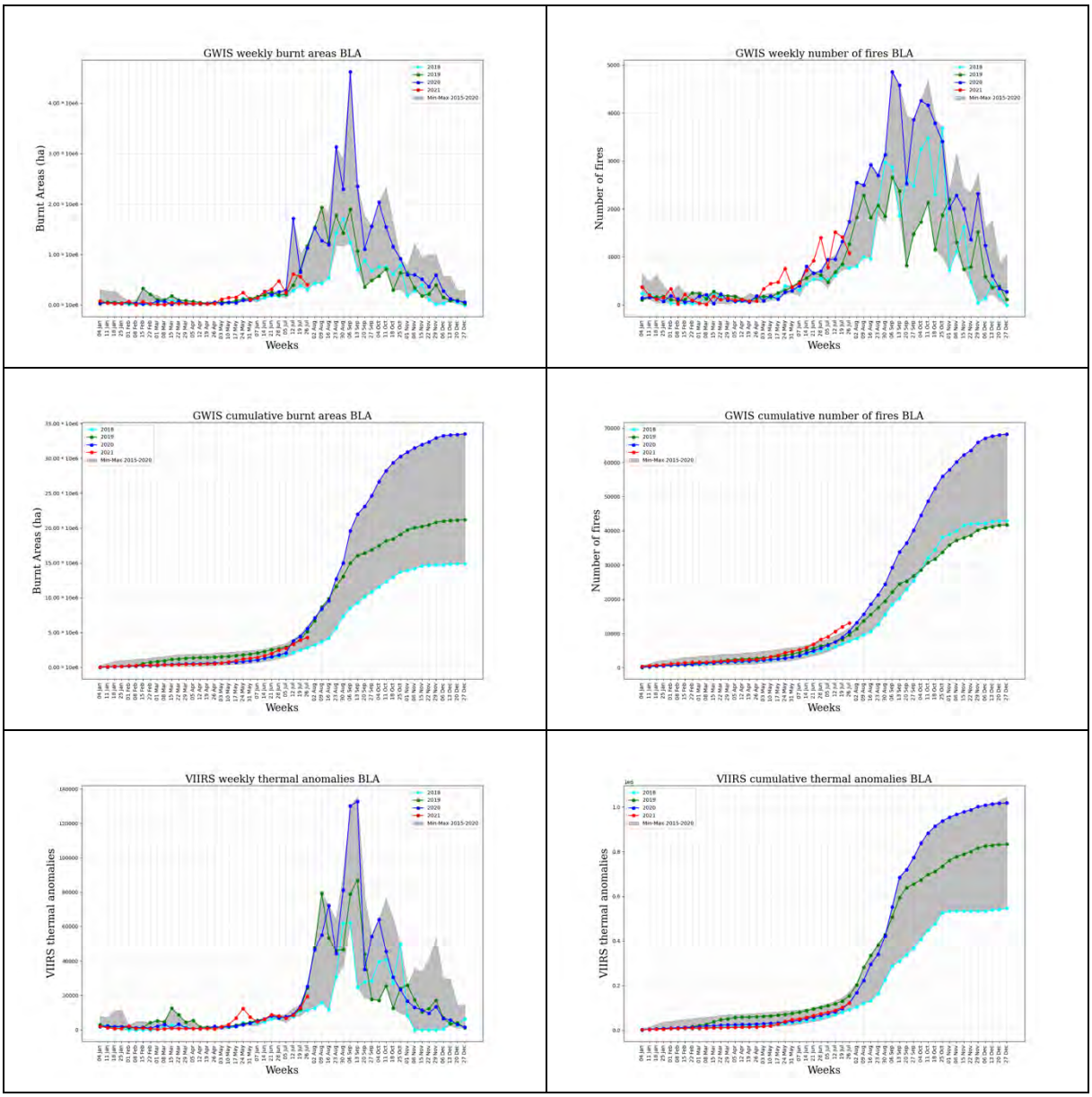



Figure 2. Trend of burnt areas and number of fires as compared to data in the last five years.

## 2 Wildfires in Brazil

Figure 3 shows the trends on the extent of burnt areas and the number of fires since January 1, 2021 produced by the Near-Real Time (NRT) fire analysis in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 8.36 Mha ha burnt in Brazil since January 1 until August 1, 2021, with a total 670,057 ha burnt in the last week. The number of fires recorded in GWIS in the last week was 2106, decreasing from the last week. The number of thermal anomalies until July 18, 2021 (251533) shows a typical trend in the region. 29,992 thermal anomalies were registered last week.

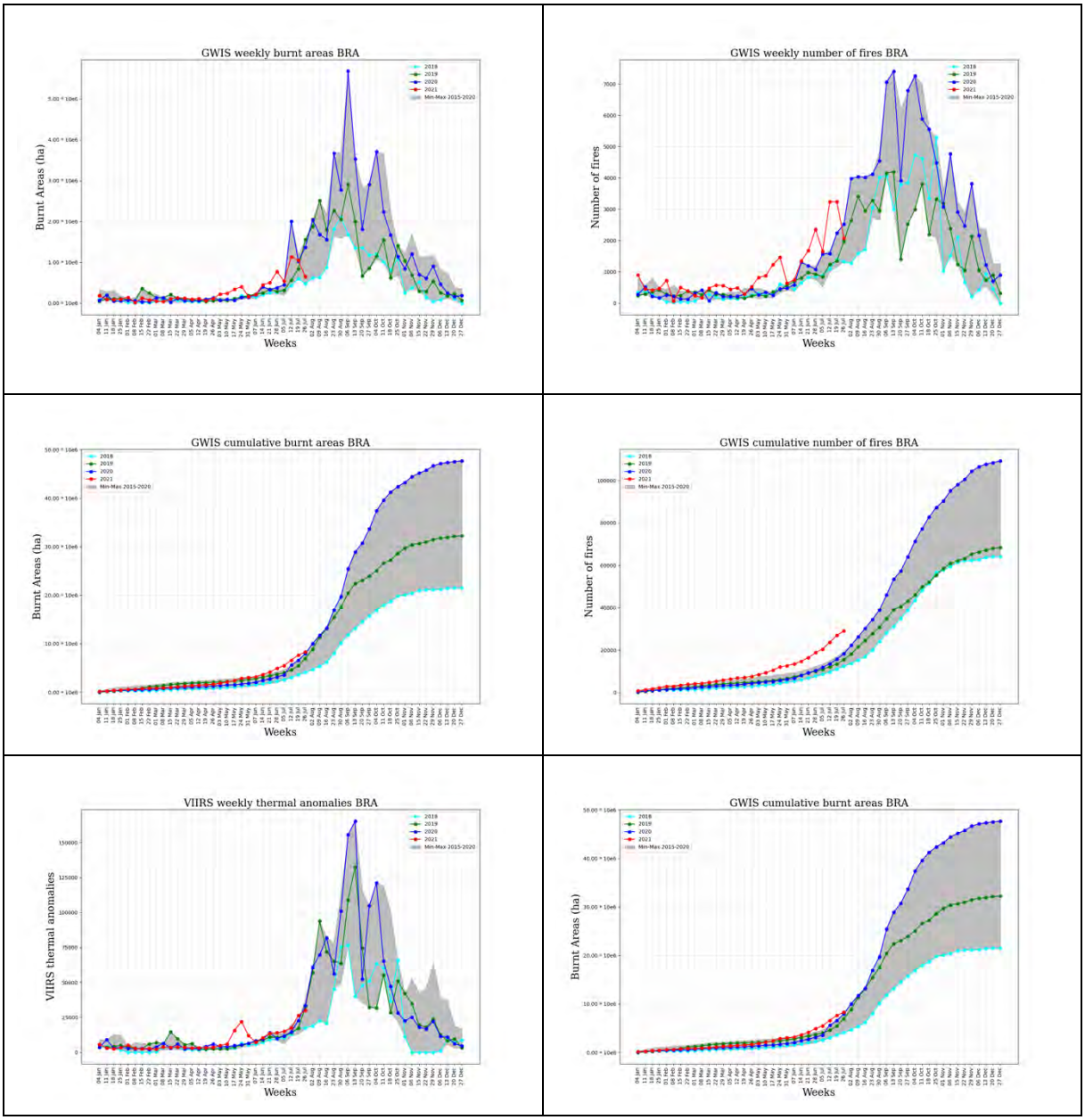



Figure 3. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last five years.

# 3 Wildfires in Bolivia

Figure 4 shows the trends on the extent of burnt areas and the number of fires since January 1, 2021 produced by the Near-Real Time (NRT) fire analysis in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 2.06 Mha ha burnt in Bolivia since January 1 until August 1, 2021, with 127,353 ha burnt in the last week, decreasing from the last week. The number of fires recorded in GWIS in the last week was 323, lower than the number of fires in the same week from the last three years. The number of thermal anomalies until August 1, 2021 (63,036) is the highest value since 2015 for the same period. 8,091 thermal anomalies were detected by VIIRS in the last week.

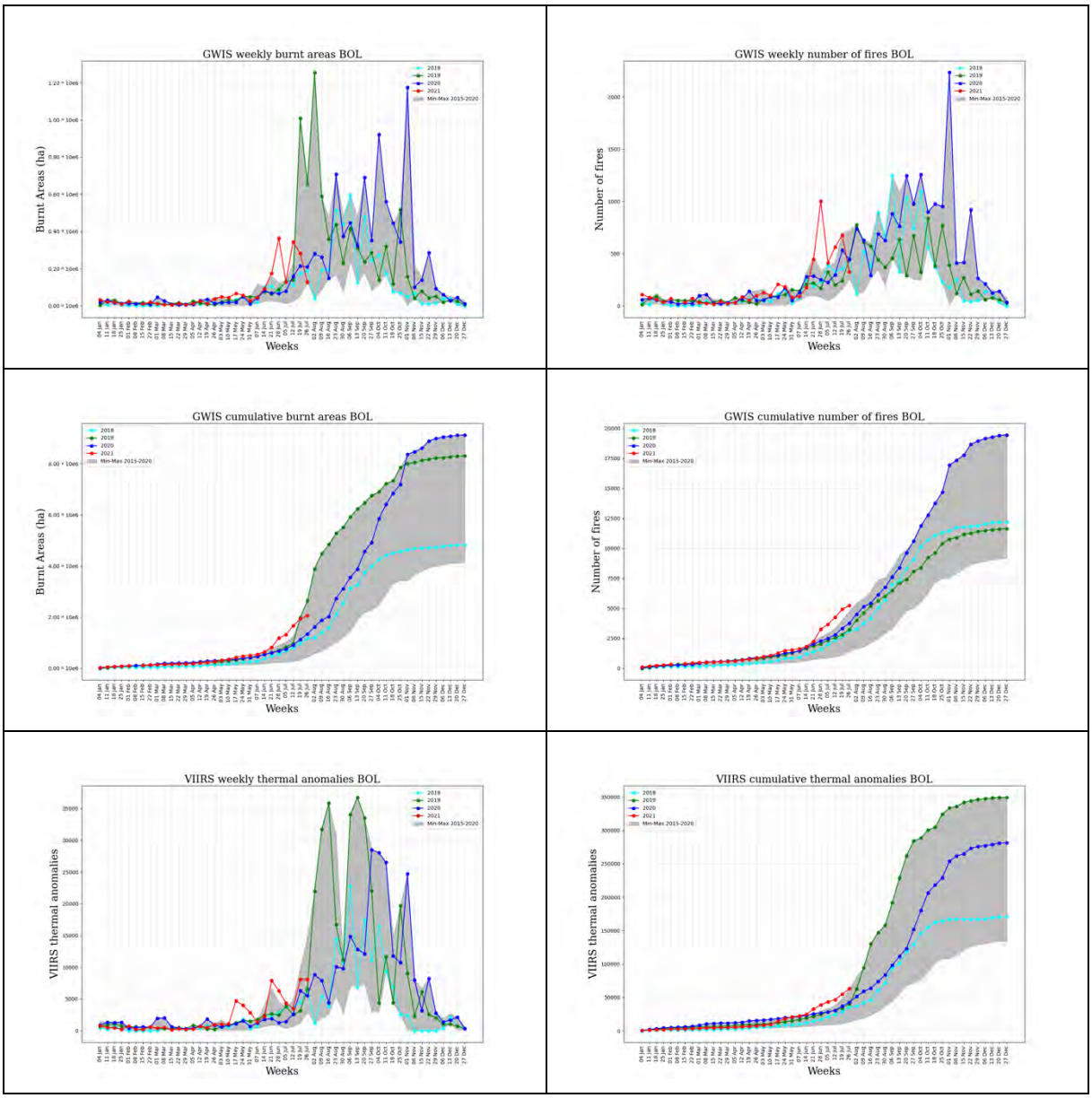



Figure 4. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

# 4 Wildfires in Colombia

Figure 5 shows the trends on the extent of burnt areas and the number of fires since January 1, 2021 produced by the Near-Real Time (NRT) fire analysis in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 2.61 Mha burnt in Colombia since January 1 until August 1, 2021. Approximately 15,546 ha burnt in the country the last week. The number of fires recorded in GWIS in the last week was 71 and the total number of fires since January 1 it's the highest value since 2015 for the same period. The number of thermal anomalies until August 1, 2021 (59,428) follows a typical trend in the region with similar values of 2018 but way below of 2019 and 2020. 113 thermal anomalies detected by VIIRS last week.

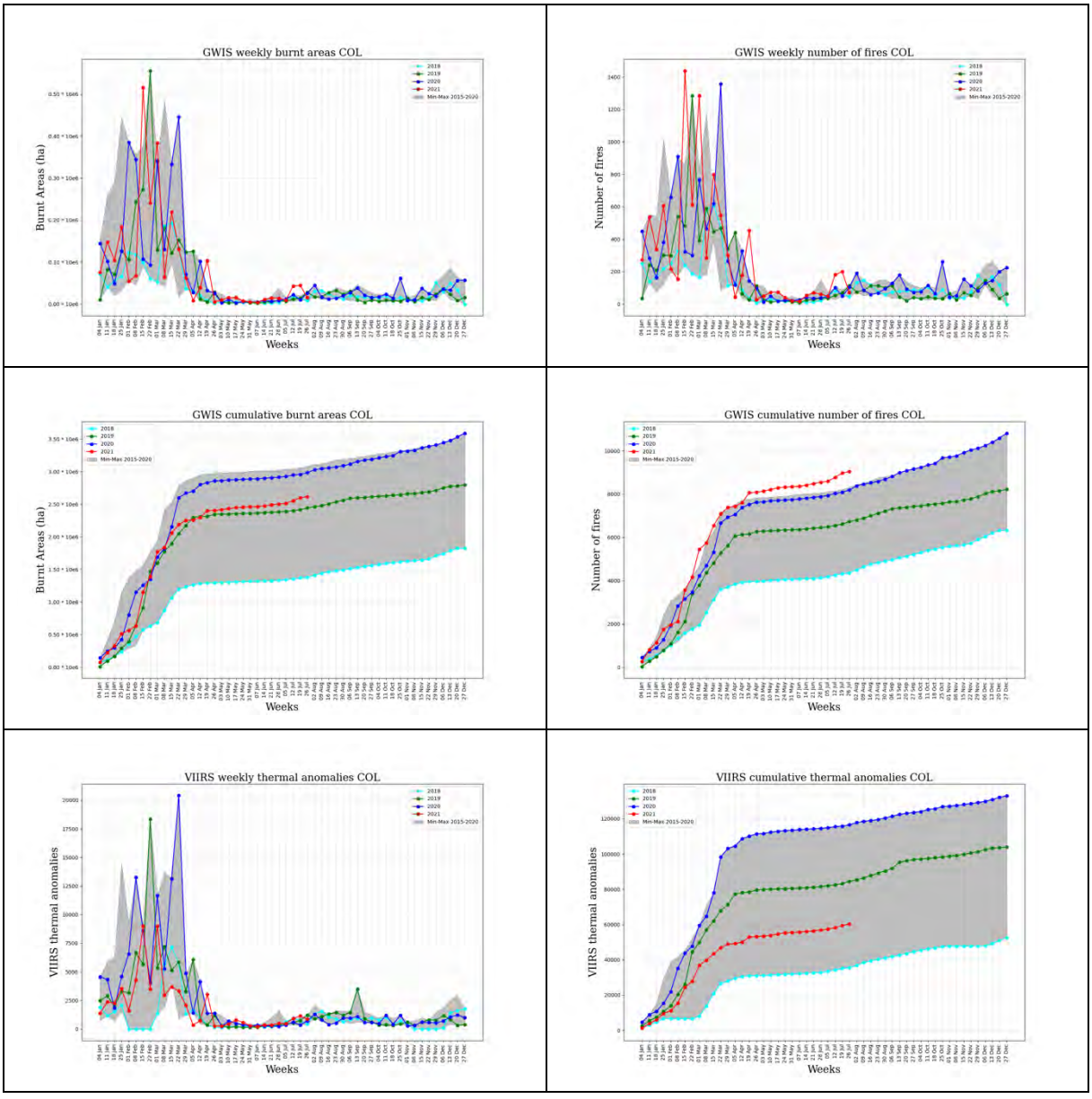



Figure 5. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

# 5 Wildfires in Paraguay

Figure 6 shows the trends on the extent of burnt areas and the number of fires since January 1, 2021 produced by the Near-Real Time (NRT) fire analysis in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 1.73 Mha burnt in Paraguay since January 1 until August 1, 2021. Approximately 76,302 ha burnt in the country the last week, decreasing from the previous week. The number of fires recorded in GWIS in the last week was 283. The number of thermal anomalies until August 1, 2021 (47,519) follows a typical trend in the region. 2993 thermal anomalies detected by VIIRS last week.

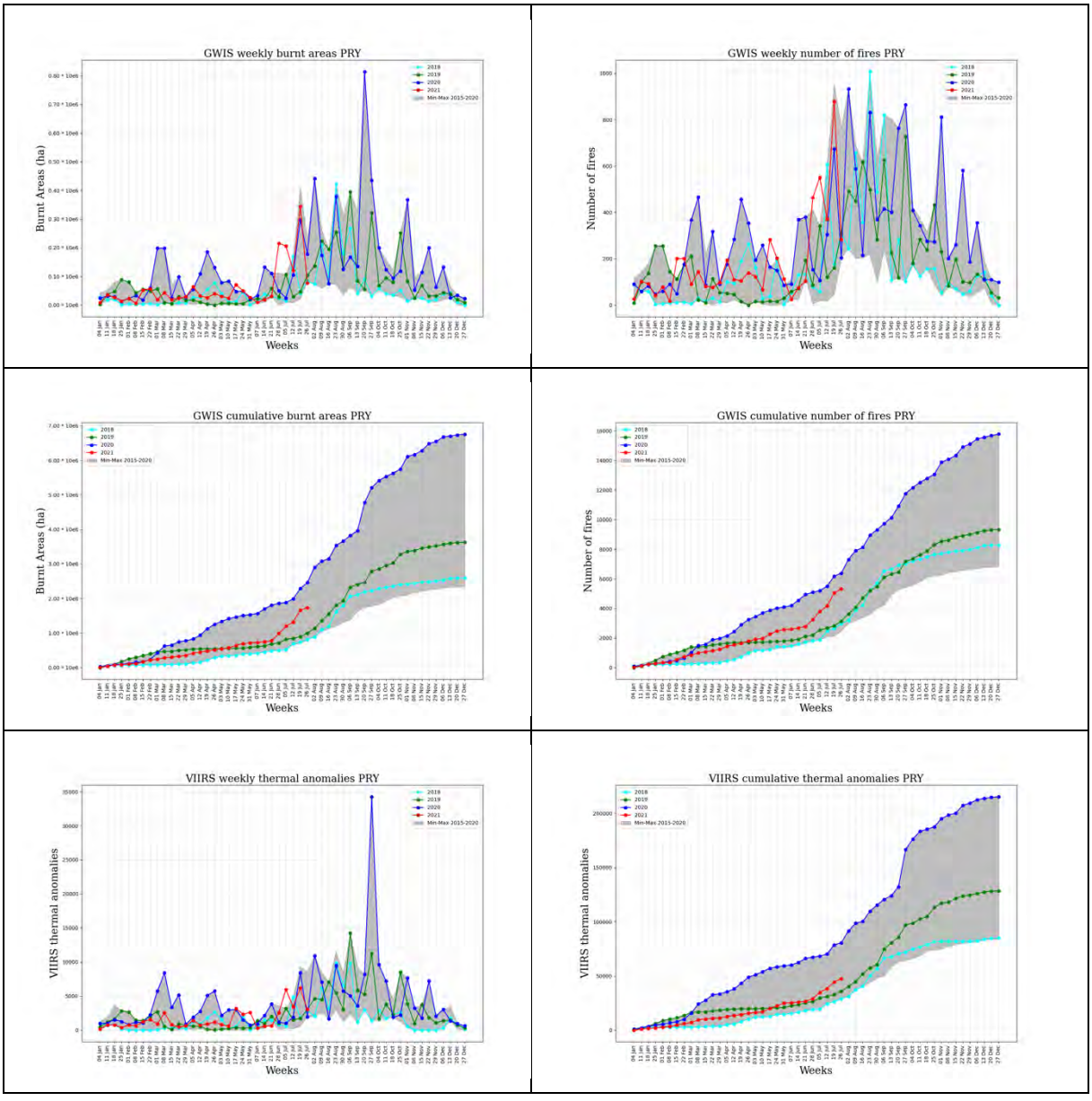



Figure 6. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

# 6 Wildfires in Peru

Figure 7 shows the trends on the extent of burnt areas and the number of fires since January 1, 2021 produced by the Near-Real Time (NRT) fire analysis in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 0.36 Mha burnt in Peru since January 1 until August 1, 2021, the highest value since 2015 for the same period. Approximately 23,488 ha burnt in the last week, decreasing from the previous week. The number of fires recorded in GWIS in the last week was 121. The total number of fires since the beginning of the year is 1799, the highest value since 2015 for the same period. The number of thermal anomalies until August 1, 2021 (13,424) shows a typical trend in the region. 1401 thermal anomalies registered last week, decreasing after the last week.

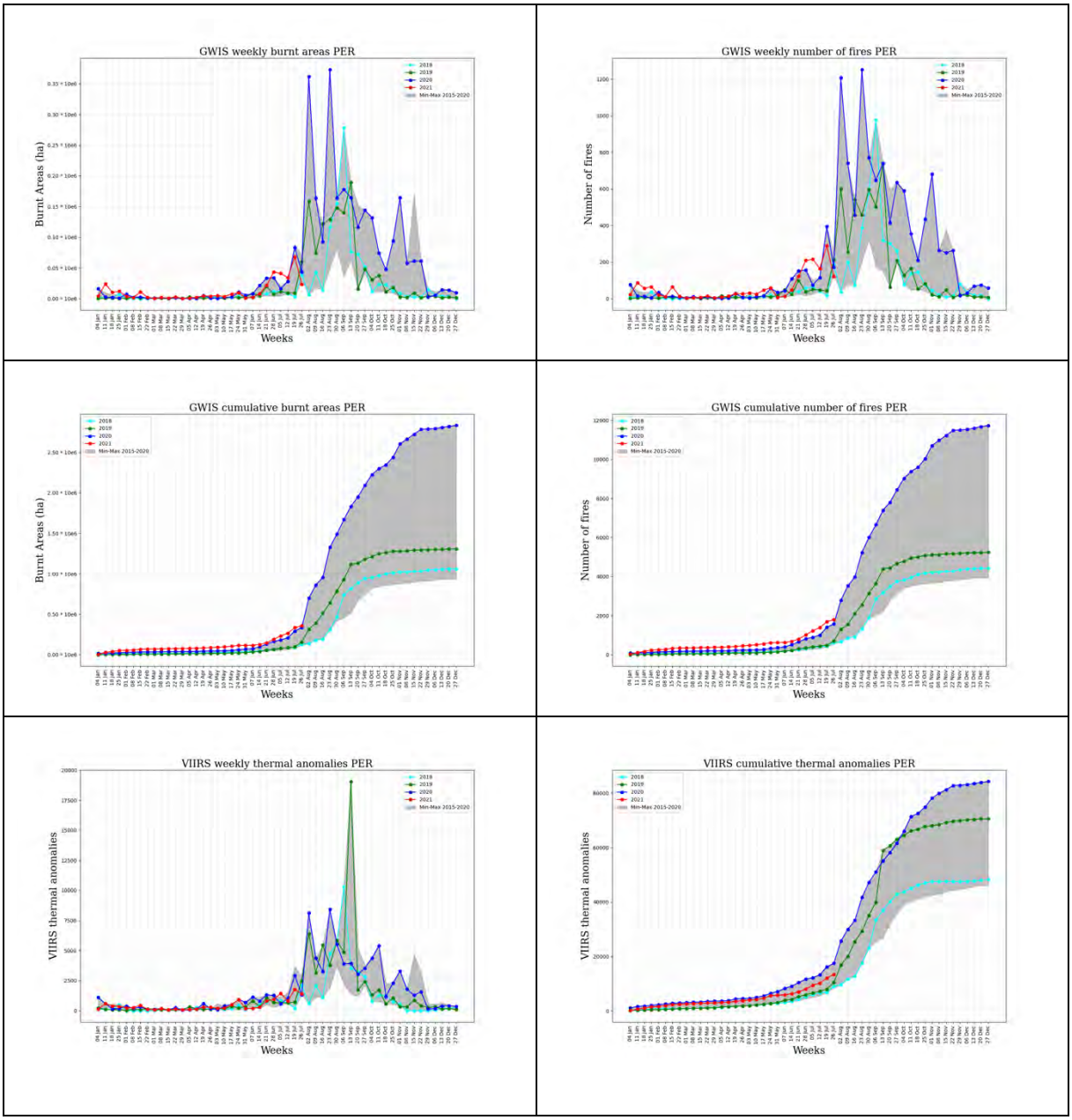



Figure 7. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

# 7 Wildfires in Venezuela

Figure 8 shows the trends on the extent of burnt areas and the number of fires since January 1, 2021 produced by the Near-Real Time (NRT) fire analysis in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 4.15 Mha burnt in Venezuela since January 1 until August 1, 2021, with 10,111 ha burnt in the last week. The number of fires recorded in GWIS in the last week was 50. The number of thermal anomalies until August 1, 2021 (116,911) shows a typical trend in the region. 1234 thermal anomalies were recorded by VIIRS during the last week.

