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Weekly analysis of wildfires in the Amazon region and South America:

July 11-July 18, 2021

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Contact information

Name: Global Wildfire Information System
Address: <https://gwis.jrc.ec.europa.eu>
Email: jrc-effis@ec.europa.eu
Tel.: +39 0332 786138

EU Science Hub
<https://ec.europa.eu/jrc>

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¹ European Commission, Joint Research Centre (JRC), Ispra, Italy

³ ARCADIA SIT, Milan, Italy

⁴ Engineering Ingegneria Informatica S.p.A. Rome, Italy

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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 that 2019 was a critical year 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 [JRC Technical Report on the Amazon](#). 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. Most of the Amazon region is in Brazil, specifically in the Brazilian Legal Amazon (BLA)², and in other neighbor countries. Paraguay has been included in this report due to the high fire activity observed this year, although it is not part of the Amazon region. Figure 1 shows the geographical extent of the countries analyzed in this report.

- In the **Brazil Legal Amazon (BLA)**, within Brazil, a total of 3.2 Million ha (Mha) burnt since January 1 until July 18, 2021. This value is similar to that of the last three years in the same period. **Last week, 1513 fires occurred, which is the highest value of the last 5 years for the same week.**
- **In Brazil, 6.37 Million ha (Mha) burnt since January 1 until July 18, 2021**, with a total of 930,002 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 (3,535 fires occurred last week). The area burnt in the last week was higher than that of the same week in 2019 but lower than in 2020. The average size of the fires is lower than all the previous 5 years.
- **In Bolivia**, the total burnt area (1.5 Million ha (Mha)) and number of fires (4246 fires) are the highest values recorded since 2015 for the same period.
- **In Colombia**, the total burnt area in the country (2.55 Million ha (Mha)) is above the values of 2018 and 2019 but approximately 13% below the values of 2020. The total number of fires since January 2021 its 8772, the highest value since 2015 for the same period.
- **In Paraguay**, 1.29 Million ha (Mha) burnt since January 1 until July 18, 2021. This figure is above those in 2018 and 2019 but 35% below the values of 2020.
- In Peru since January 1 until July 18, 2021, the total burnt area (0.2 Mha) and total number of fires (1389) are the highest values recorded since 2015. So far, the total burned area for 2021 its 26% higher than 2020
- **In Venezuela**, 4.12 Million ha (Mha) burnt in the current year until July 18. The value of the total burnt area in Venezuela is lower than that in 2019 and 2020. The burned area last week was the highest since 2015 for the same week.
- **In Chile, 390 809 ha** burnt in the current year until July 18, 2021. This value is 50% higher than that in 2020. The total burnt area and number of fires (1471), up until now, are the second highest values since 2015.
- **In Argentina**, a total of 1.34 Million ha (Mha) burnt since January 1 until July 18, 2021, which is less than half of what was burned in 2020. A total of 5437 fires were mapped in this period.
- **In Ecuador**, a total of 139 fires burnt 24,843 ha since January 1 until July 18. These values are similar to the values of the last five years.
- **In Uruguay**, a total of 29135 ha burnt since January 1 until July 18. This value its higher than 2018 and 2019 but lower than 2020. No fires were reported last week.
- **In French Guiana** a total of 726 ha burnt since January 1 until July 18, 2021. This value its similar with the previous years. No fires were reported last week.
- **In Guyana**, a total of 59554 ha burnt since January 1 until July 18, 2021, a value higher than that of 2018 but lower than the values in 2019 and 2020. No fires were mapped last week.
- **In Suriname**, 21 fires burnt a total of 4533 ha since January 1 until July 18, 2021, a value similar to that of 2018 and lower than 2019 and 2020. No fires were reported last week.
- This week, fire danger will remain very high to extreme in the eastern part of Brazil and moderate to high in southern Bolivia.

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 3.2 Mha burnt in the BLA since January 1 until July 18, 2021, with 479,939 ha burnt in total during the last week, which is similar to the values of the same week in 2018 and 2019 but lower than 2020. The number of fires recorded in GWIS in the last week was 1513, above the average value of the mean of the last 5 years. The number of thermal anomalies until July 18, 2021 (89311) shows a typical trend in the region as compared to the trends in 2018 and 2020, but the values remain below those of 2019. 8410 thermal anomalies were registered last week.