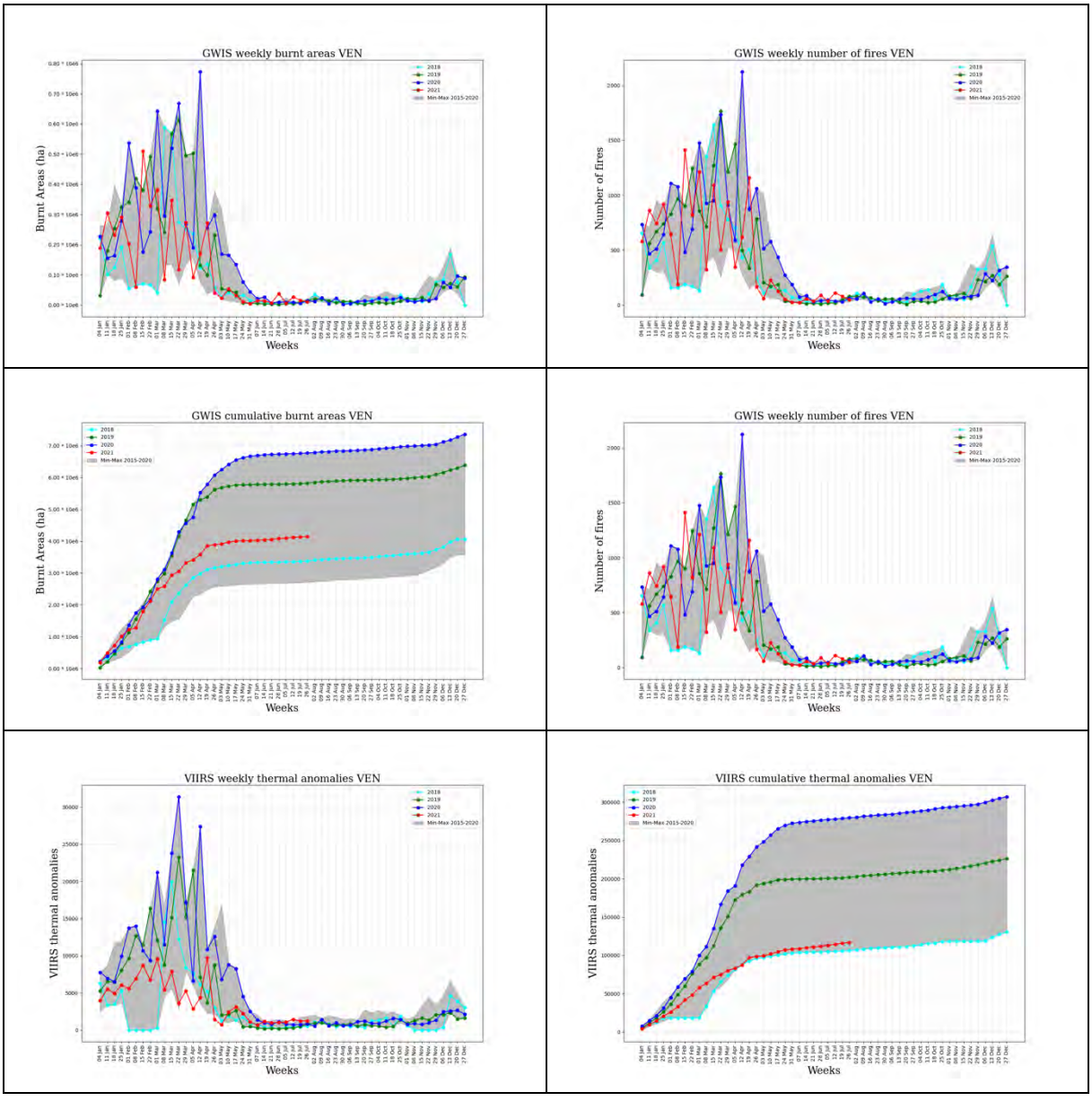



Figure 8. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

# 8 Wildfires in Chile

Figure 9 shows the trends on the extent of burnt areas and the number of fires since January 1, 2021 produced by the Near-Real Time (NRT) fire analysis in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 400,113 burnt in Chile since January 1 until August 1, 2021, with 3,025 ha burnt in the last week. The number of fires recorded in GWIS in the last week was 16. The number of thermal anomalies until August 1, 2021 (11,487) shows a typical trend in the region as compared to the trends during previous years. 287 thermal anomalies were detected by VIIRS during the last week, which is similar to the values in the same week during previous years.

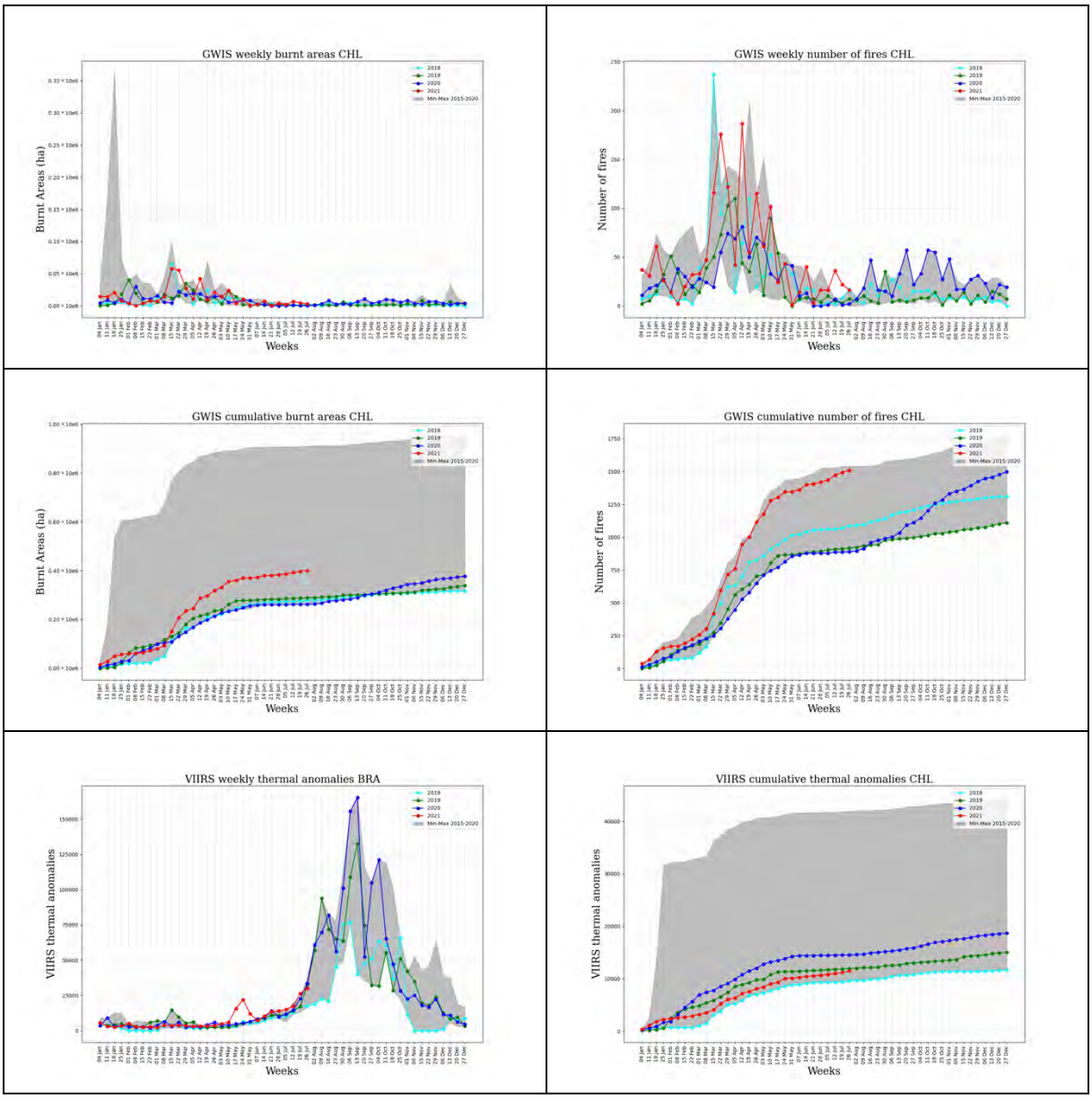



Figure 9. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

# 9 Wildfires in Argentina

Figure 10 shows the trends on the extent of burnt areas and the number of fires since January 1, 2021 produced by the Near-Real Time (NRT) fire analysis in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 1.88 Mha burnt in Argentina since January 1 until August 1, 2021, with 135,671 ha burnt in the last week. These values are below than of 2020. The number of fires recorded in GWIS in the last week was 586, the highest value since 2015 for the same period. The number of thermal anomalies until August 1, 2021 (60,063) shows a typical trend in the region. 6821 thermal anomalies were recorded by VIIRS during the last week, a value that is like those recorded in that week for 2020.

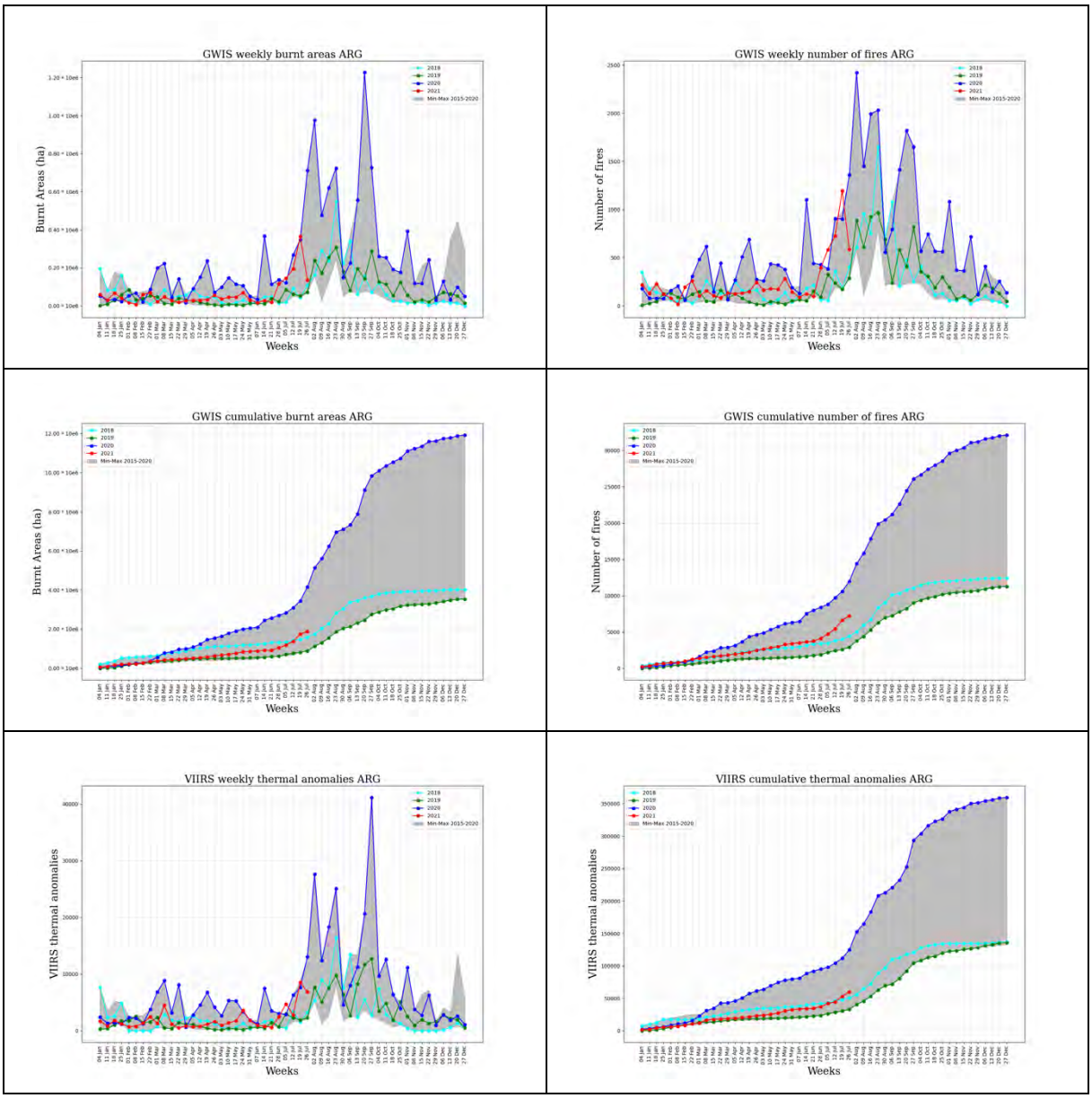



Figure 10. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

## 10 Wildfires in Ecuador

Figure 11 shows the trends on the extent of burnt areas and the number of fires since January 1, 2021 produced by the Near-Real Time (NRT) fire analysis in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 33,275 ha burnt in Ecuador since January 1 until August 1, 2021, the highest value since 2015 for the same period, with 894 ha burnt in the last week. The number of fires recorded in GWIS in the last week was 5. The number of thermal anomalies until August 1, 2021 (1363) shows a typical trend in the region. 73 thermal anomalies were detected by VIIRS in the last week.

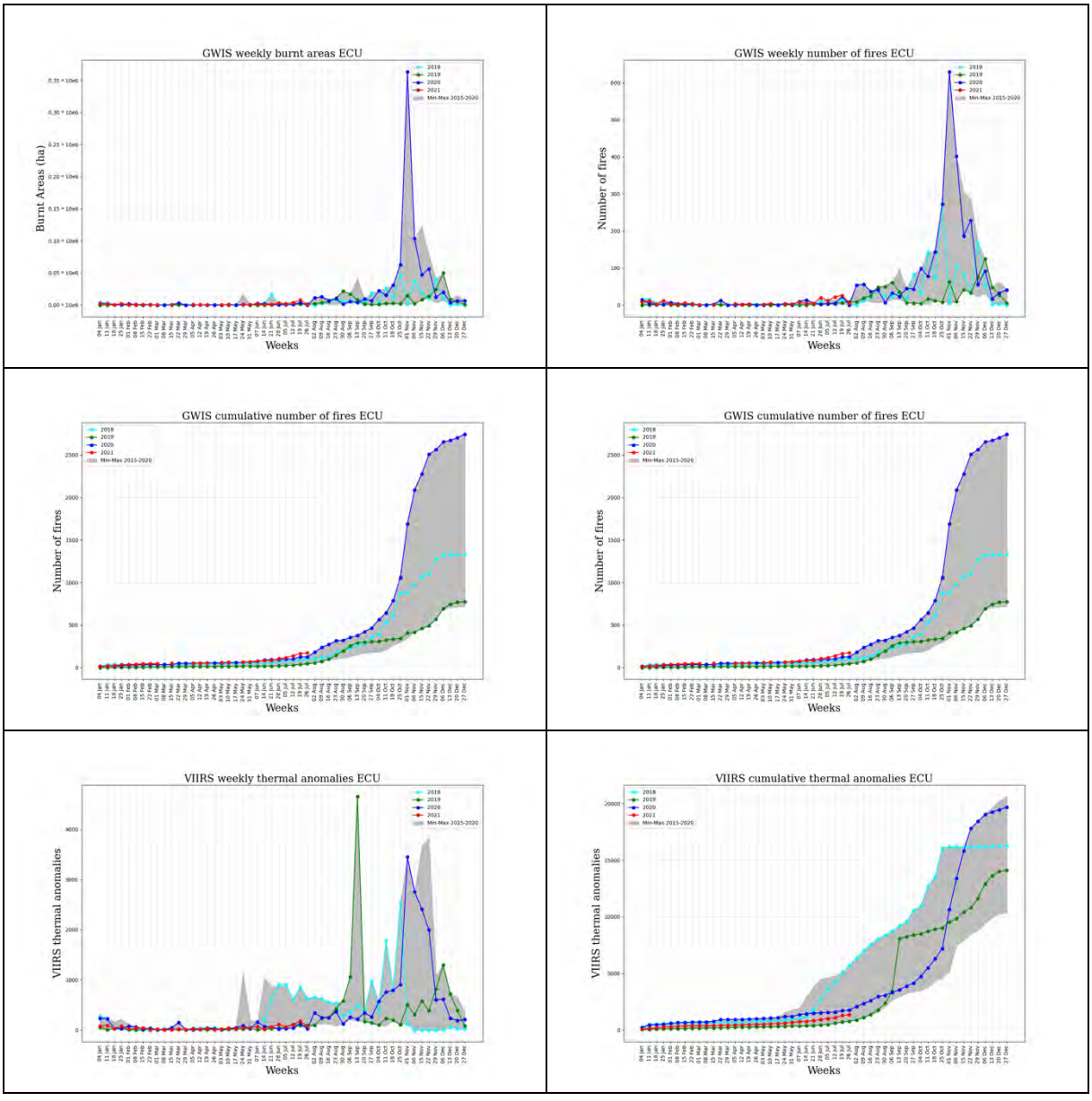



Figure 11. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

## 11 Wildfires in Uruguay

Figure 12 shows the trends on the extent of burnt areas and the number of fires since January 1, 2021 produced by the Near-Real Time (NRT) fire analysis in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 32,925 ha burnt in Uruguay since January 1 until August 1, 2021. 3 fires were recorded last week. The number of thermal anomalies until August 1, 2021 (1,171) shows a typical trend in the region.

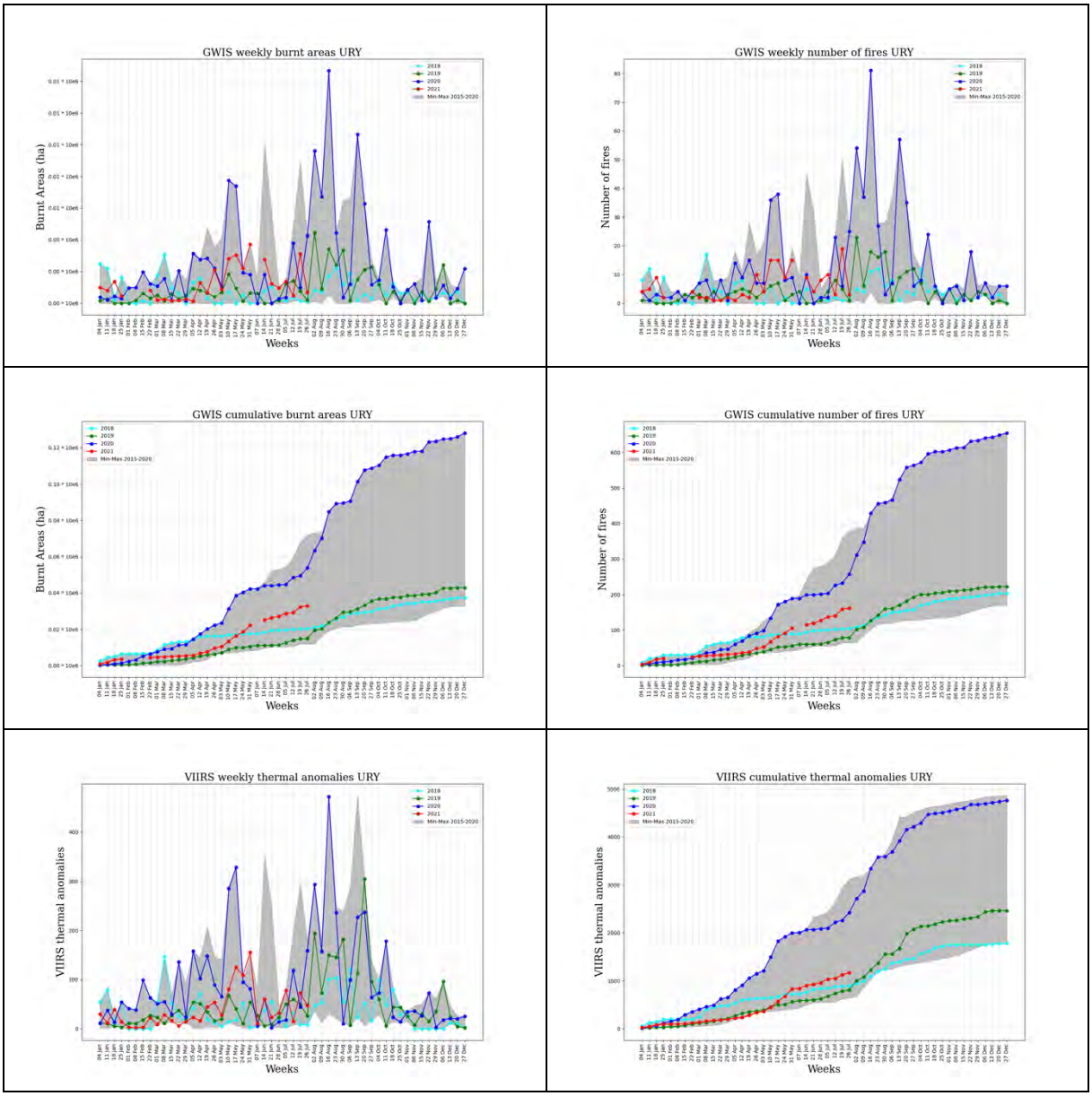



Figure 12. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

## 12 Wildfires in French Guiana

Figure 13 shows the trends on the extent of burnt areas and the number of fires since January 1, 2021 produced by the Near-Real Time (NRT) fire analysis in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 726 ha burnt since January 1 until August 1, 2021, with no fire recorded last week. The number of thermal anomalies until August 1, 2021 (32) shows a typical trend in the region as compared to the trends during previous years. 0 thermal anomalies were detected by VIIRS during the last week, which is similar to the values in the same week during previous years.