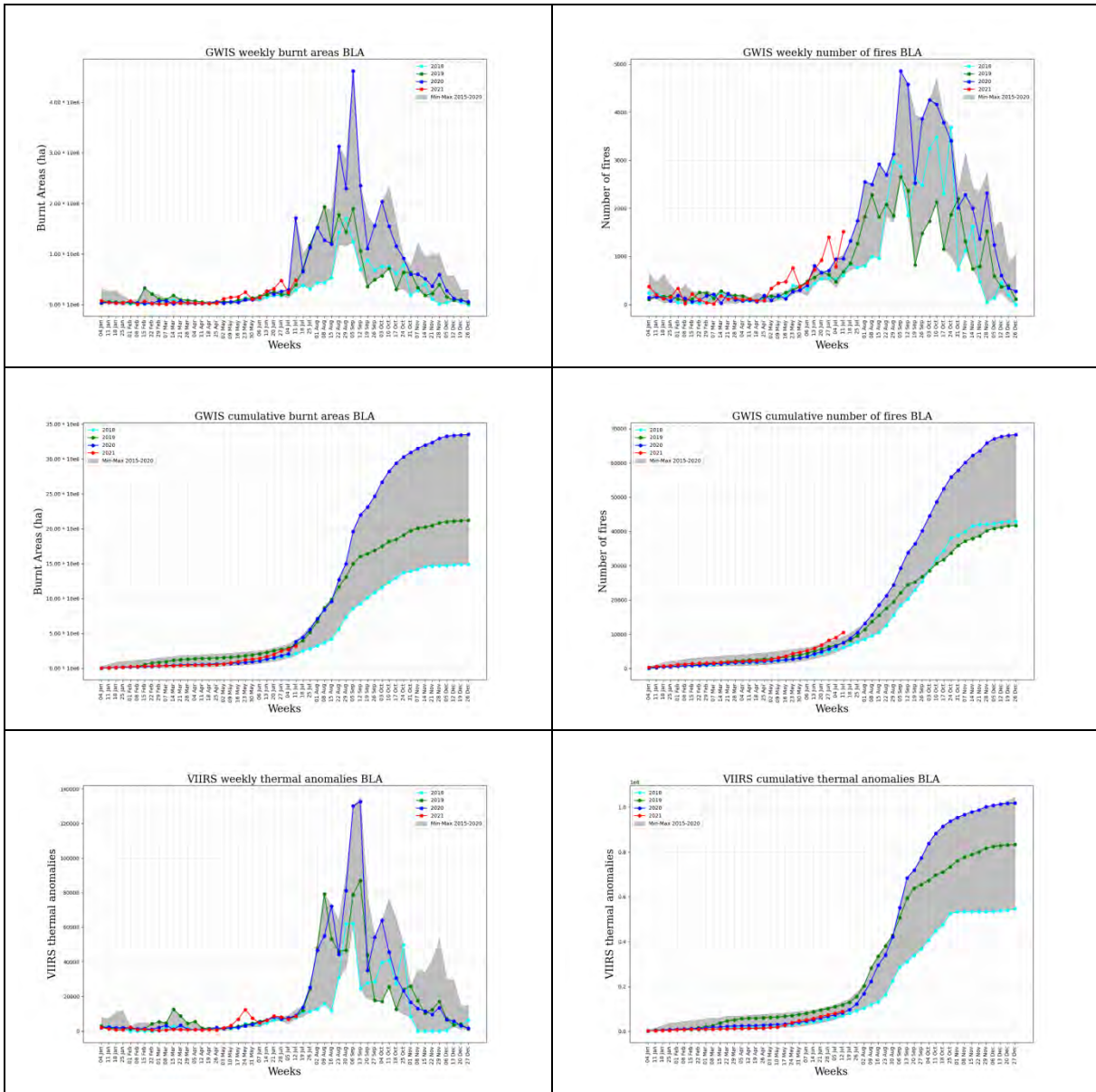


Figure 2. Trend of burnt areas and number of fires as compared to data in the last two years.

2 Wildfires in Brazil

Figure 3 shows the trends on the extent of burnt areas and the number of fires since January 1, 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 6.37 Mha ha burnt in Brazil since January 1 until July 18, 2021, with a total 930,002 ha burnt in the last week. The number of fires recorded in GWIS in the last week was 3232, the highest value in the last five years for the same week . The number of thermal anomalies until July 18, 2021 (181369) shows a typical trend in the region; 17,334 thermal anomalies were registered last week.