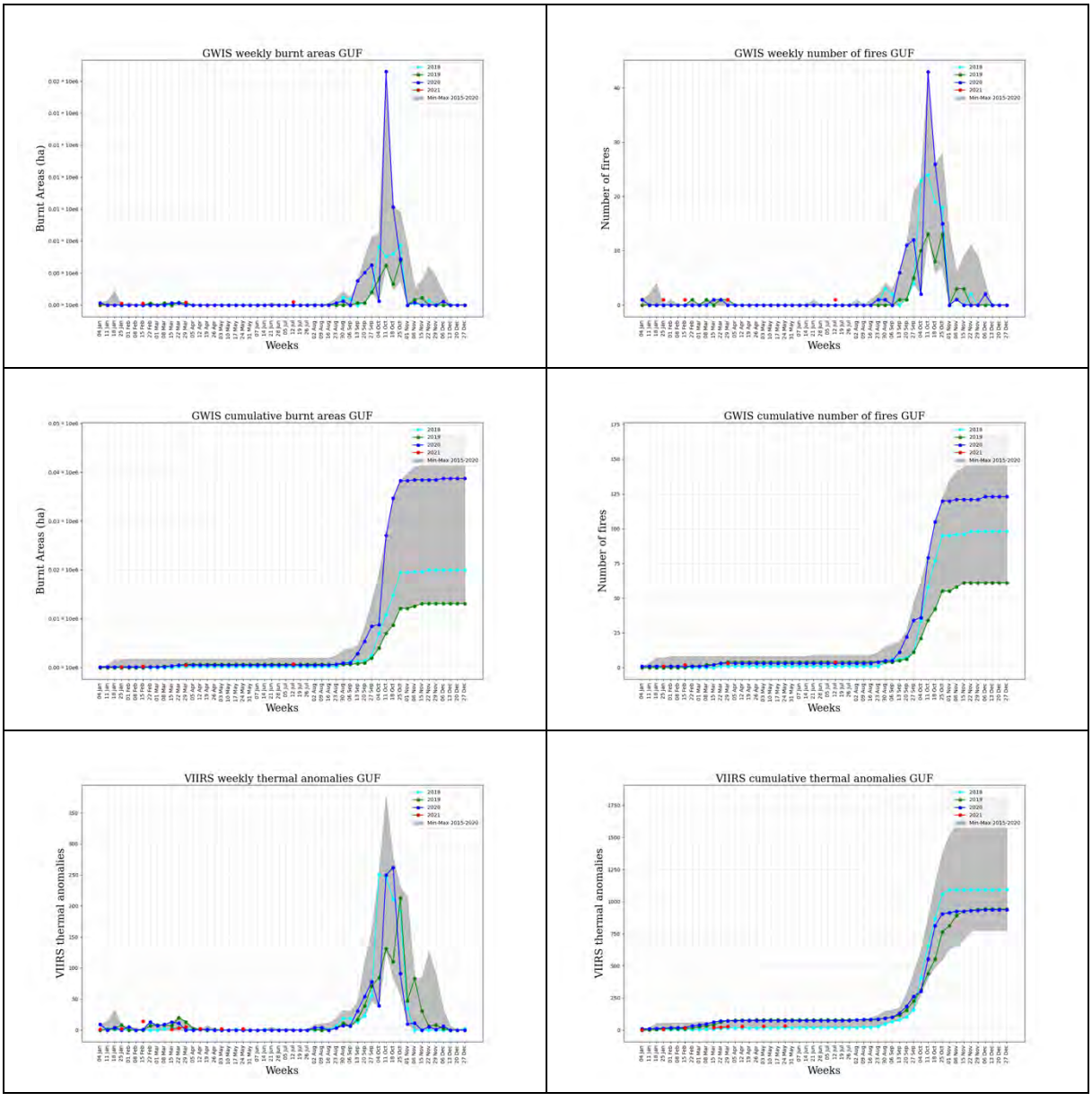



Figure 13. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

## 13 Wildfires in Guyana

Figure 14 shows the trends on the extent of burnt areas and the number of fires since January 1, 2021 produced by the Near-Real Time (NRT) fire analysis in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 60,669 Mha burnt in Guyana since January 1 until August 1, 2021, with 3 fires recorded last week. The number of thermal anomalies until August 1, 2021 (1,548) shows a typical trend in the region as compared to the trends during previous years. 8 thermal anomalies were detected by VIIRS during the last week, which is similar to the values in the same week during previous years.

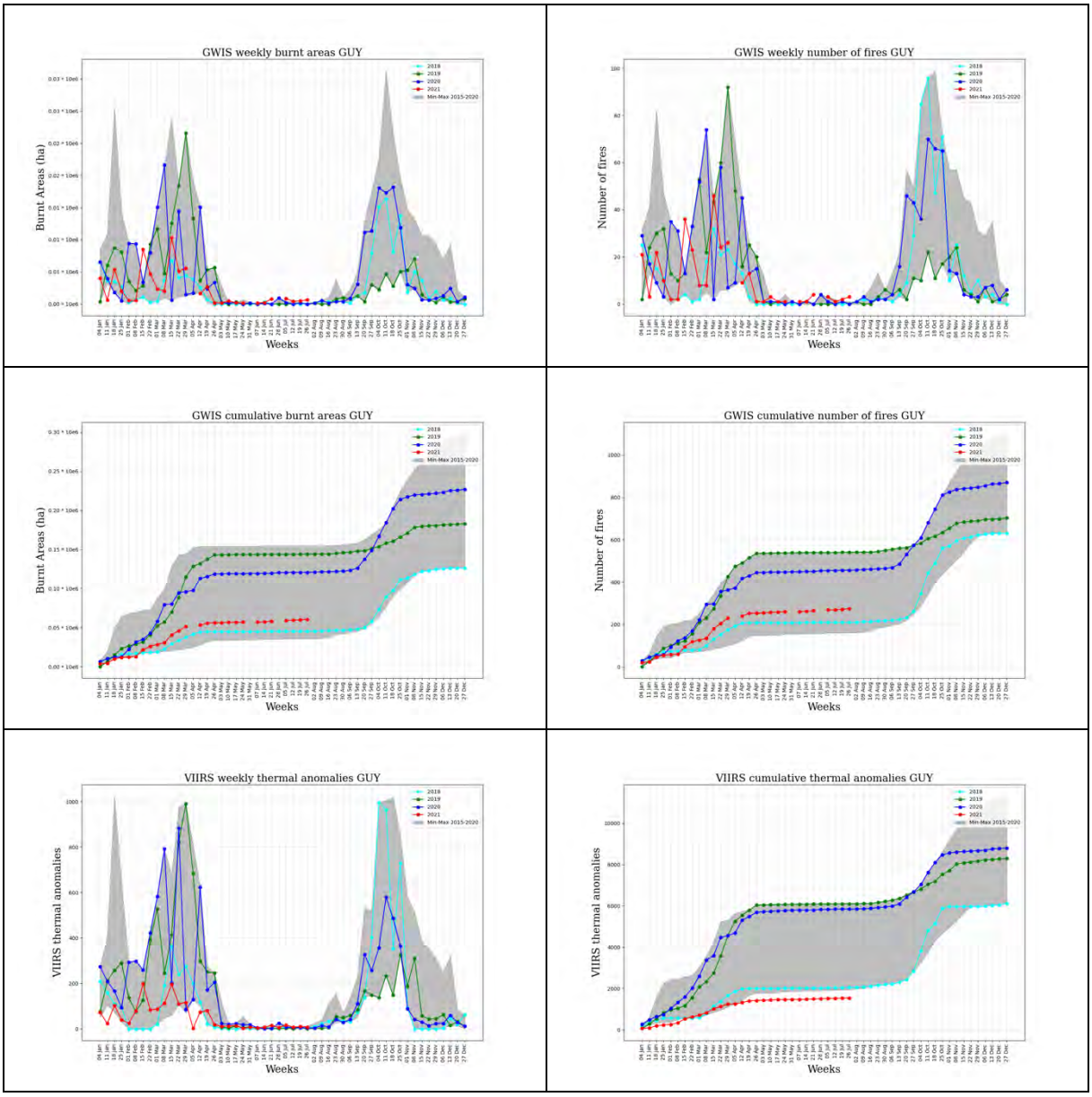



Figure 14. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

## 14 Wildfires in Suriname

Figure 15 shows the trends on the extent of burnt areas and the number of fires since January 1, 2021 produced by the Near-Real Time (NRT) fire analysis in GWIS. The last row shows the evolution of active hot spots (thermal anomalies) detected by the satellite sensor VIIRS. A total of 4533 ha burnt in Suriname since January 1 until August 1, 2021. No fires were recorded last week. The total number of fires since the beginning of the year is 21. The number of thermal anomalies until August 1, 2021 (121) shows a typical trend in the region. 3 thermal anomalies registered last week, increasing after the last week.

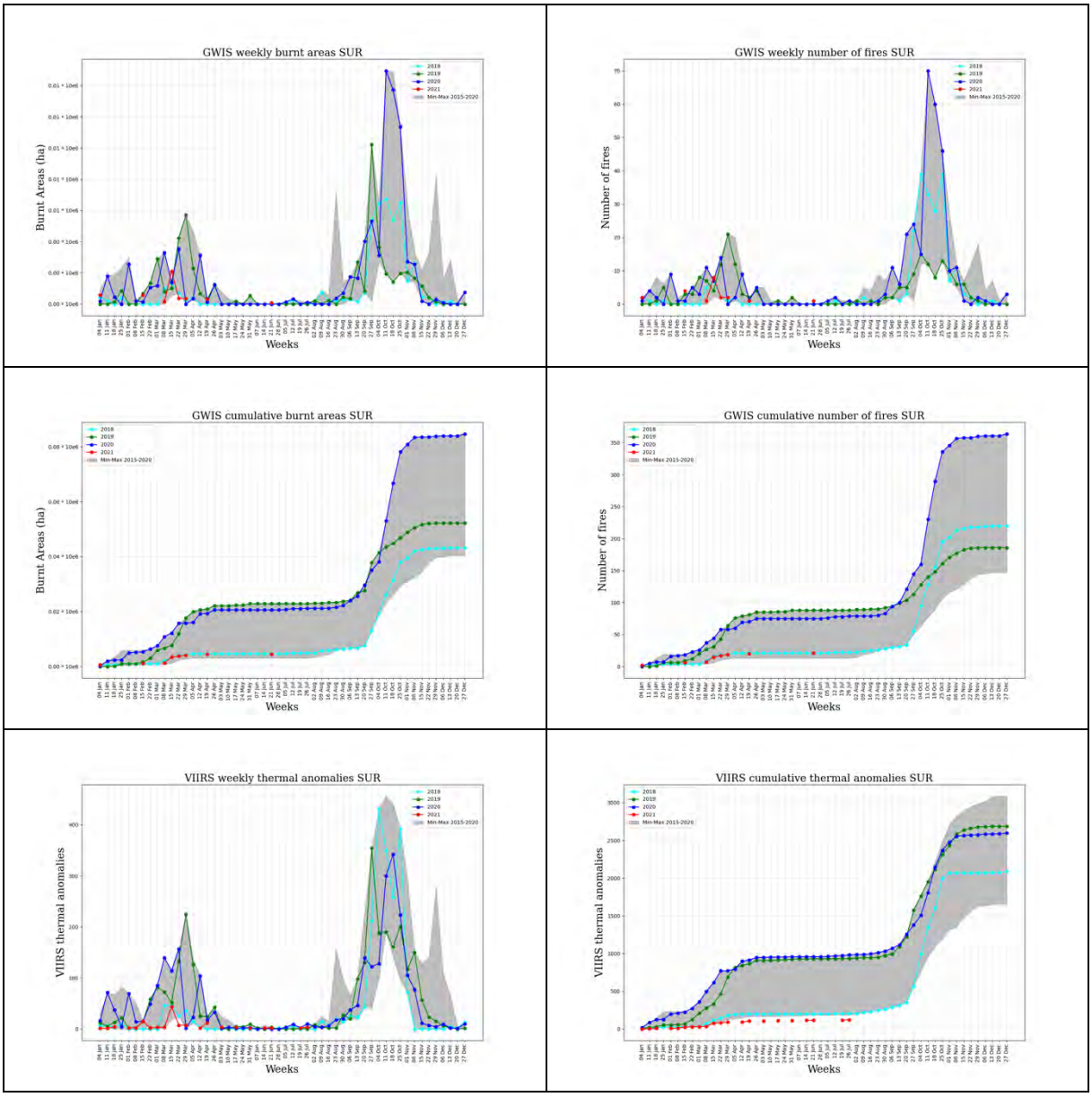



Figure 15. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

## 15 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 16 provides the average fire danger for the week of August 2 to August 8, 2021. This information is based on the daily fire danger forecast that is provided online in GWIS[3]. According to this forecast, it is expected that fire danger conditions will continue to be very high to extreme in the central and eastern part of Brazil and moderate to high in eastern and southwestern Bolivia, Paraguay and across Argentina.

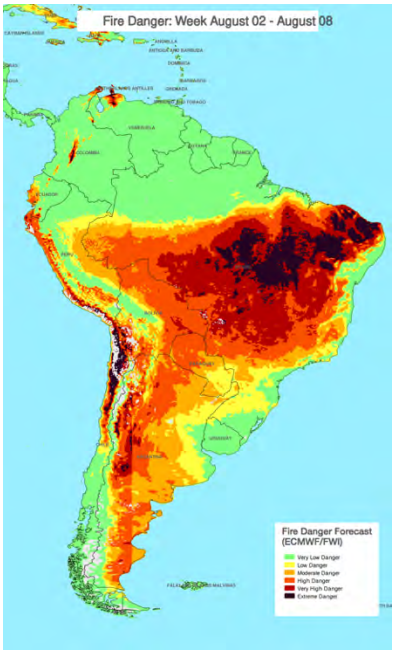



Figure 16. Average Fire danger forecast. Week, August 02-August 08, 2021.

The weekly fire weather forecast of temperature and precipitation anomalies for this week is presented in Figure 17. Above average temperatures are forecasted for areas of central Brazil and Argentina. Below average temperatures are forecasted in southern Brazil, Paraguay and eastern Bolivia. The models estimate an above average precipitation rates for next week mainly in northern Brazil and Venezuela. Below average precipitation is foreseen mainly in southern part of Brazil and Bolivia.

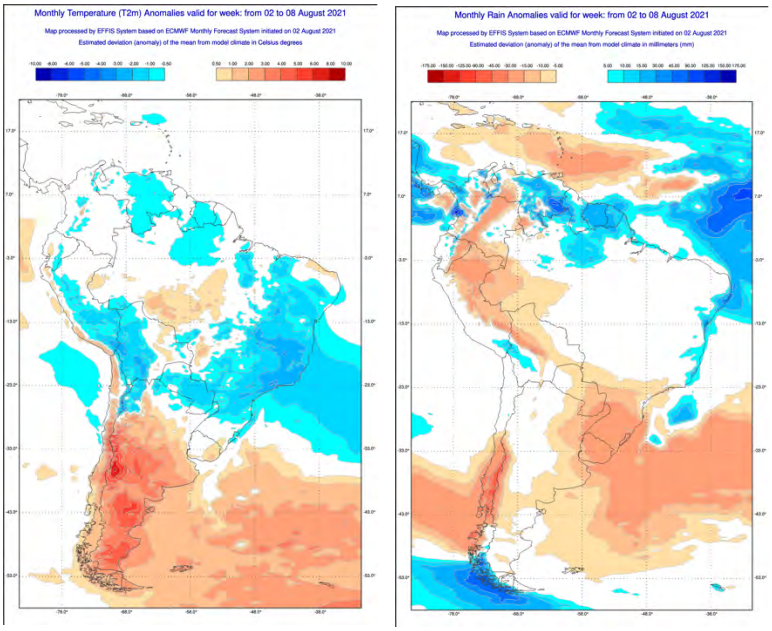



Figure 17. Fire weather anomalies of the current week, August 2- August 8, 2021.

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

# 16 Monthly analysis (up to 31 July 2021)

## 16.1 Brazilian Legal Amazon (BLA)

Figure 18 shows the spatial distribution of burnt areas for 2021 mapped by the Near-Real Time (NRT) process in GWIS in the Brazilian Legal Amazon region, within Brazil.

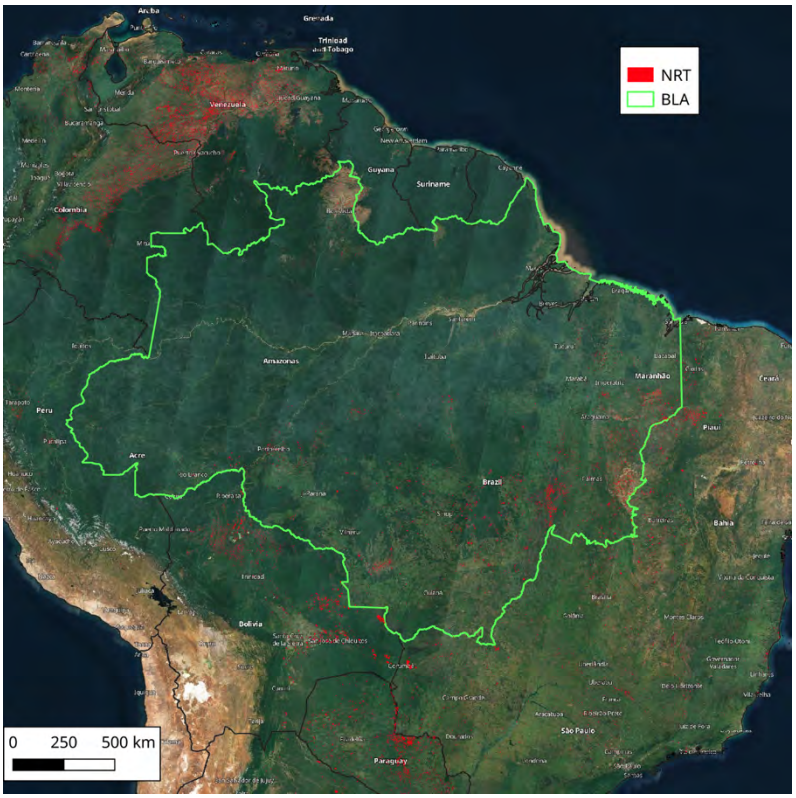
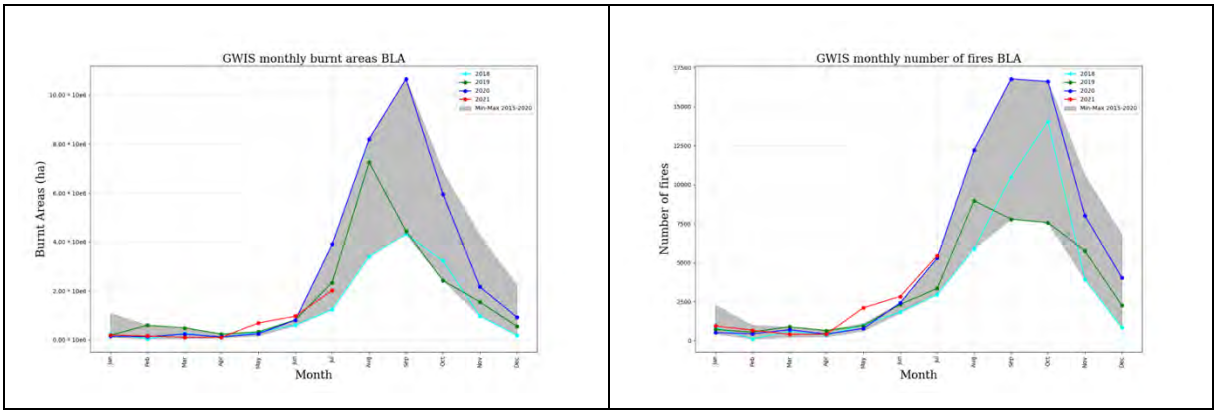



Figure 18. GWIS burnt areas for 2021 in Brazilian Legal Amazon (BLA). Burnt areas until 31 July.

The 2021 fire season in the BLA was following similar trends of the last year until July as shown in Figure 19. However, this year the burnt area up to July is lower than the last two years. However, the numbers of fires are reaching the highest values during the last 5 years (since 2015). There are, in average, more fires burning less surface than the previous two years is usually due to agricultural or controlled fires.



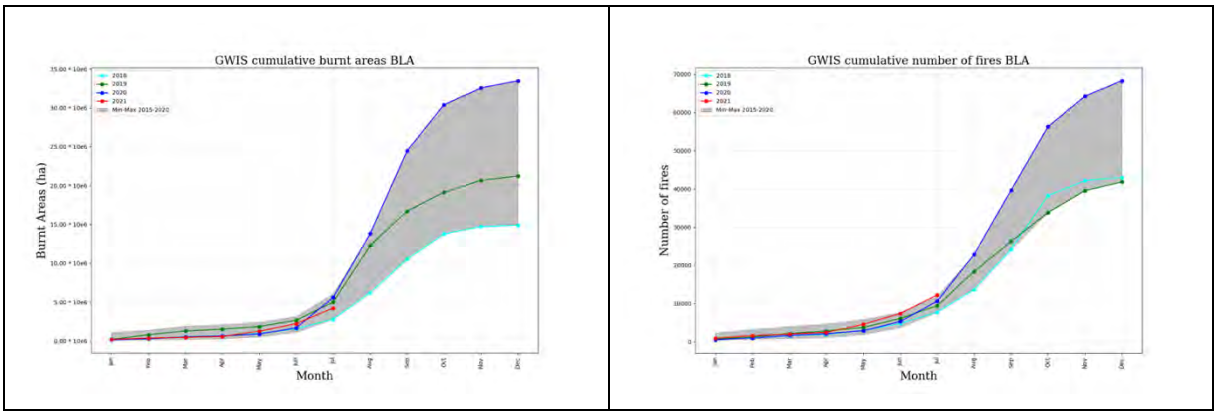



Figure 19. Trend of burnt areas and number of fires as compared to data in the last five years.

Figure 20 shows the monthly burnt landcover distribution for the current year 2021.

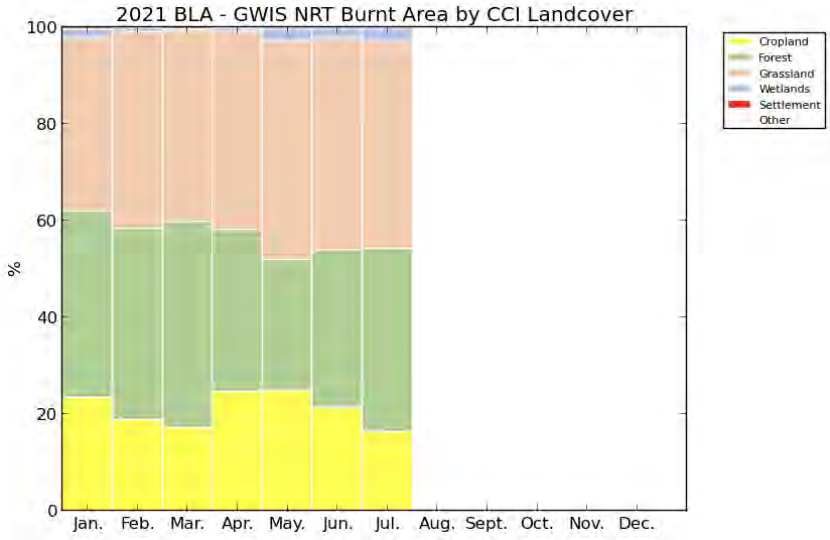



Figure 20. Monthly percentage of burnt land cover for the year 2021.

In terms of the number of **active fire spots retrieved directly by the VIIRS sensor, 2021 presents a number of active fire spots up to July 2021 lower than 2019 and 2020** as shown in Figure 21. This type of data is those often reported in the media.

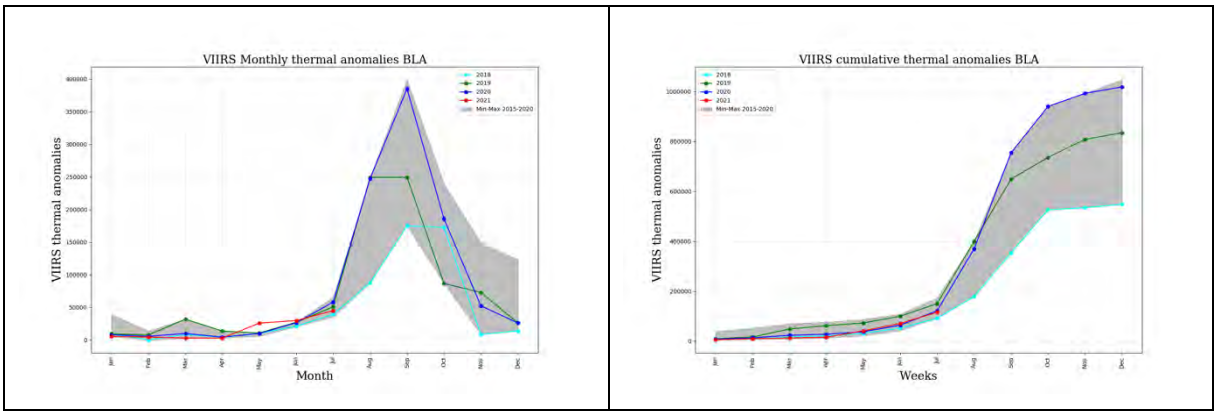



Figure 21. Trend of VIIRS thermal anomalies compared to data in the last five years.

## 16.2 Brazil

The spatial extent of the burnt areas mapped by the Near-Real Time (NRT) process in GWIS is presented in Figure 22. Although most of the burnt areas occurred in the center of the country (Cerrado Biome), the fire activity and the resulting burnt areas show a widespread from north to south, including the humid Amazon Forest.


Figure 22. GWIS burnt areas for 2021 in Brazil. Burnt areas until 31 July.

The 2021 fire season in Brazil is showing similar behavior of 2019 burned area values but still lower than of the season of 2020 that was a critical year. The number of fires up to July 2021 are the highest from the last five years for the same period. Despite the total amount of burnt area up to July is more than the value of 2019, the number of fires is considerably higher than in 2019. Therefore, in overall more small fires are taking place compared to 2019.

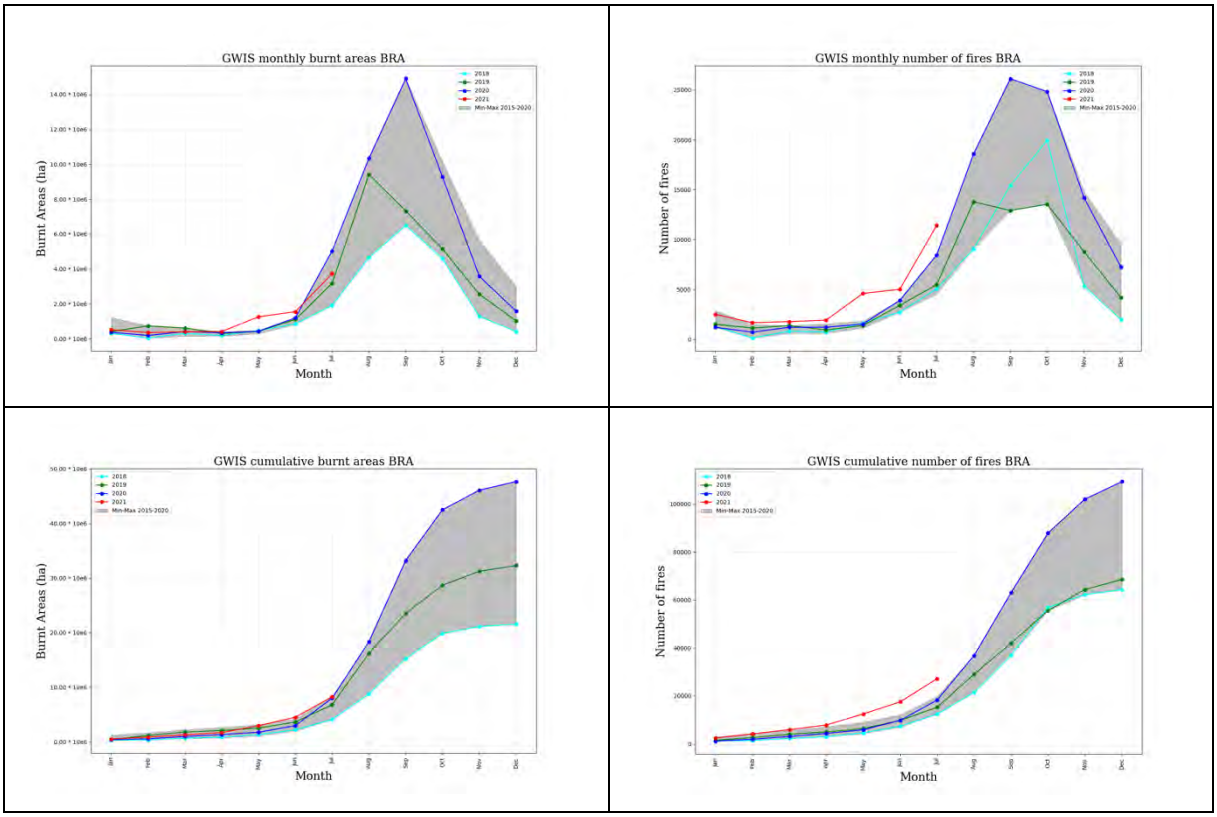



Figure 22. Trend of burnt areas and number of fires as compared to data in the last five years.

Figure 23 shows the monthly burnt landcover distribution for the year 2021.

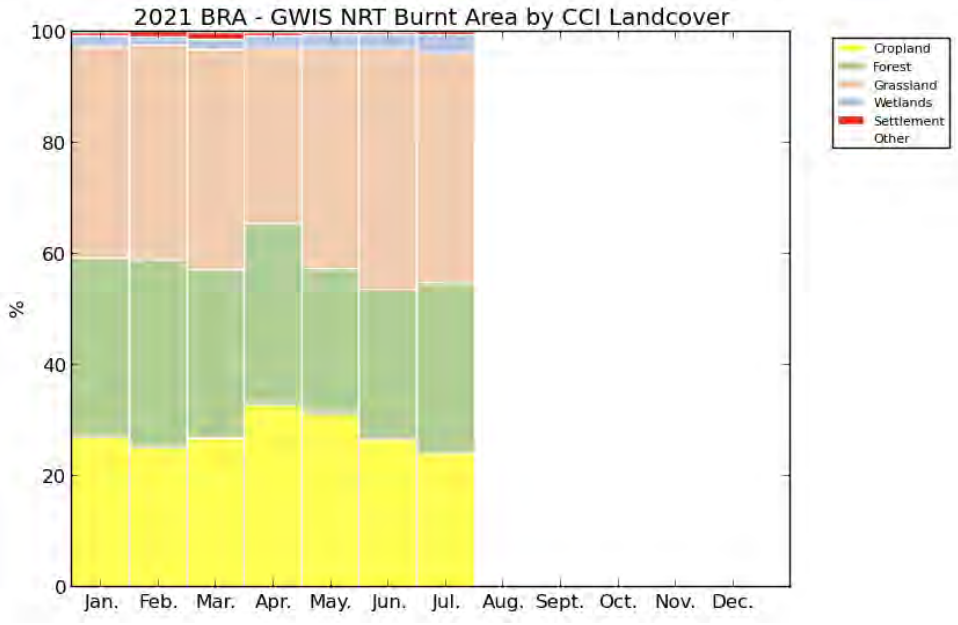



Figure 23. Monthly percentage of burnt land cover for the year 2021.

In terms of active fire spots detected by VIIRS, 2021 presents a number of active fire spots in the period between January and July above the values of 2020 as shown in Figure 24. This type of data is those often reported in the media, which point out to a higher number of fires this year as compared to past years.

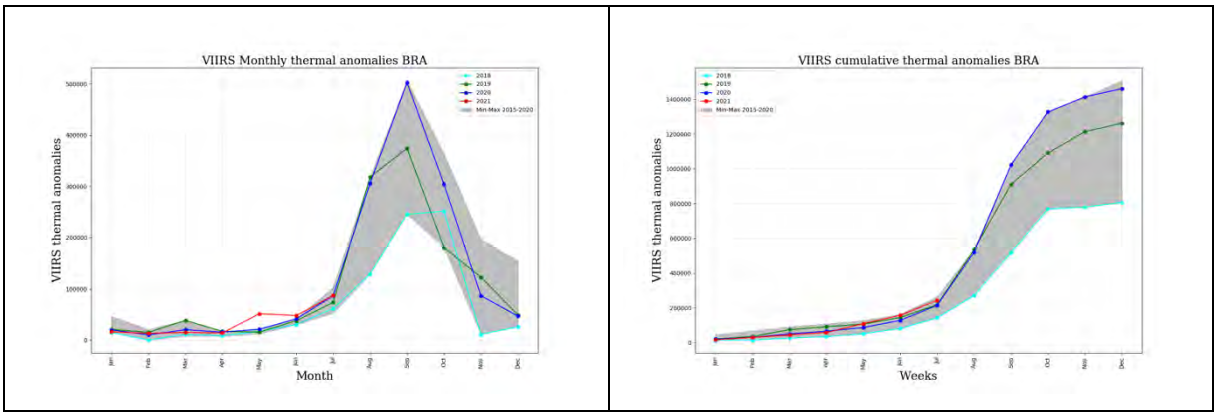



Figure 24. Trend of VIIRS thermal anomalies compared to data in the last five years

## 16.3 Bolivia

The spatial distribution of burnt areas in Bolivia in 2021 mapped by the Near-Real Time (NRT) process in GWIS is shown in Figure 23. In Bolivia the 2021 fire season is following a similar trend to the past five years with slightly more burnt area than 2020 the highest number of fires since 2015. Bolivia has 2.06 Mha of burnt area and 5242 fires up to July. However, the current year is clearly better compared with the critical 2019 fire season that had clear peak in August and an anomalous average fire during July, August and September as can be seen in Figure 25.

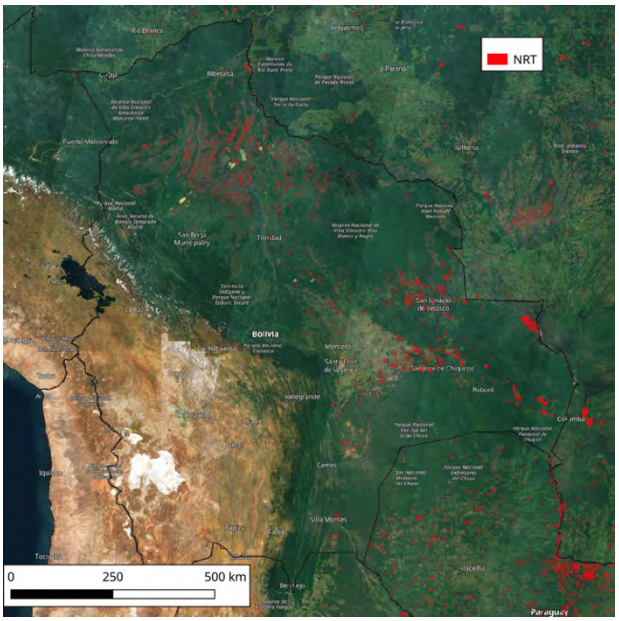



Figure 25. GWIS burnt areas for 2021 in Bolivia. Burnt areas until 31 July.

Considering 2019 a completely anomalous year because of the huge fire in Santa Cruz, this year is burning a considerable surface compared to the last 3 years. Besides, the number of fires is also higher, that fact can point out to more agricultural and controlled fires. See Figure 26.

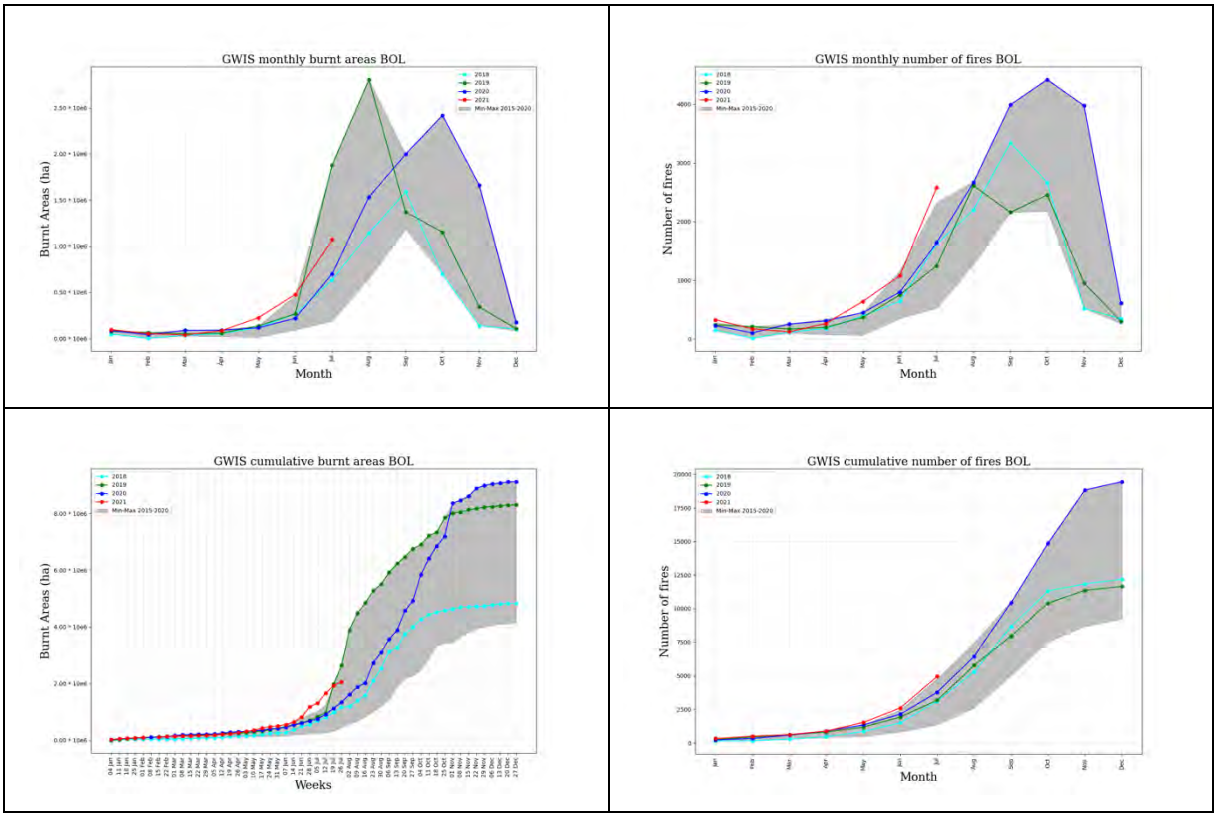



Figure 26. Trend of burnt areas and number of fires as compared to data in the last five years.

Figure 27 shows the monthly burnt landcover distribution for the year 2021.

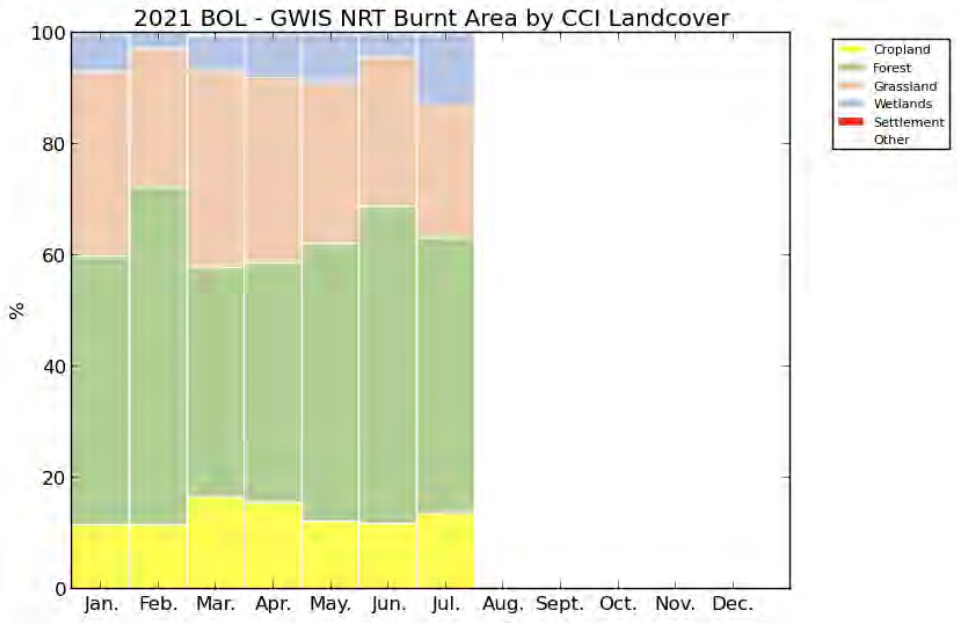



Figure 27. Monthly percentage of burnt land cover for the year 2021.

In terms of active fire spots detected by VIIRS, 20201 presents a number of active fire spots in the period above between January and July above 2019 and 2020 since May as shown in Figure 28. This type of data is those often reported in the media.

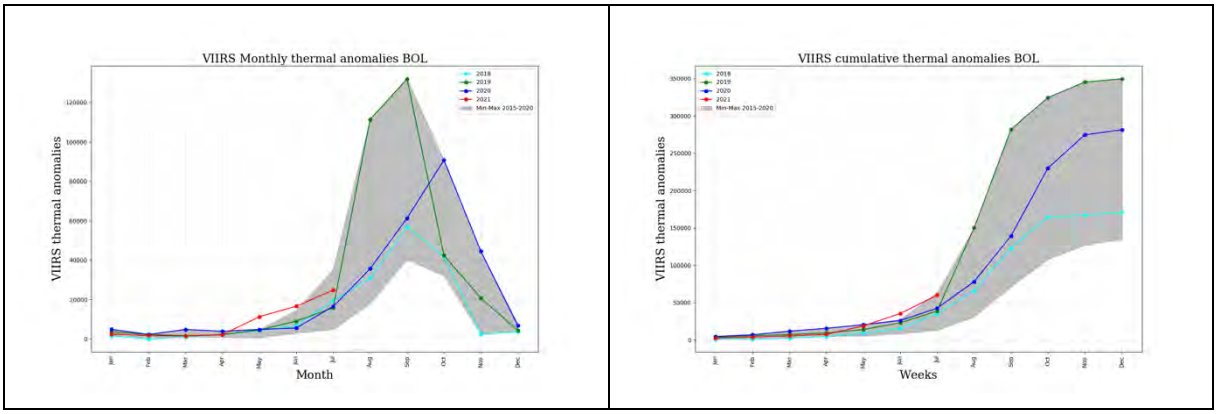



Figure 28. Trend of VIIRS thermal anomalies compared to data in the last five years.

## 16.4 Colombia

The spatial distribution of burnt areas in Colombia in 2021 mapped by the Near-Real Time (NRT) process in GWIS is shown in Figure 29.

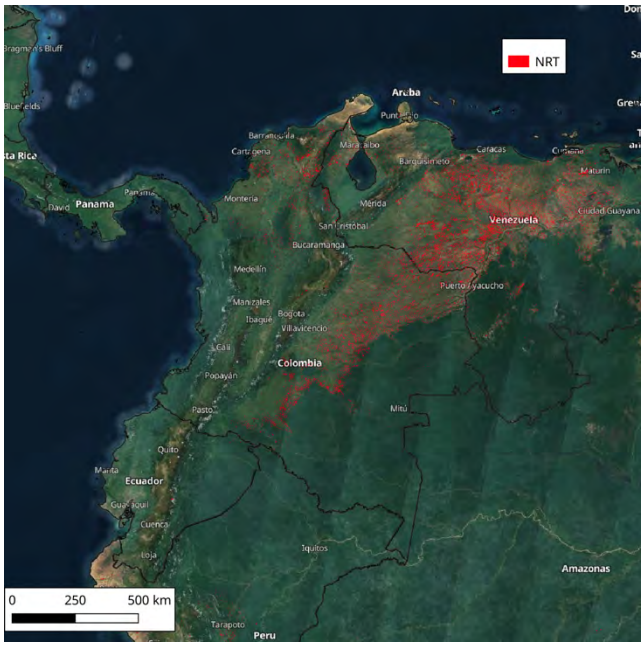



Figure 29 GWIS burnt areas for 2021 in Colombia. Burnt areas until 31 July.

The current fire season has been less severe than the last year in burnt area but with a higher number of fires. About 2.61 Mha of burnt areas have been mapped in the country until end of July. Figure 30 shows how the number of fires is considerable higher comparing with the period 2015-2020. The fires are mainly located on the center and south-west of the country, a region designated as “Llanos”, a complex savanna ecosystem which undergoes periodic, human-induced and natural biomass burning during the dry season, usually between November and April.

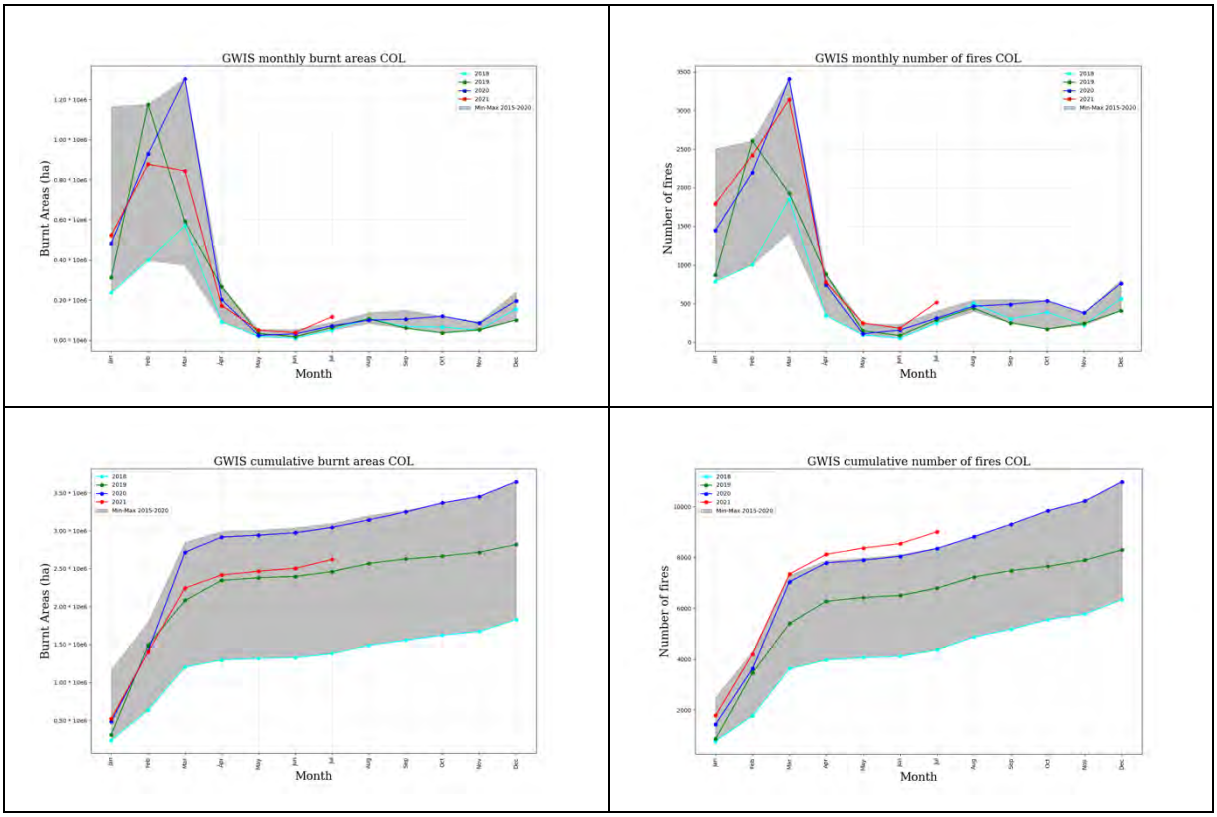



Figure 30. Trend of burnt areas and number of fires as compared to data in the last five years.

Figure 31 shows the monthly burnt landcover distribution for the year 2021.

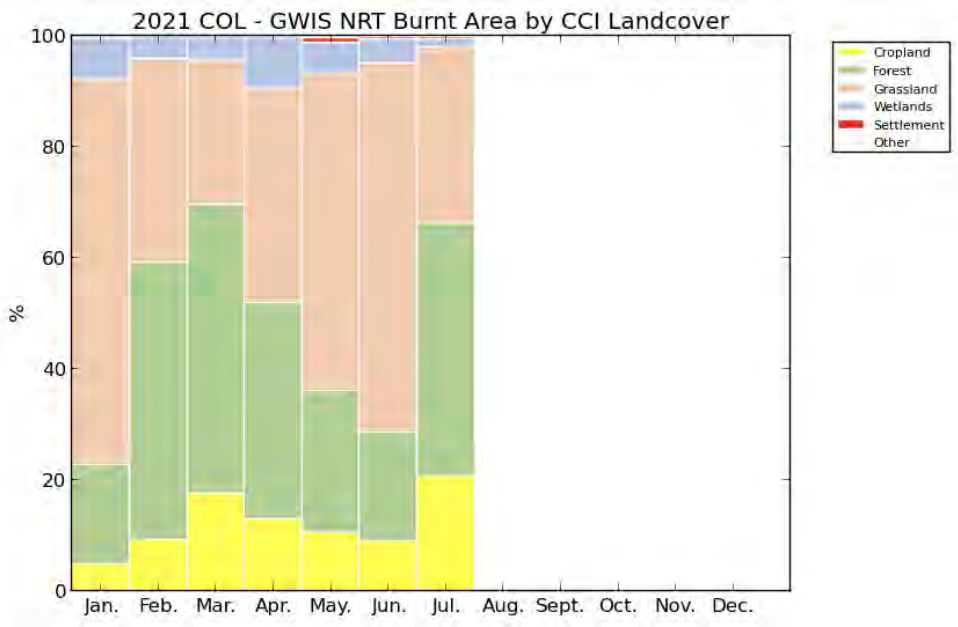



Figure 31. Monthly percentage of burnt land cover for the year 2021.

In terms of active fire spots detected by VIIRS, 2021 presents a number of active fire spots in the period between January and July lower than the previous two years as shown in Figure 32. This type of data is those often reported in the media.

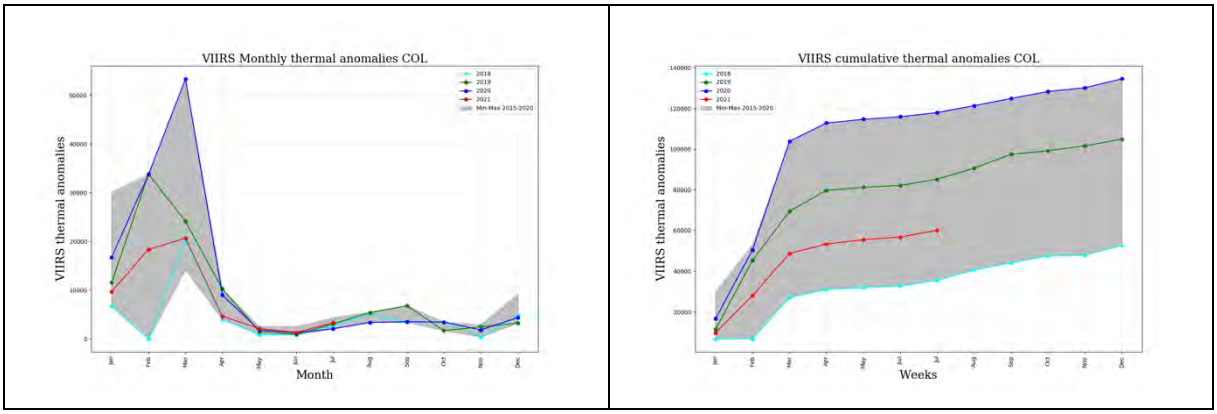



Figure 32. Trend of VIIRS thermal anomalies compared to data in the last five years.

## 16.5 Paraguay

In 2021, the spatial extent of the burnt areas in the country mapped by the Near-Real Time (NRT) process in GWIS is presented in Figure 33.

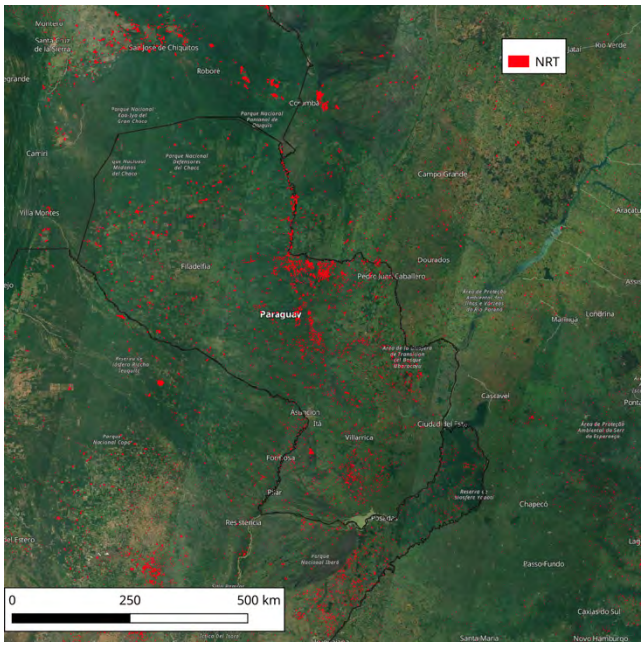



Figure 33. GWIS burnt areas for 2021 in Paraguay. Burnt areas until 31 July.

The 2021 fire season in Paraguay is showing a typical behavior compared with all previous years, but with lower values than 2020 (Figure 34). The burnt area and number of fires in July were the highest compared with the last five years for the same month. However, the total burned area this year is lower than 2020. The current burnt area is 1.73 Mha and 5325 fires.

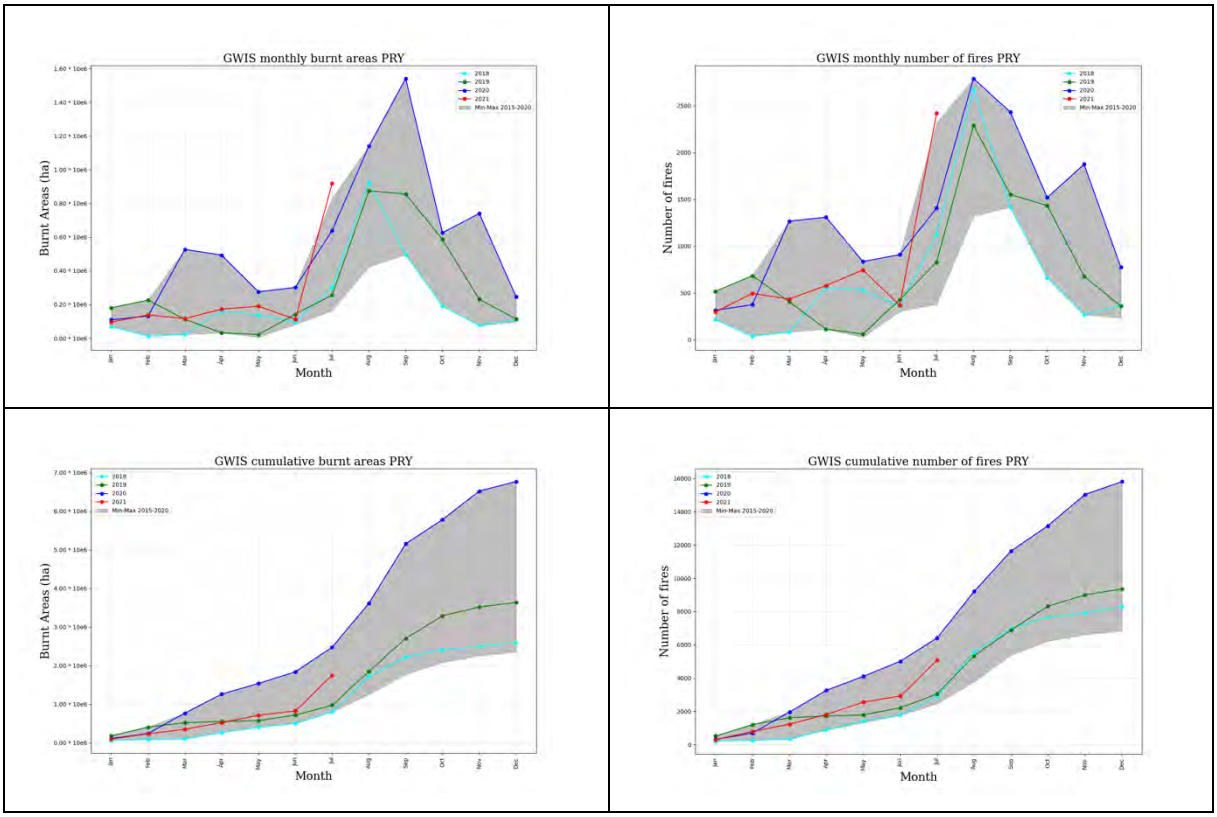



Figure 34. Trend of burnt areas and number of fires as compared to data in the last five years.

Figure 35 shows the monthly burnt landcover distribution for the year 2021.

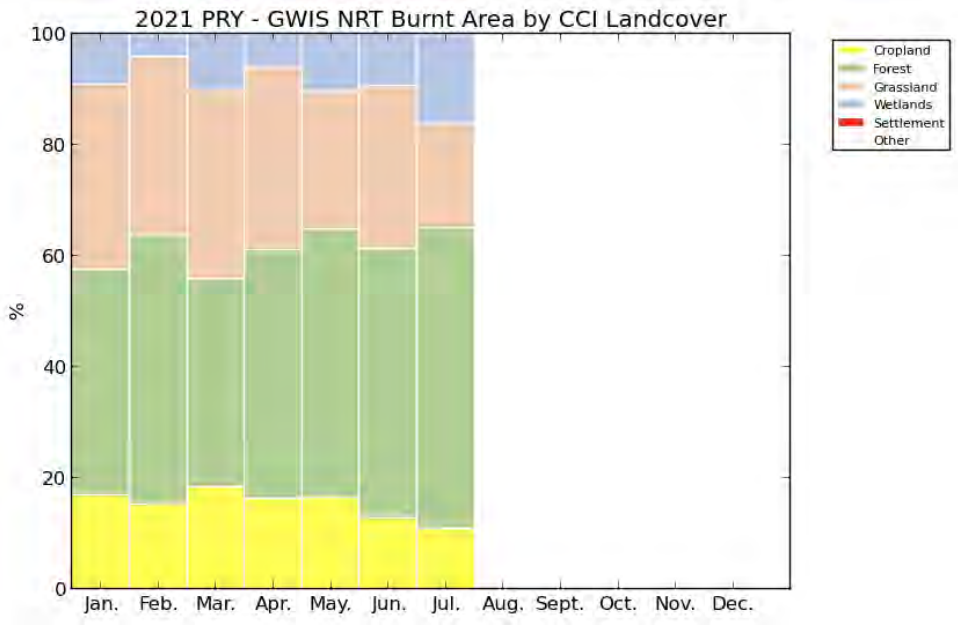



Figure 35. Monthly percentage of burnt land cover for the year 2021.

In terms of active fire spots detected by VIIRS, 2021 presents the same typical trend of the burned area and number of fires shown in Figure 36, with a higher number of active fire spots in July. This type of data is those often reported in the media.

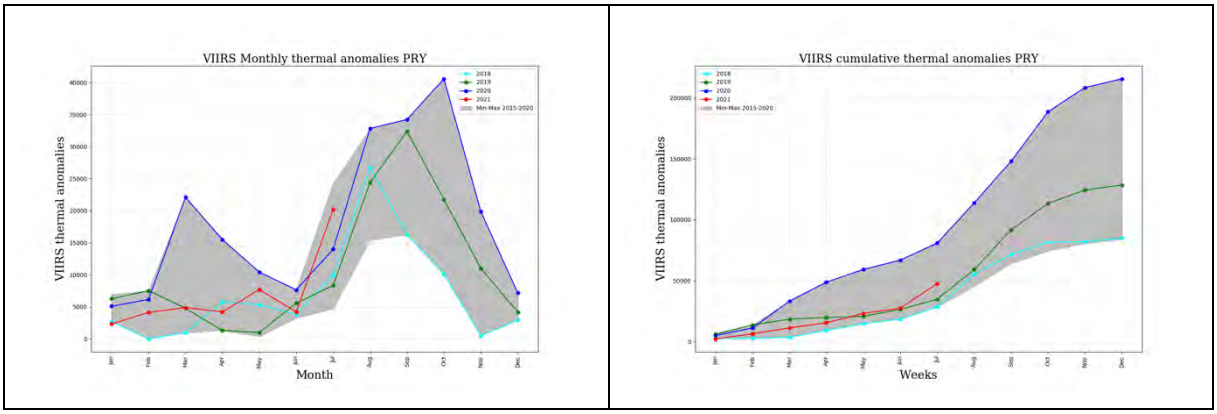



Figure 36. Trend of VIIRS thermal anomalies compared to data in the last five years.

## 16.6 Peru

The spatial extent of the burnt areas in the country in 2021 mapped by the Near-Real Time (NRT) process in GWIS is presented in Figure 37.

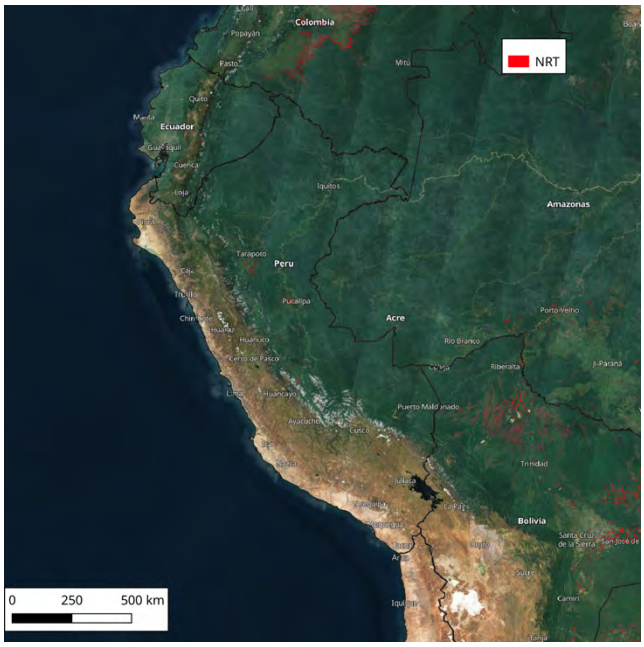



Figure 37. GWIS burnt areas for 2021 in Peru. Burnt areas until 31 July.

Peru in 2021 present similar values of burnt area of 2020. It is worth to mention that the data for Peru is much more sensitive to uncertainty in the data when monitoring small fires for large areas for long time periods.

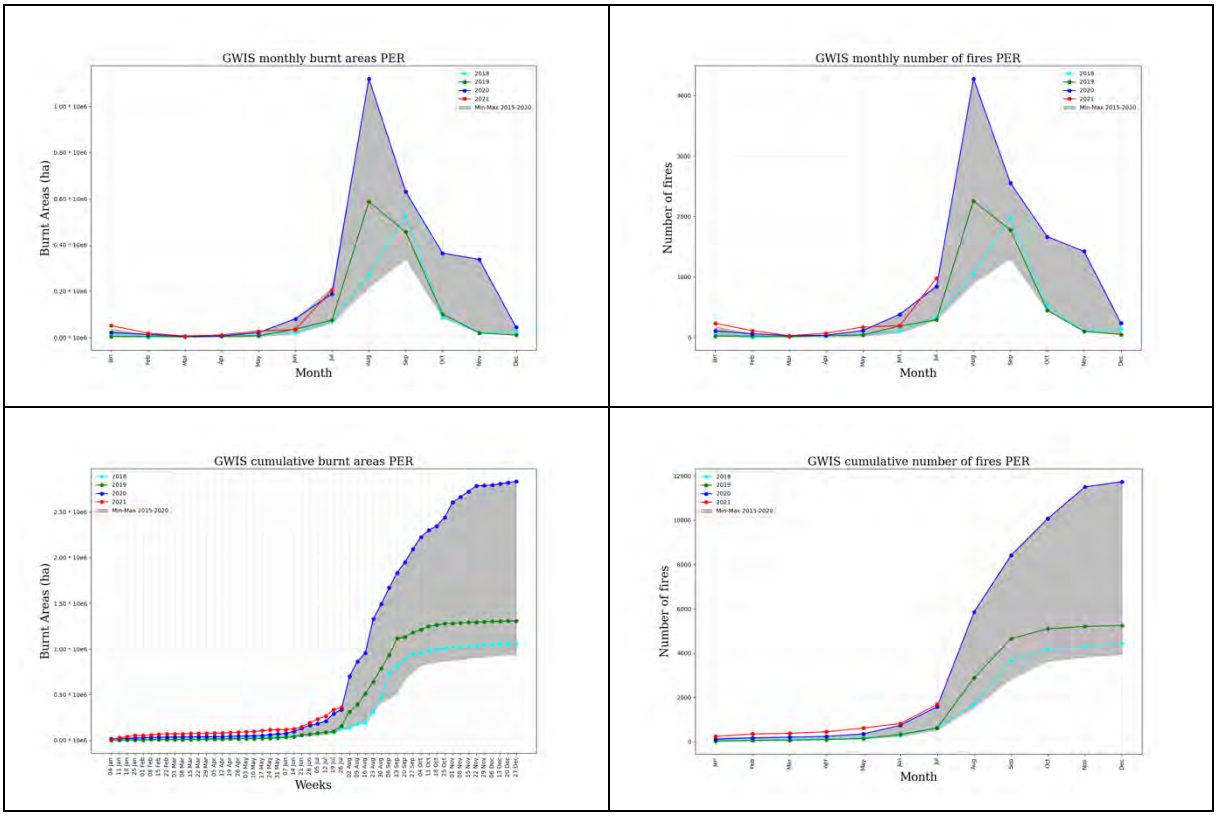



Figure 37 bis. Trend of burnt areas and number of fires as compared to data in the last two years.

Figure 38 shows the monthly burnt landcover distribution for the year 2021.

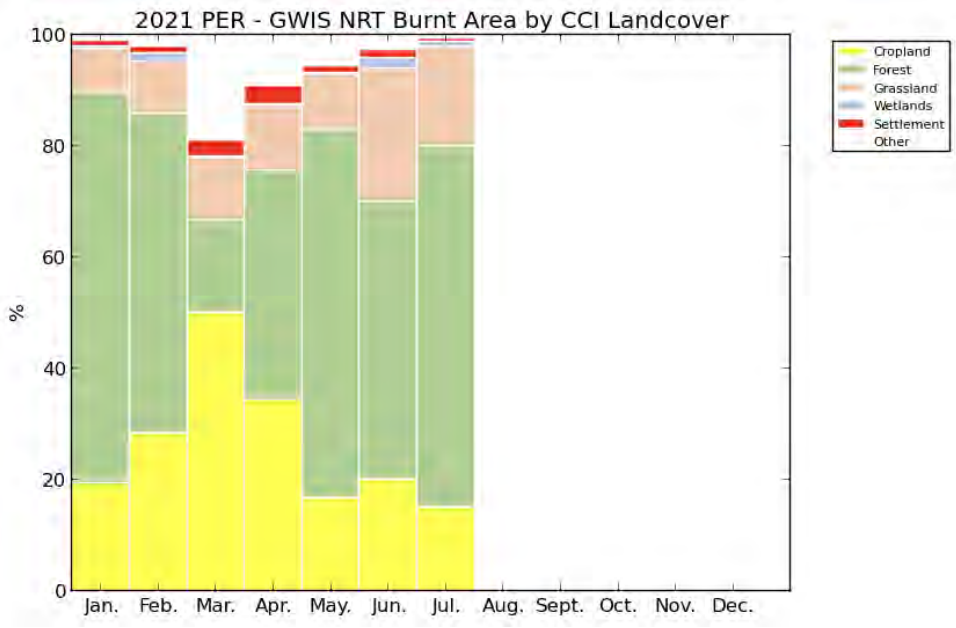



Figure 38. Monthly percentage of burnt land cover for the year 2021.

In terms of active fire spots detected by VIIRS, 2021 presents the same increasing trend seen in the number of fires shown in Figure 37, with a number of active fire spots in the first seven months of the year below than 2020 as shown in Figure 38. This type of data is those often reported in the media.

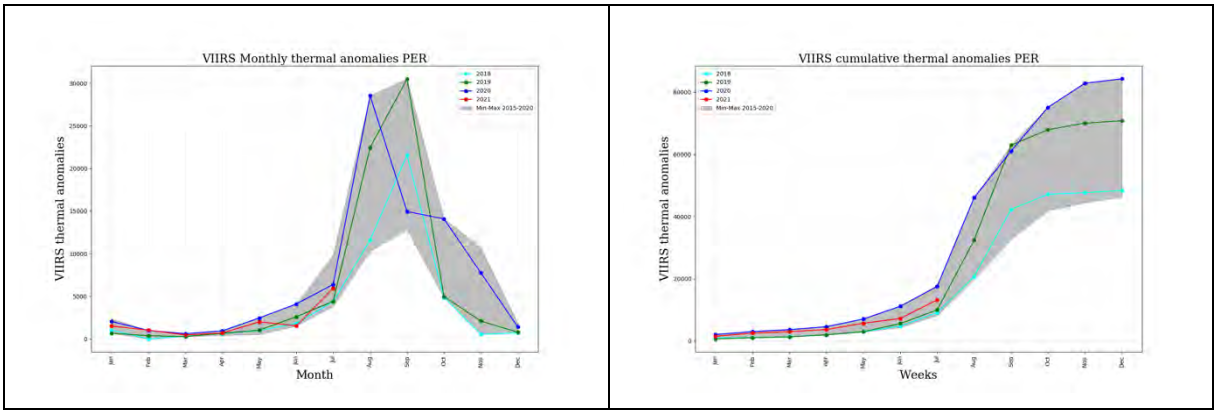



Figure 38 bis. Trend of VIIRS thermal anomalies compared to data in the last five years.

## 16.7 Venezuela

In 2021, wildfires in Venezuela spread over the central and northern areas of the country, with very large fires on the west of the country, such as those on the west side of Maracaibo Lake. (Figure 39). This region is part of the designated “Llanos”, a complex savanna ecosystem sharing the border with Colombia, where it undergoes periodic, human-induced and natural biomass burning during the dry season, usually between November and April.

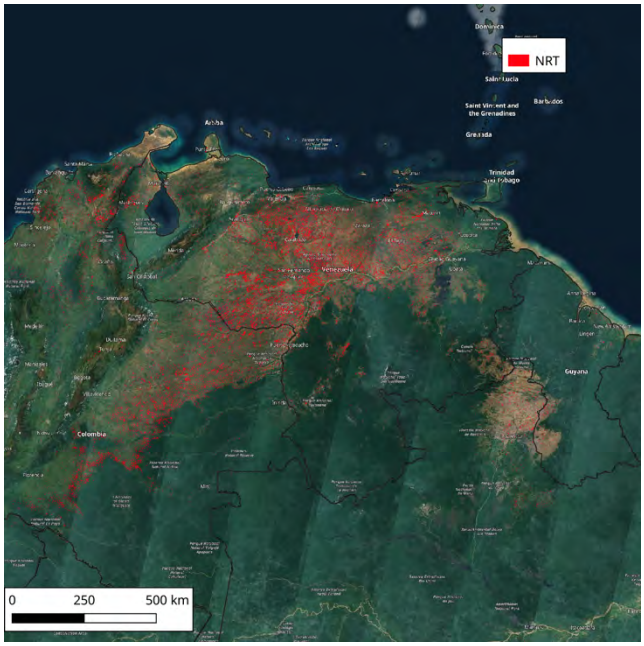



Figure 39. GWIS burnt areas for 2021 in Venezuela. Burnt areas until 31 July.

The current fire season for 2021 is below the last two years in all terms, see Figure 40. The total burnt area is slightly above 2018, and considerably lower than that of the 2019 and 2020 fire season. Until July, almost 4.15 Mha of burnt areas have been mapped by GWIS in the region.

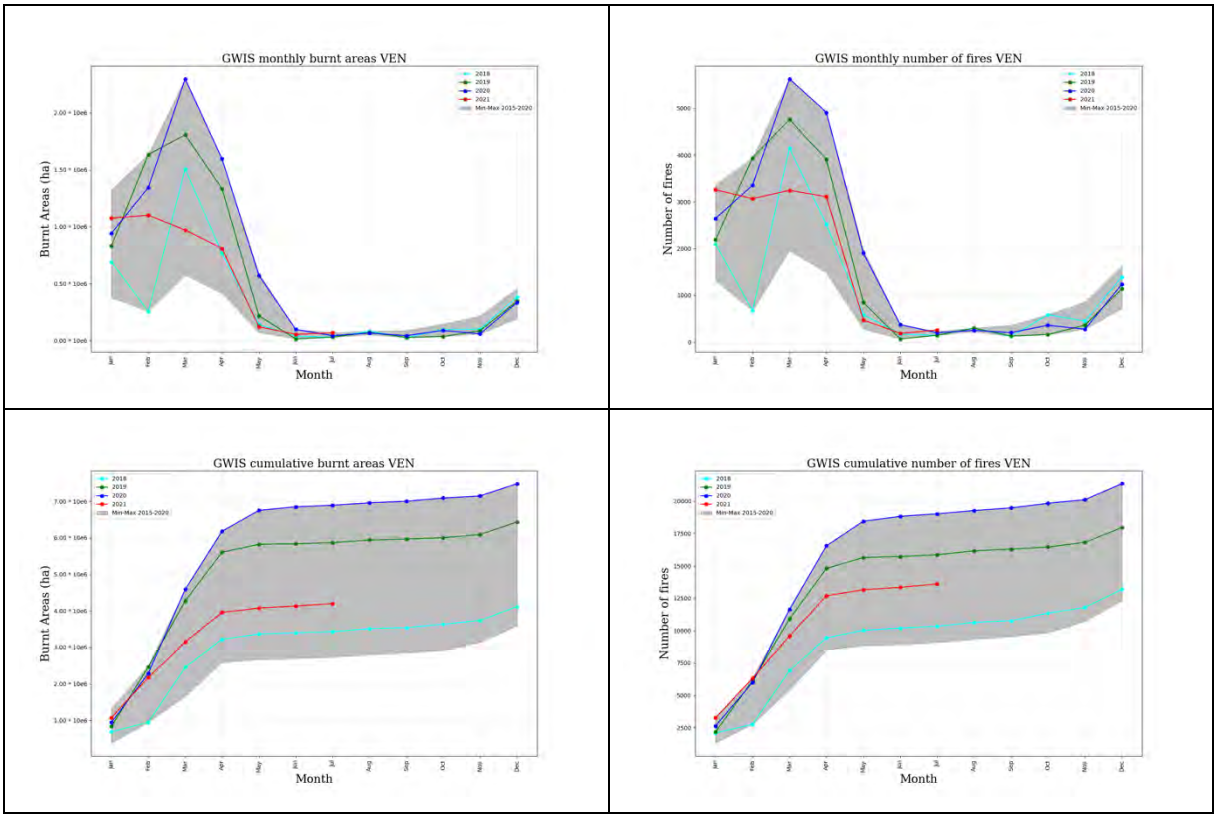



Figure 40. Trend of VIIRS thermal anomalies compared to data in the last five years.

Figure 41 shows the monthly burnt landcover distribution for the year 2021.

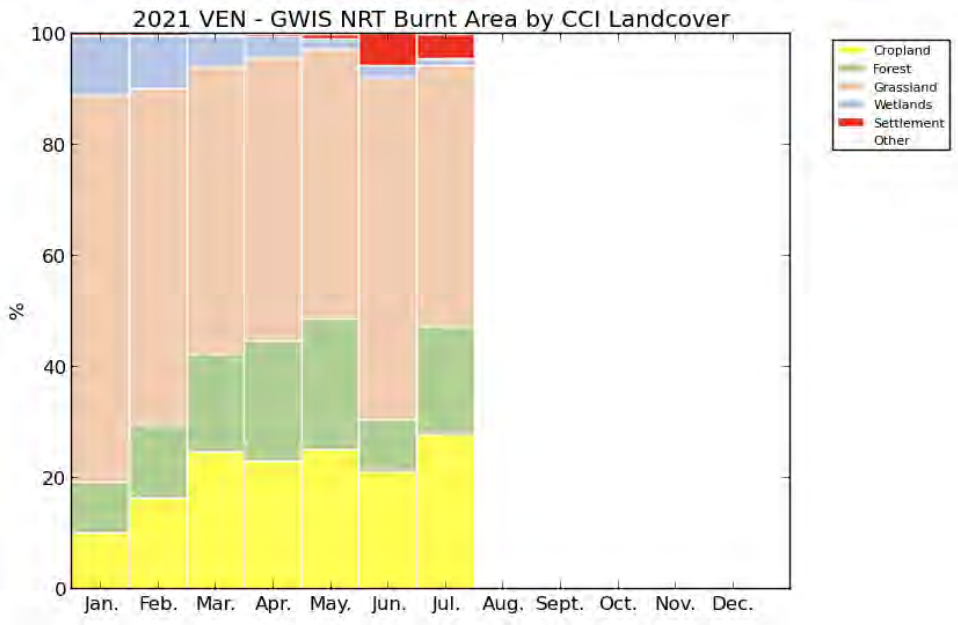



Figure 41. Monthly percentage of burnt land cover for the year 2021.

In terms of active fire spots detected by VIIRS, 2021 presents the same trend of the burned area and number of fires shown in Figure 41, with a number of active fire spots in the first seven months of the year below of those recorded in 2019 and 2020 as shown in Figure 42. This type of data is those often reported in the media.

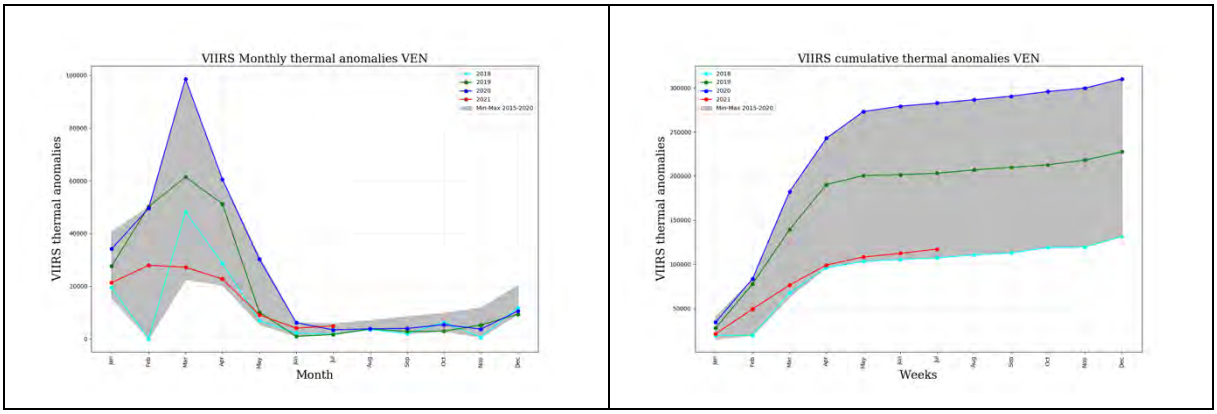



Figure 42. Trend of burnt areas and number of fires as compared to data in the last two years.

## 16.8 Chile

In 2021, wildfires in Chile spread mainly in the central and southern part of the country (Figure 43).


Figure 43. GWIS burnt areas for 2021 in Chile. Burnt areas until 31 July.

The current fire season for 2021 is above the last two years in all terms, see Figure 44. Until July, around 400 thousand ha of burnt areas have been mapped by GWIS in the region. The current year can be considered as quite severe since 2017 was a complete anomaly.

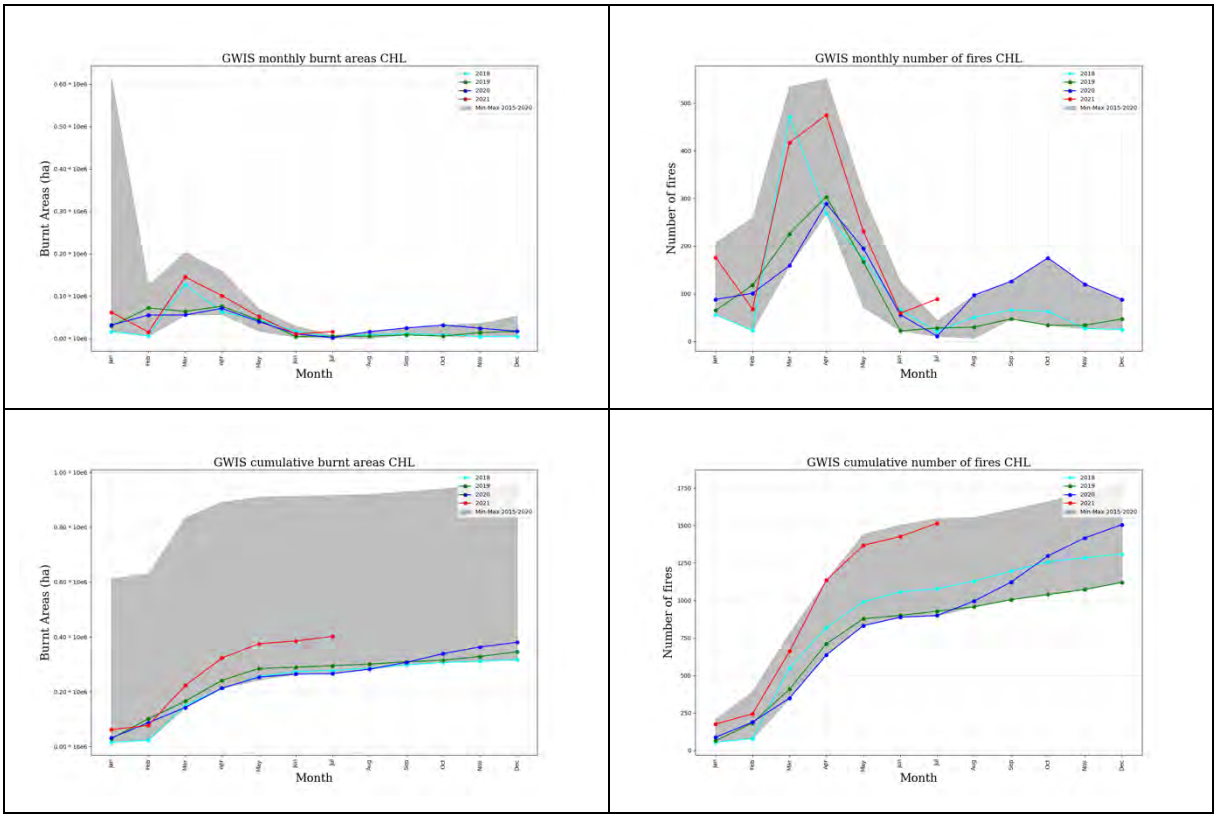



Figure 44. Trend of VIIRS thermal anomalies compared to data in the last five years.

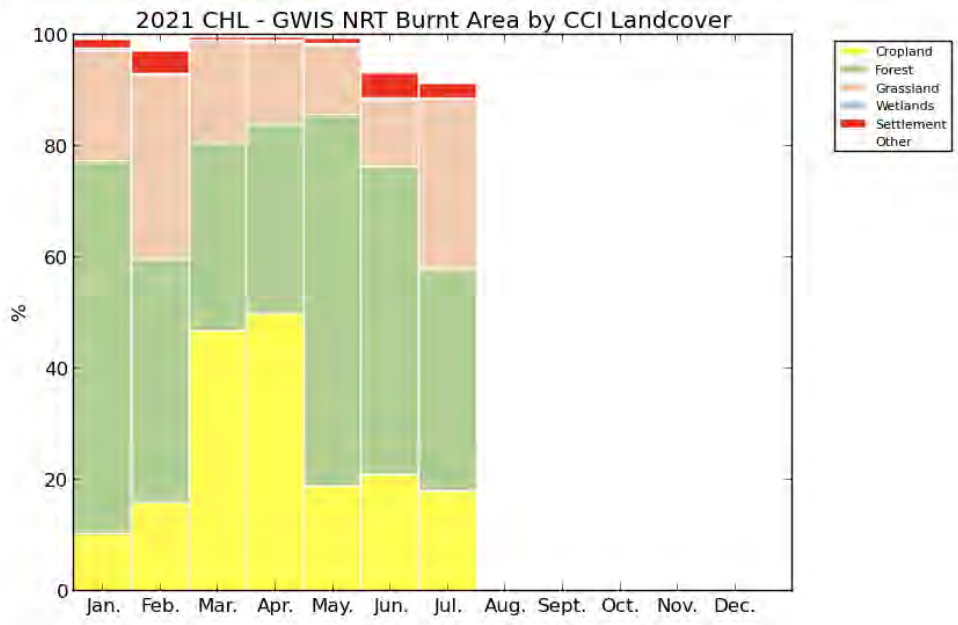



Figure 45. Monthly percentage of burnt land cover for the year 2021.

In terms of active fire spots detected by VIIRS, 2021 presents lower values than 2019 and 2020 for the first seven months as shown in Figure 46. This type of data is those often reported in the media.

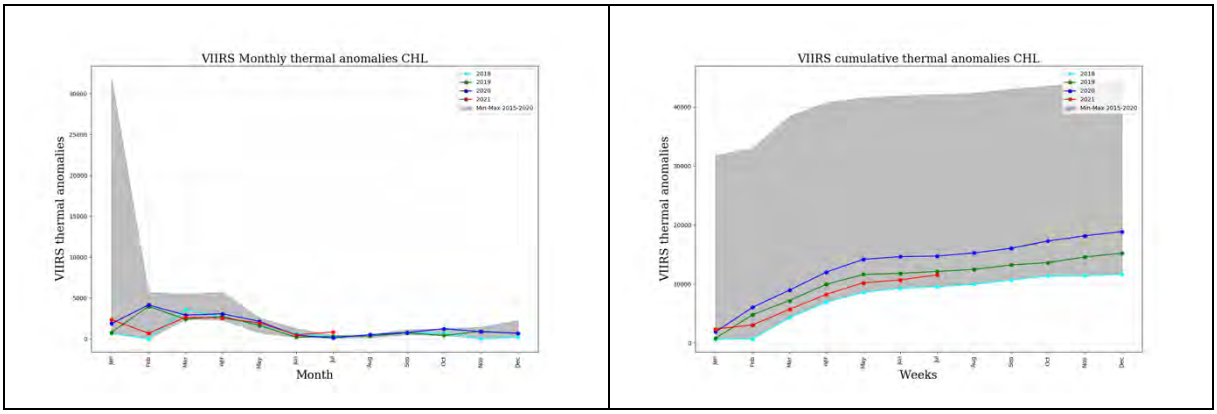


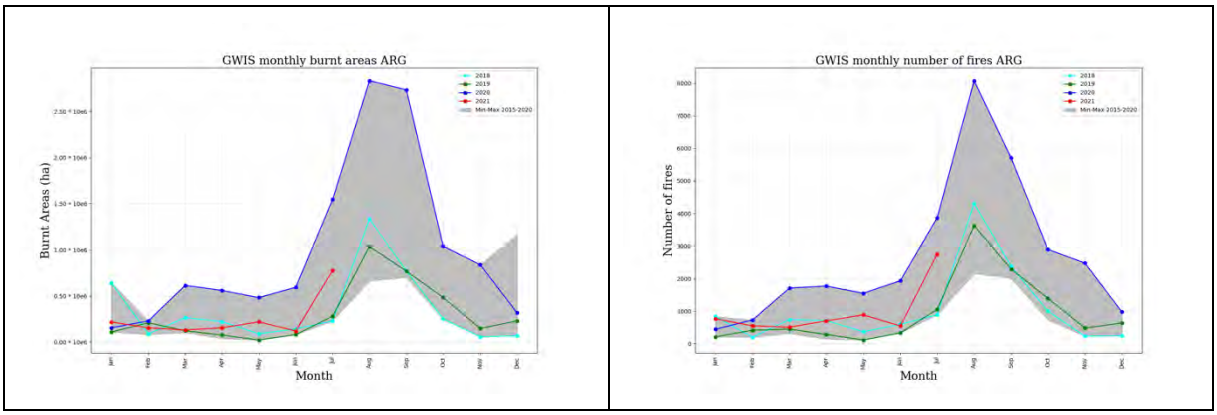

Figure 46. Trend of burnt areas and number of fires as compared to data in the last two years.

## 16.9 Argentina

In 2021, the spatial extent of the burnt areas in the country mapped by the Near-Real Time (NRT) process in GWIS is presented in Figure 47


Figure 47. GWIS burnt areas for 2021 in Argentina. Burnt areas until 31 July.

The current fire season for 2021 is below than 2020 in all terms, see Figure 48. Until July, almost 2 Mha of burnt areas have been mapped by GWIS in the region. The current fire season is following the usual fire season for Argentina, however, burnt area and number of fires are quite high and it would be the higher without considering year 2020.



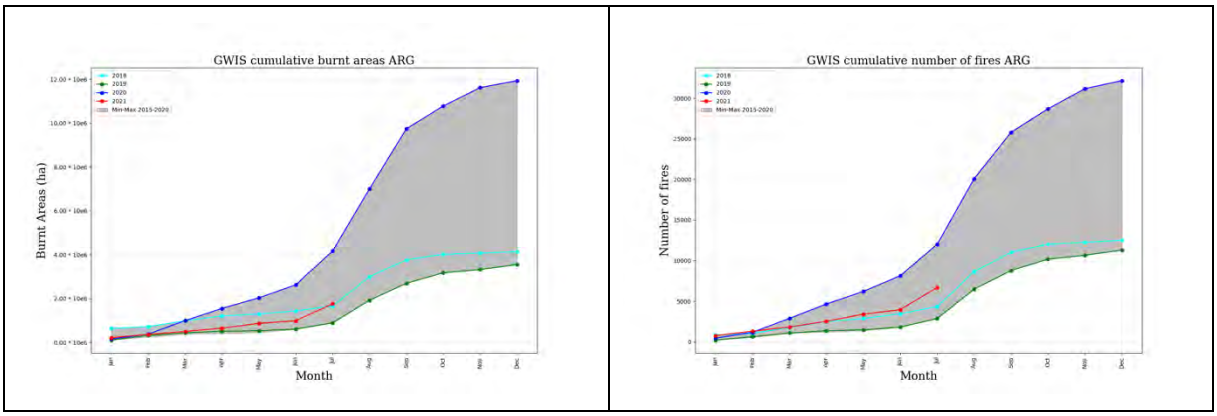



Figure 48. Trend of VIIRS thermal anomalies compared to data in the last five years.

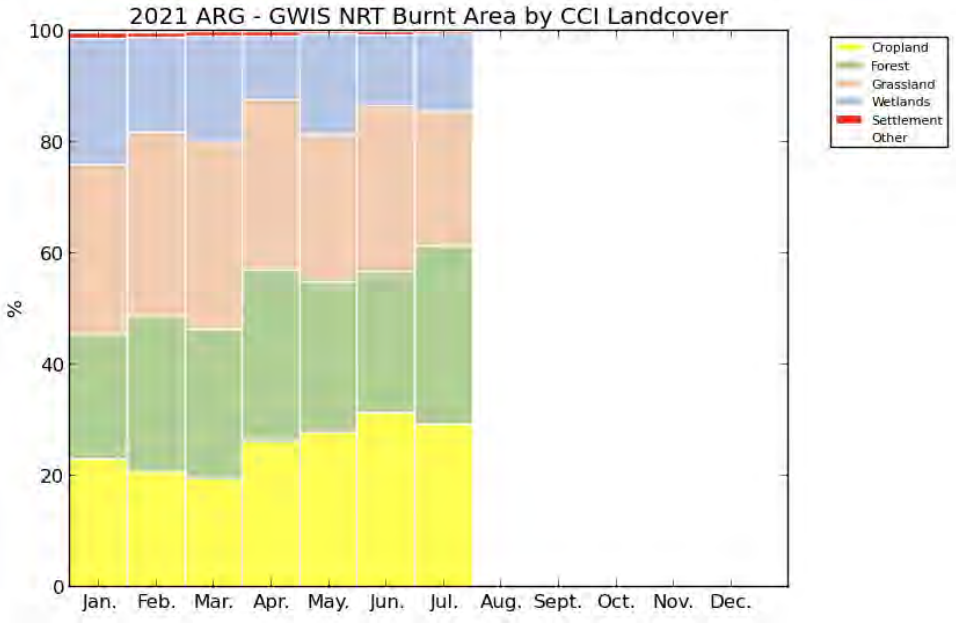



Figure 49. Monthly percentage of burnt land cover for the year 2021.

In terms of active fire spots detected by VIIRS, 2021 presents the same trend of the burned area and number of fires shown in Figure 41, with a number of active fire spots in the first seven months of the year below of those recorded in 2020 as shown in Figure 50. This type of data is those often reported in the media.

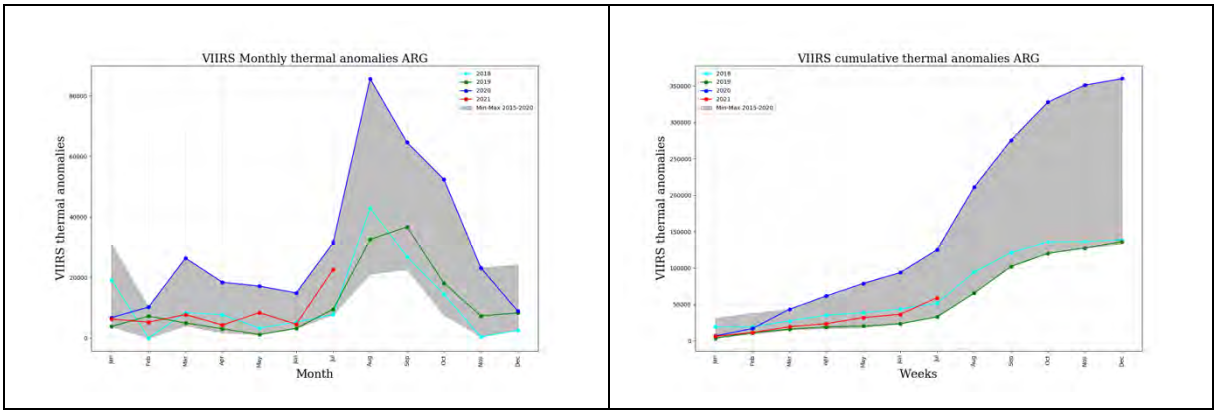



Figure 50. Trend of burnt areas and number of fires as compared to data in the last two years.

## 16.10 Ecuador

In 2021, the spatial extent of the burnt areas in the country mapped by the Near-Real Time (NRT) process in GWIS is presented in Figure 51

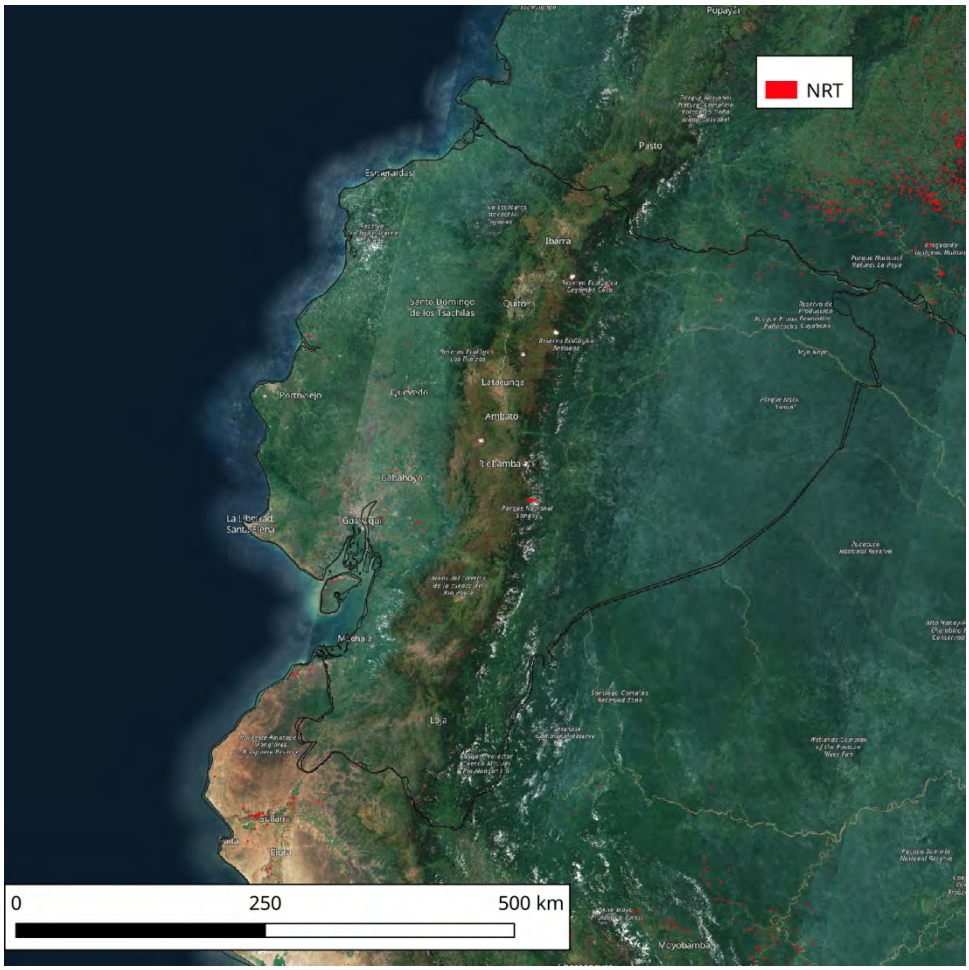
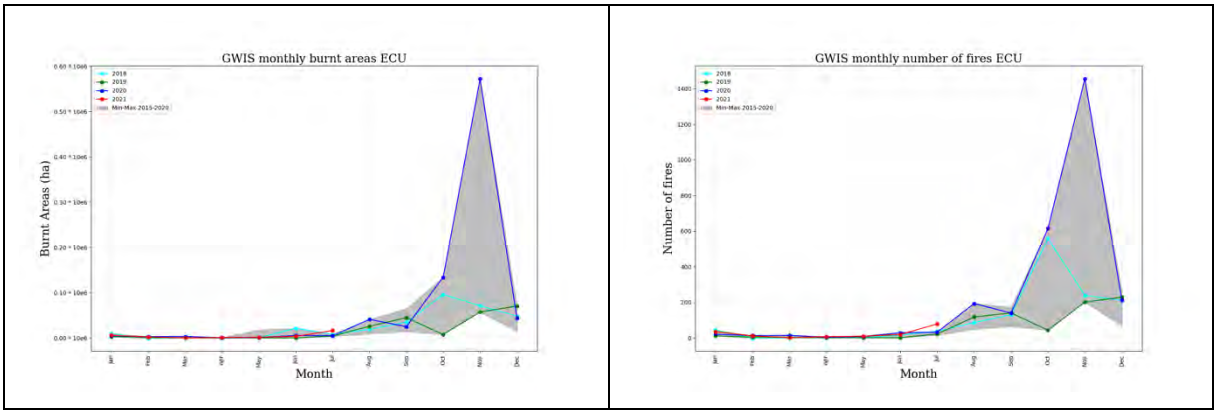



Figure 51. GWIS burnt areas for 2021 in Ecuador. Burnt areas until 31 July.

The current fire season for 2021 is slightly above the last two years in all terms, see Figure 52. Until July, a total of 33 thousand ha of burnt areas have been mapped by GWIS in the region. It is worth mentioning that the fire season is still about to start.



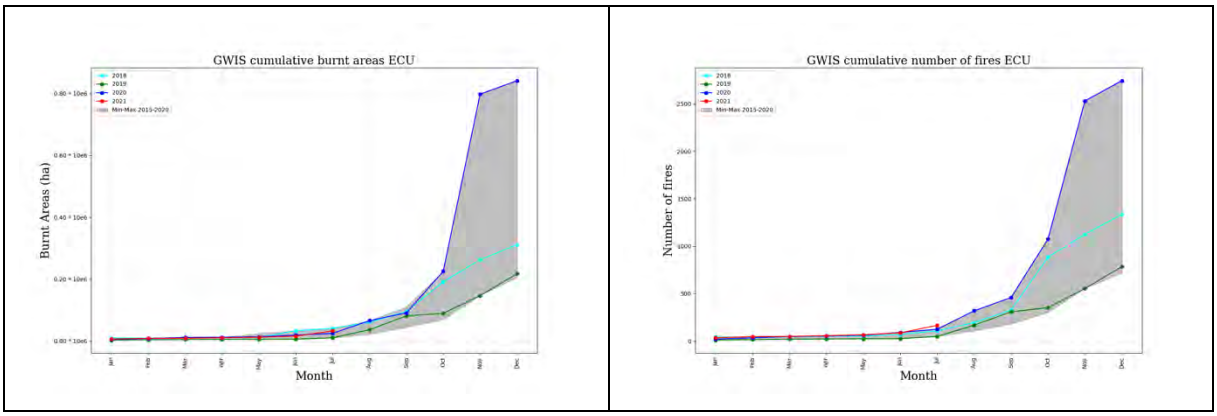



Figure 52. Trend of VIIRS thermal anomalies compared to data in the last five years.

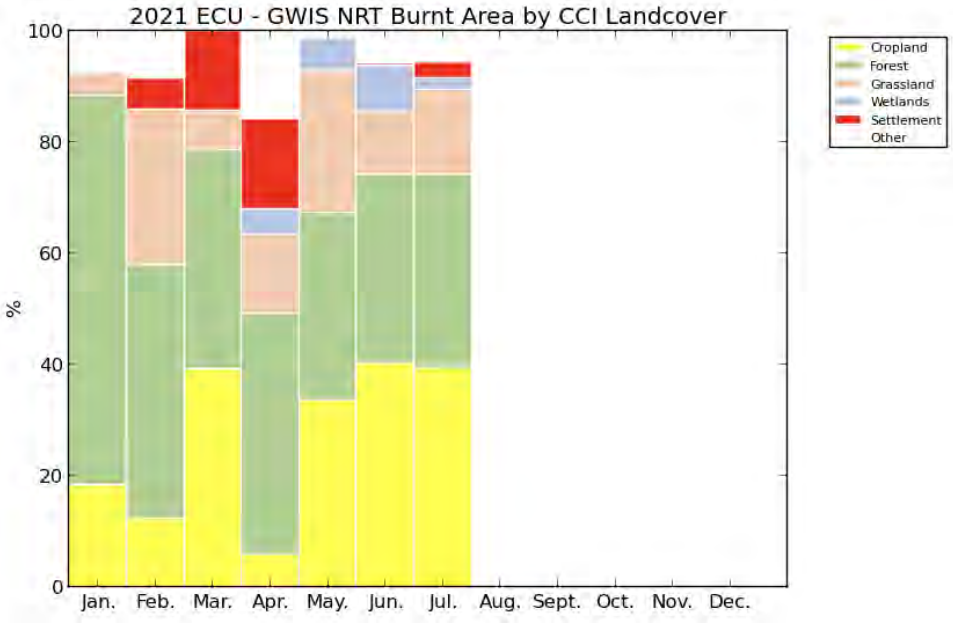



Figure 53. Monthly percentage of burnt land cover for the year 2021.

In terms of active fire spots detected by VIIRS, 2021 presents the same trend of the burned area and number of fires shown in Figure 52, with a number of active fire spots in the first seven months of the year below of those recorded in 2020 as shown in Figure 54. This type of data is those often reported in the media.

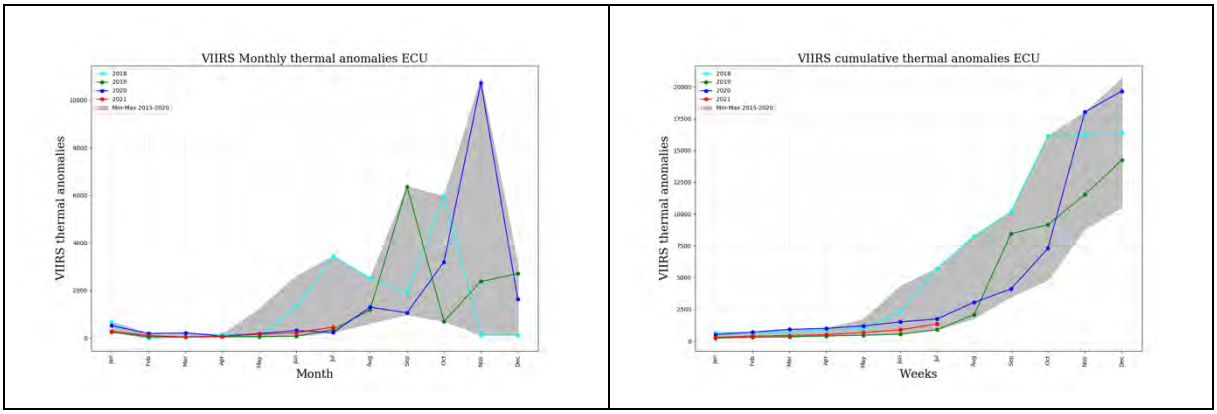



Figure 54. Trend of burnt areas and number of fires as compared to data in the last two years.

## 16.11 Uruguay

In 2021, the spatial extent of the burnt areas in the country mapped by the Near-Real Time (NRT) process in GWIS is presented in Figure 55

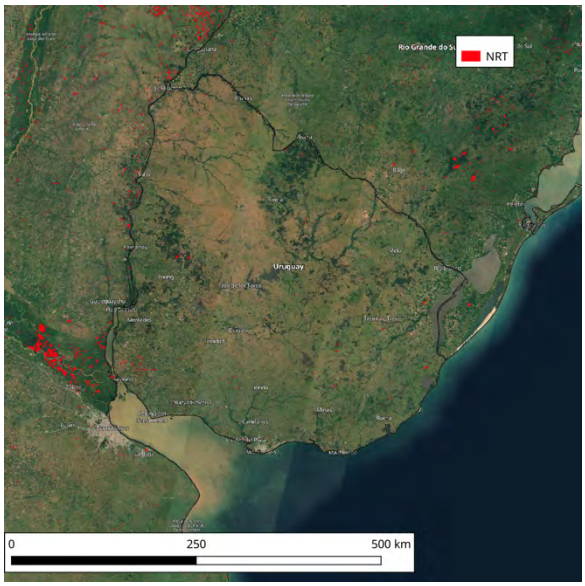



Figure 55. GWIS burnt areas for 2021 in Uruguay. Burnt areas until 31 July.

The current fire season for 2021 is below than 2020, see Figure 56. The total burnt area is above 2019, and considerably lower than of 2020 fire season. Until July, almost 32 thousand ha of burnt areas have been mapped by GWIS in the region.

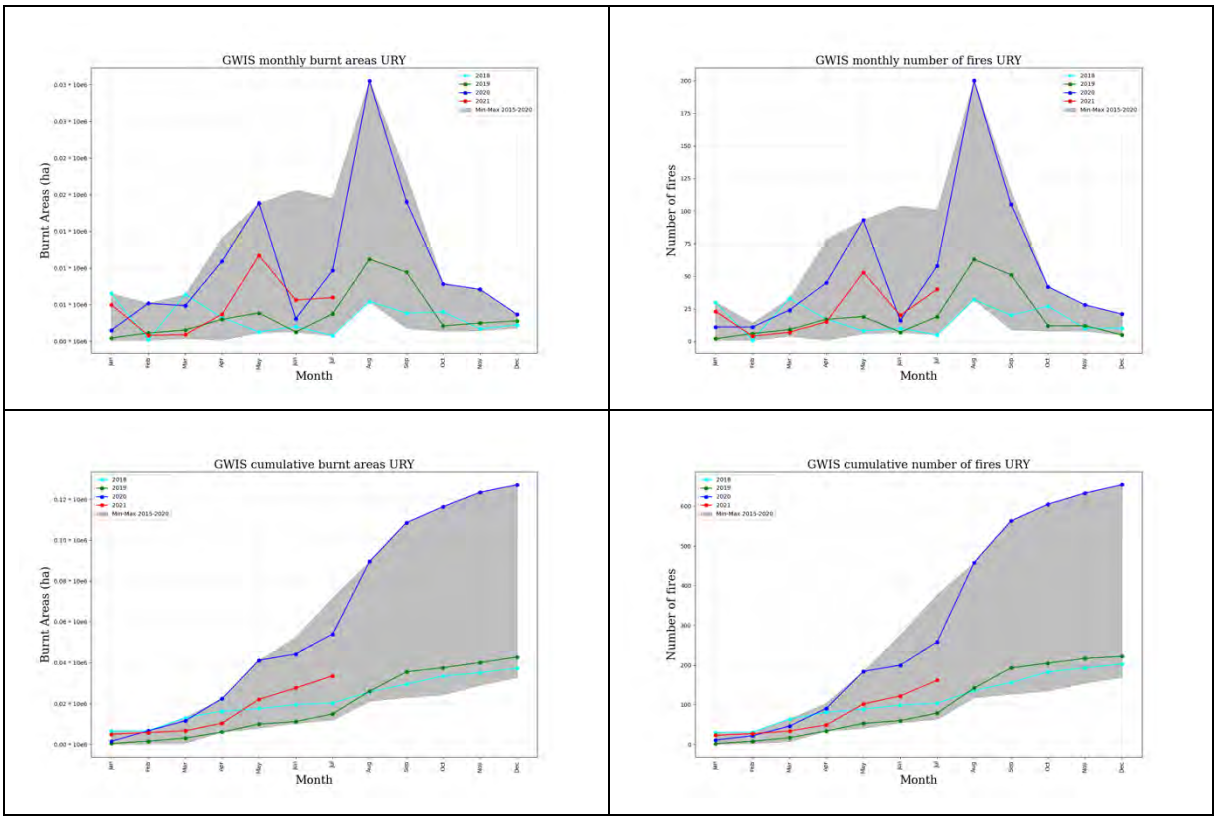



Figure 56. Trend of VIIRS thermal anomalies compared to data in the last five years.

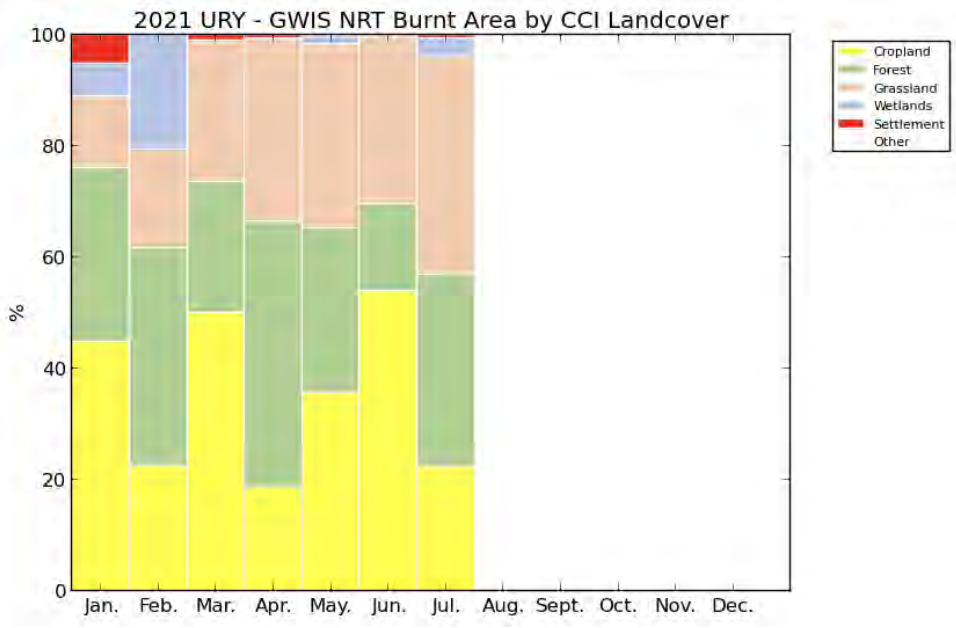



Figure 57. Monthly percentage of burnt land cover for the year 2021.

In terms of active fire spots detected by VIIRS, 2021 presents the same trend of the burned area and number of fires shown in Figure 56, with a number of active fire spots in the first seven months of the year below of those recorded in 2020 as shown in Figure 58. This type of data is those often reported in the media.

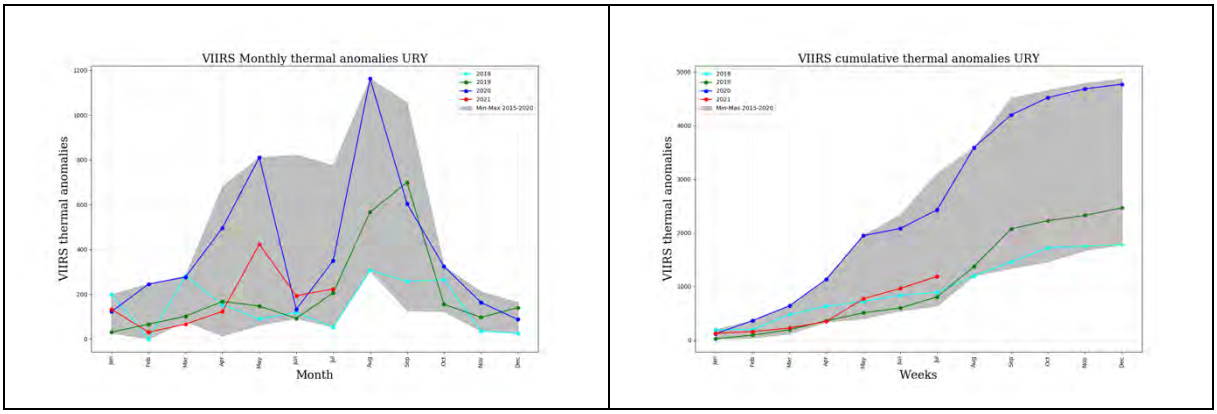



Figure 58 Trend of burnt areas and number of fires as compared to data in the last two years.

## 16.12 French Guiana

In 2021, the spatial extent of the burnt areas in the country mapped by the Near-Real Time (NRT) process in GWIS is presented in Figure 59


Figure 59. GWIS burnt areas for 2021 in French Guiana. Burnt areas until 31 July.

The current fire season for 2021 is similar with the last years, see Figure 60. Until July, a total of around 700 ha of burnt areas have been mapped by GWIS in the region.

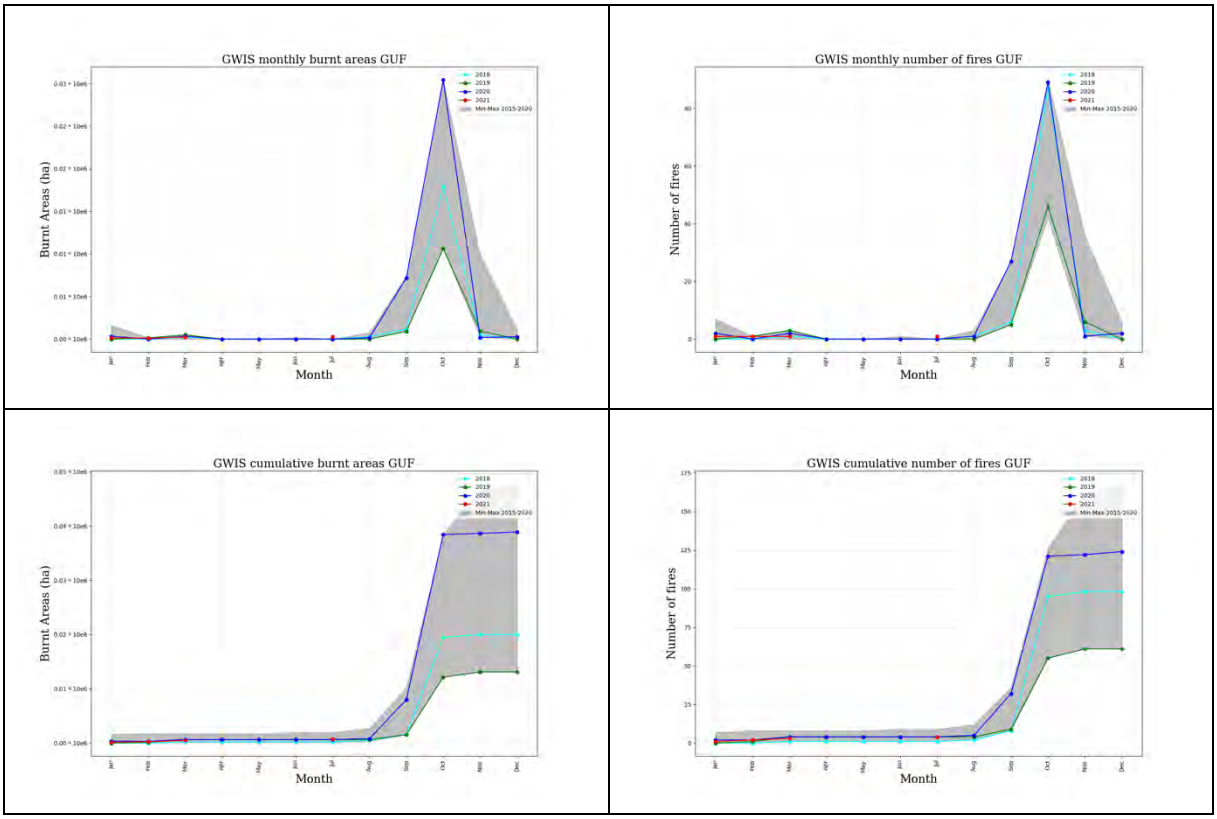



Figure 60. Trend of VIIRS thermal anomalies compared to data in the last five years.

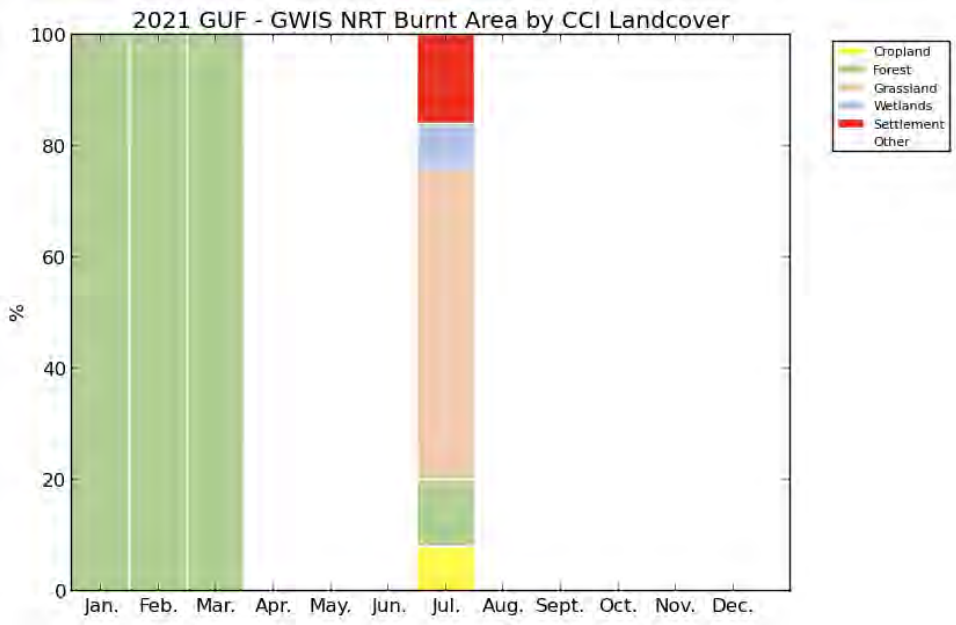



Figure 61. Monthly percentage of burnt land cover for the year 2021.

In terms of active fire spots detected by VIIRS, 2021 presents the same trend of the burned area and number of fires shown in Figure 60, with a number of active fire spots in the first seven months of the year below of those recorded in 2020 as shown in Figure 62. This type of data is those often reported in the media.

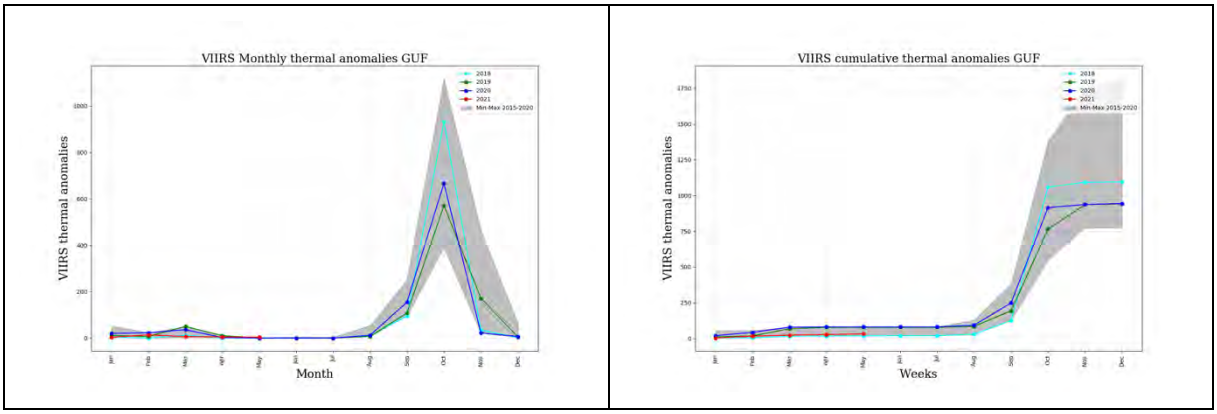



Figure 62. Trend of burnt areas and number of fires as compared to data in the last two years.

## 16.13 Guyana

In 2021, the spatial extent of the burnt areas in the country mapped by the Near-Real Time (NRT) process in GWIS is presented in Figure 63

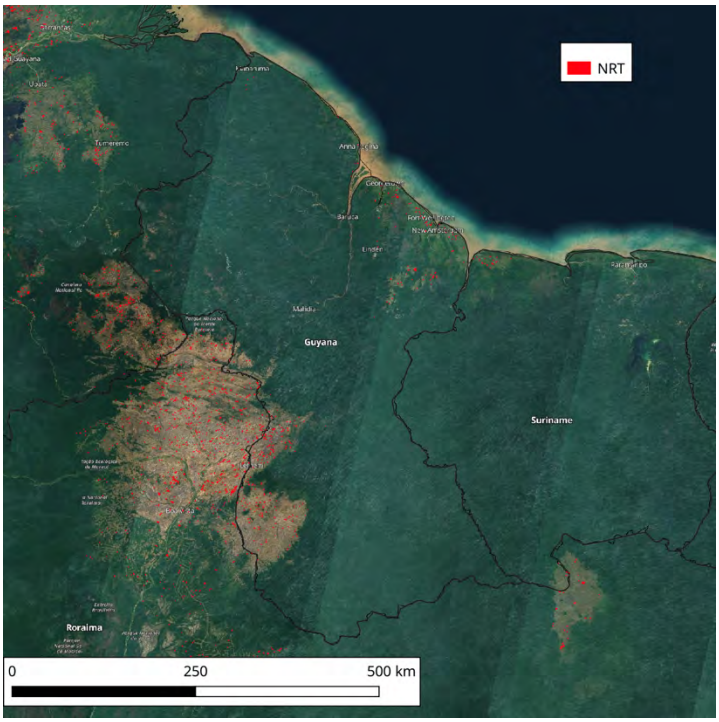



Figure 63. GWIS burnt areas for 2021 in Guyana. Burnt areas until 31 July.

The current fire season for 2021 is below the last two years in all terms, see Figure 64. Until July, almost 60 thousand ha of burnt areas have been mapped by GWIS in the region.

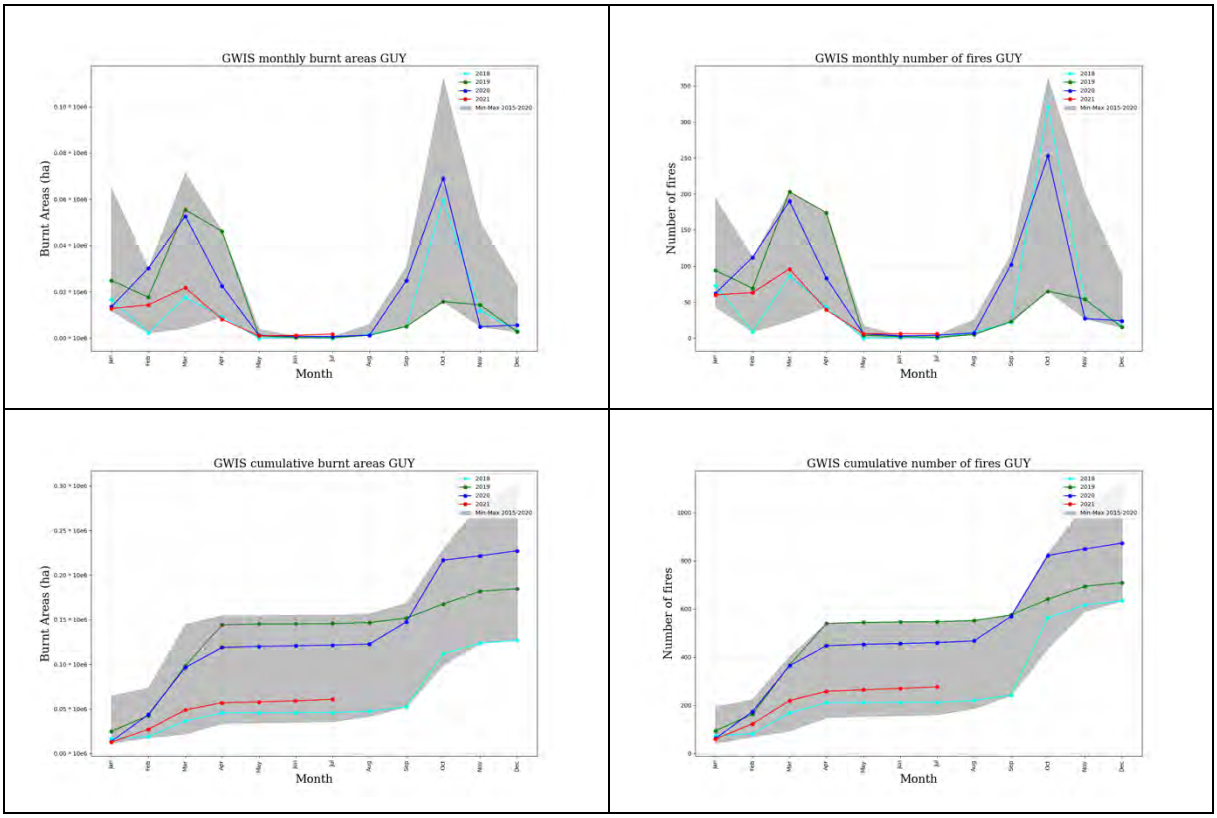



Figure 64. Trend of VIIRS thermal anomalies compared to data in the last five years.

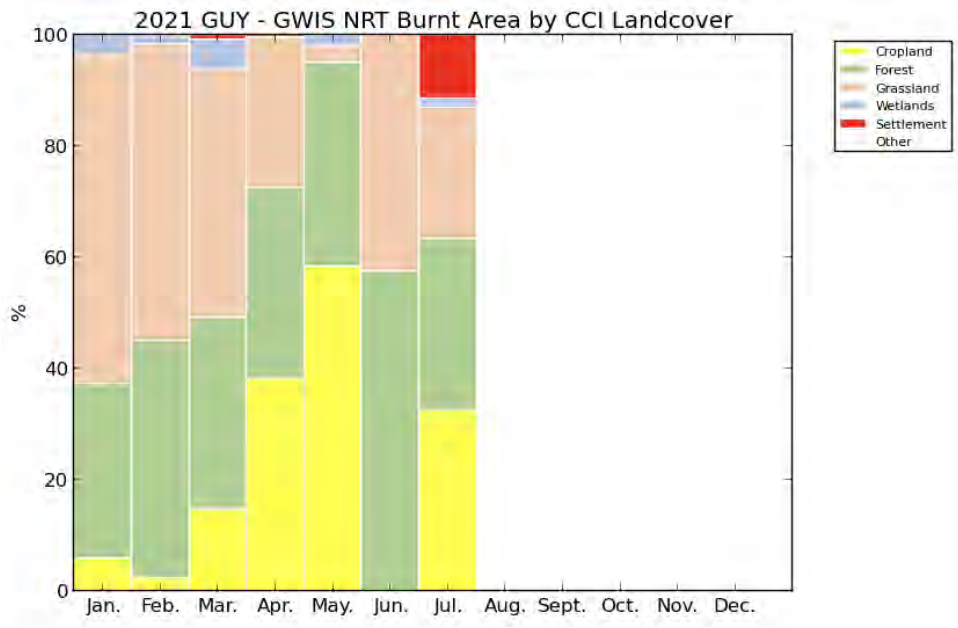



Figure 65. Monthly percentage of burnt land cover for the year 2021.

In terms of active fire spots detected by VIIRS, 2021 presents the lowest number in the last five as shown in Figure 66. This type of data is those often reported in the media.

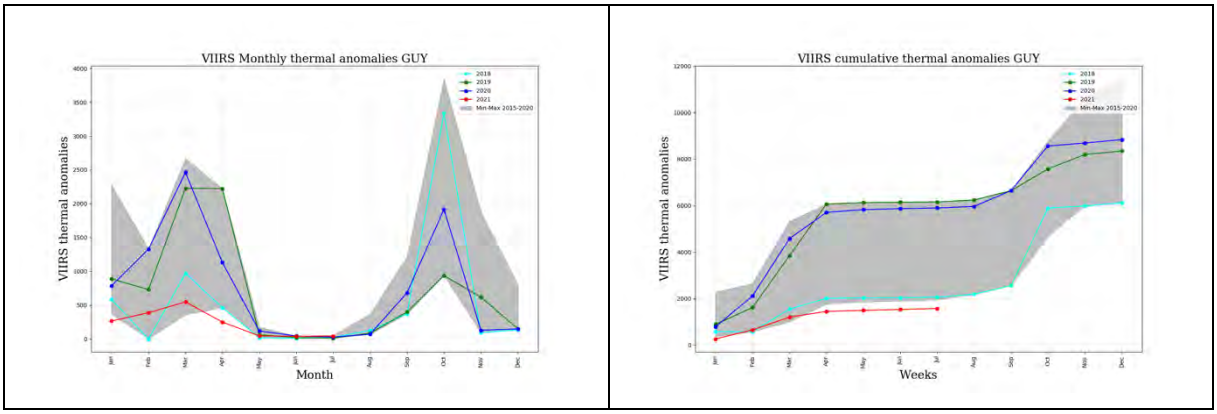



Figure 66. Trend of burnt areas and number of fires as compared to data in the last two years.

## 16.14 Suriname

In 2021, the spatial extent of the burnt areas in the country mapped by the Near-Real Time (NRT) process in GWIS is presented in Figure 67.


Figure 67. GWIS burnt areas for 2021 in Suriname. Burnt areas until 31 July.

The current fire season for 2021 is similar with the last two years in all terms, see Figure 68. Until July, 4533 ha of burnt areas have been mapped by GWIS in the region.

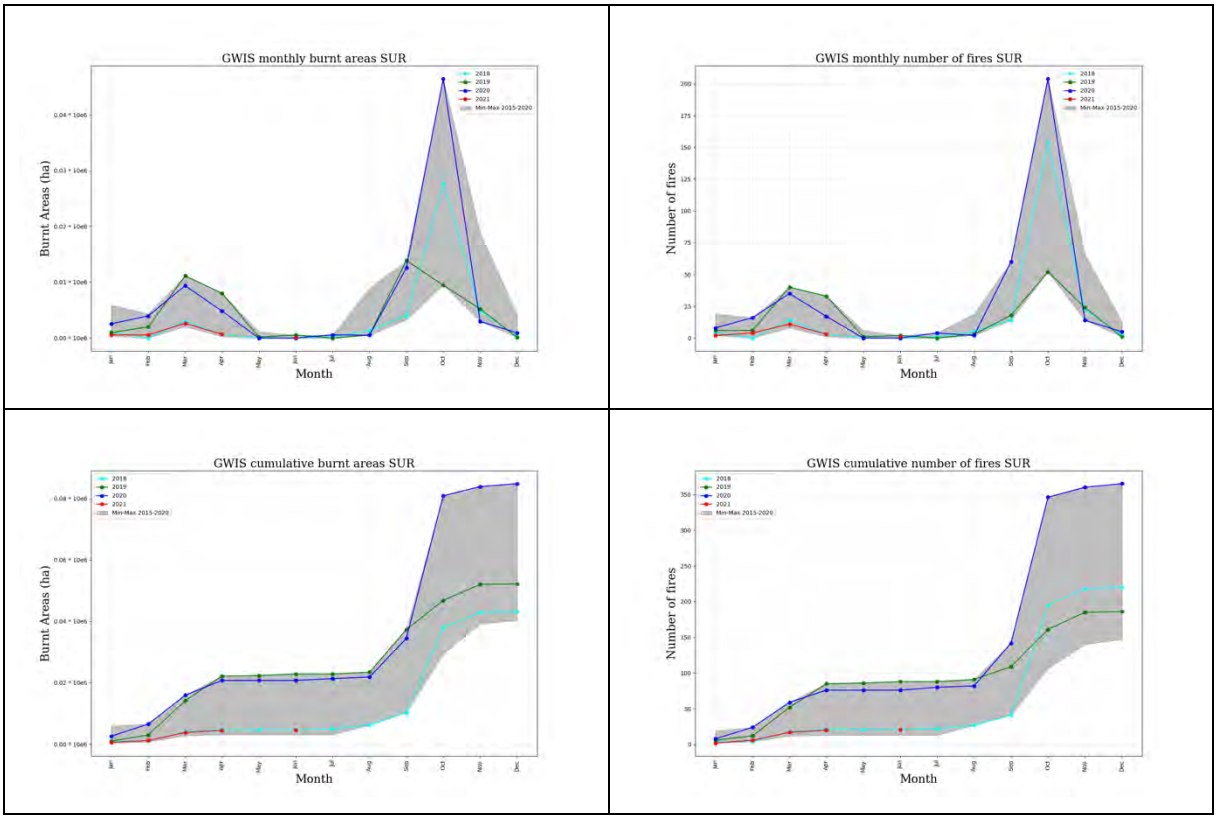



Figure 68. Trend of VIIRS thermal anomalies compared to data in the last five years.

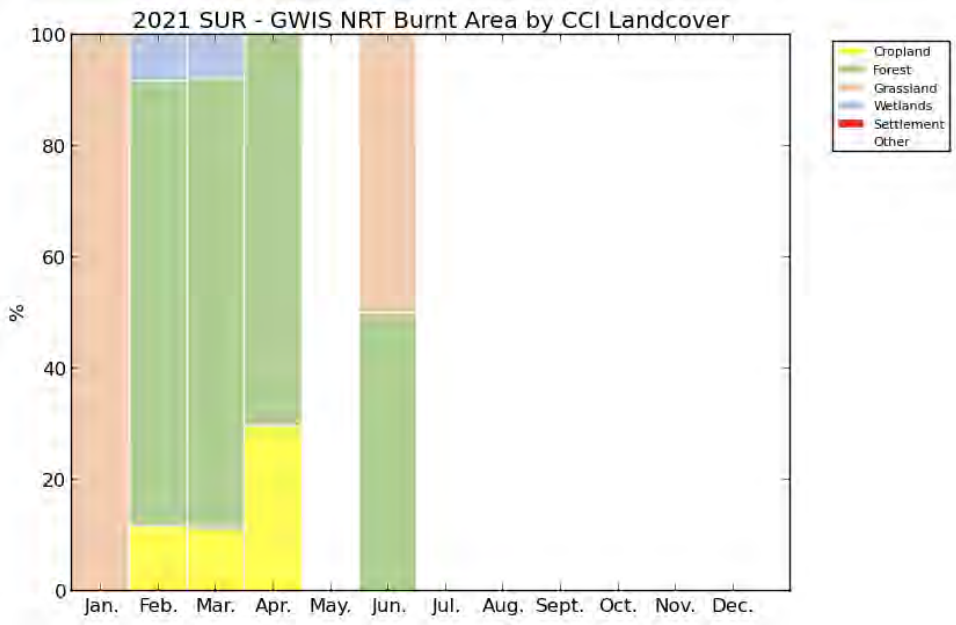



Figure 69. Monthly percentage of burnt land cover for the year 2021.

In terms of active fire spots detected by VIIRS, 2021 presents the same trend of the burned area and number of fires shown in Figure 68, with a number of active fire spots in the first seven months of the year below of those recorded in the last five years as shown in Figure 70. This type of data is those often reported in the media.

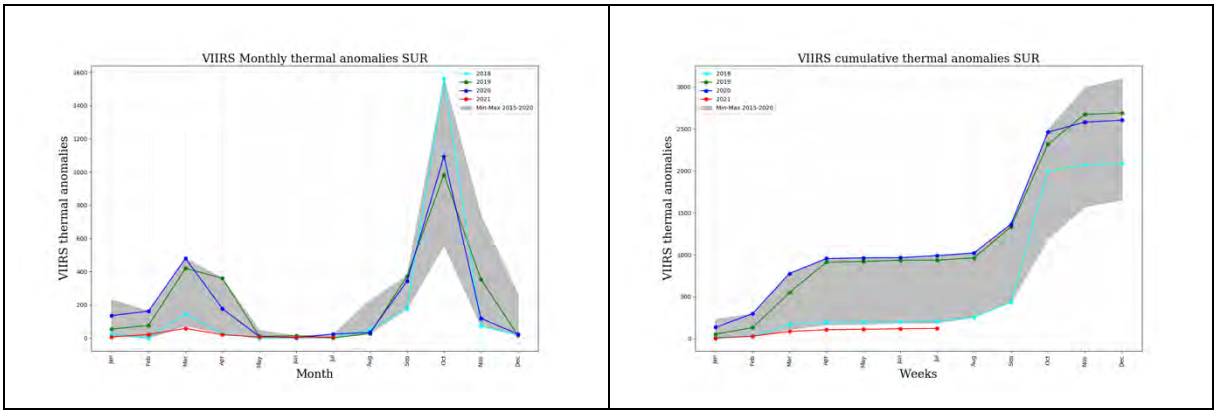



Figure 70. Trend of burnt areas and number of fires as compared to data in the last two years.

## 16.15 Fire danger and fire weather forecast in the Amazon region

The monthly fire weather forecast of temperature and precipitation anomalies for August is presented in Figure 71. **A strong average temperature anomaly is forecasted for eastern/central Brazil, extending to Bolivia, Paraguay, Argentina and Peru. However above average temperatures are also expected in the BLA, and southern Colombia**. The forecast estimate a decrease on precipitation rates for this month in eastern Paraguay and increase on precipitation on the northern countries of South America.

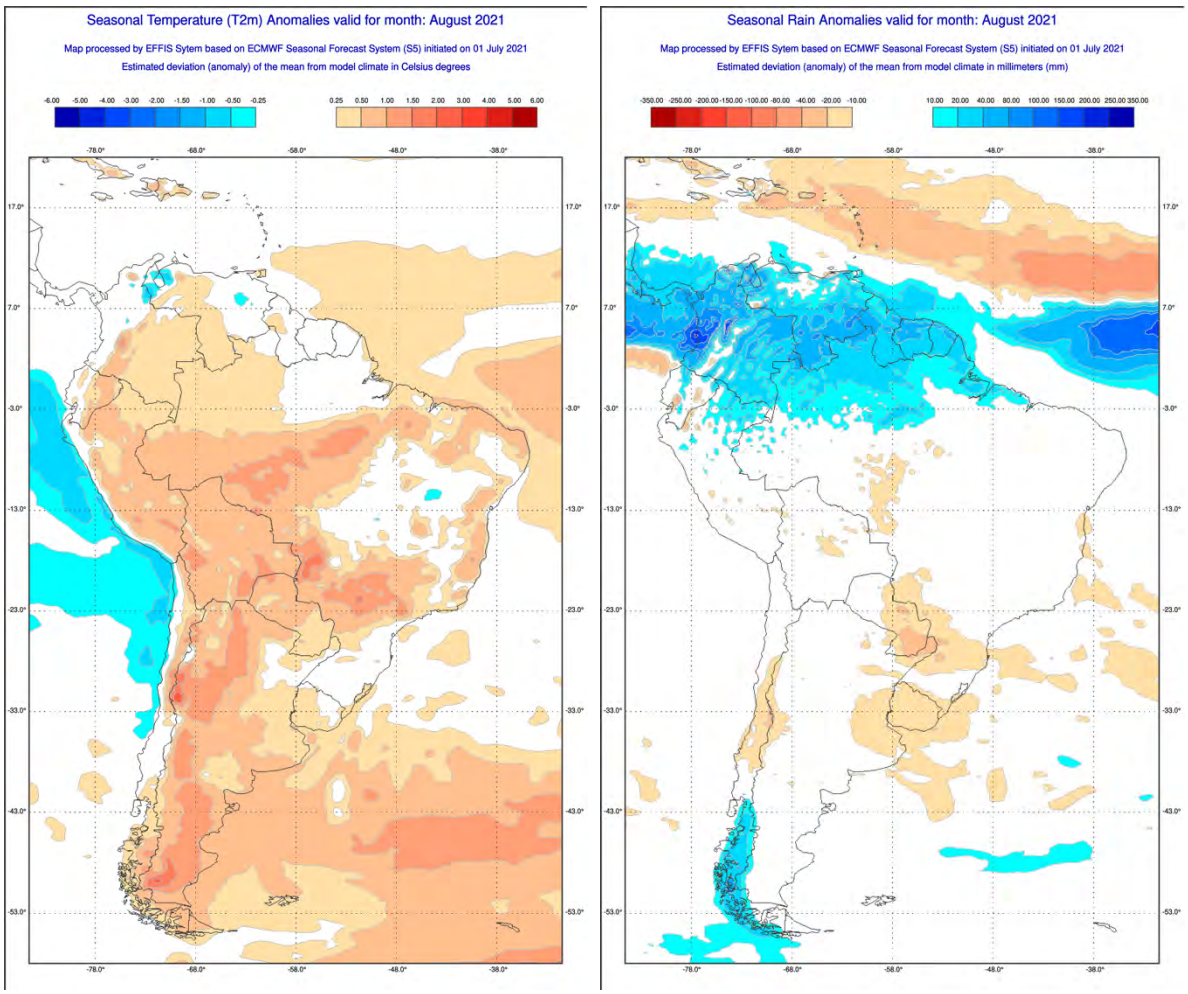
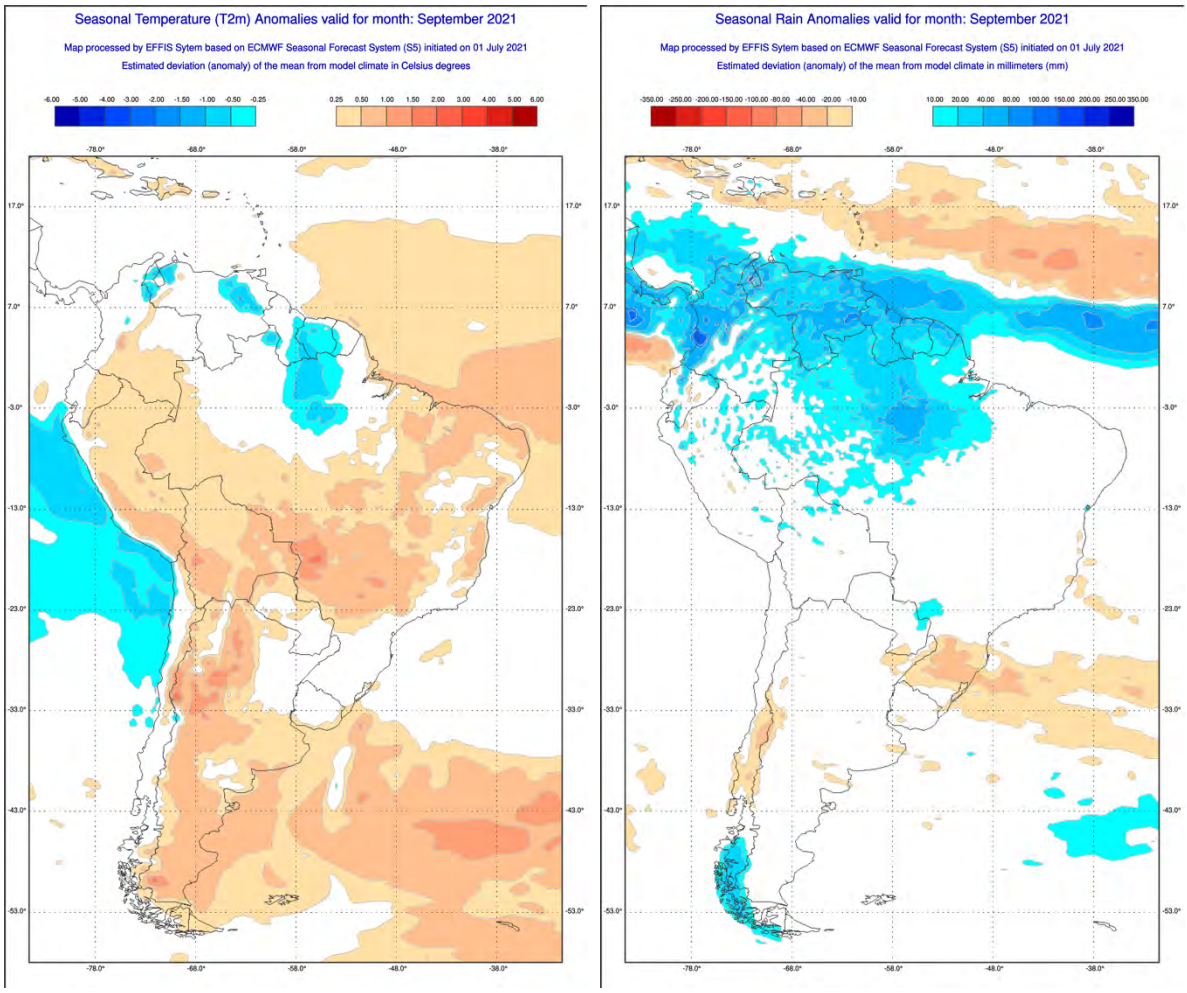



Figure 71. Fire weather anomalies of the current month, August, 2021.

At the current date, its foreseen that September will be very similar with August for the region (Figure 72).

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