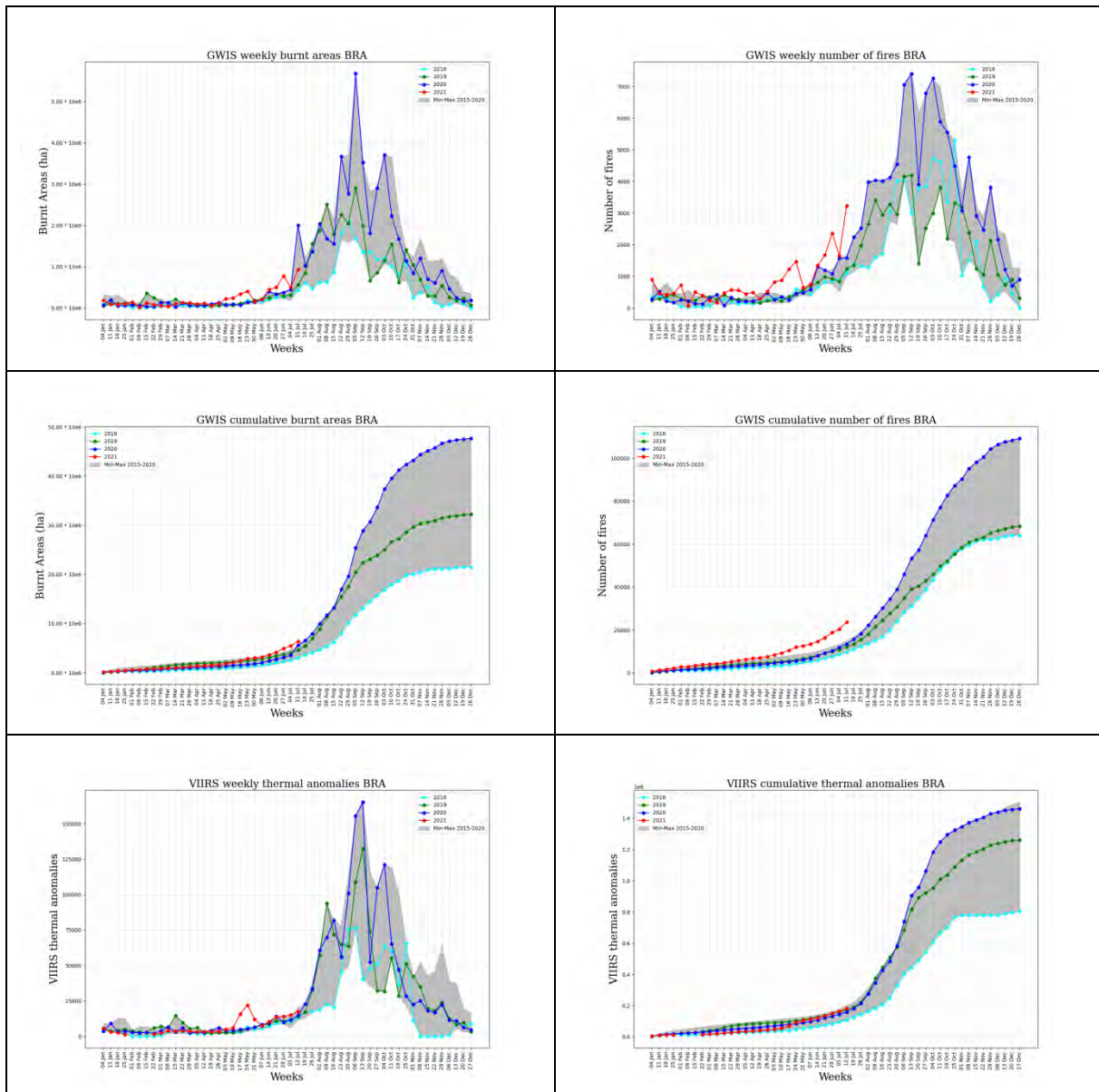


Figure 3. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

3 Wildfires in Bolivia

Figure 4 shows the trends on the extent of burnt areas and the number of fires since January 1, 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 1.5 Mha ha burnt in Bolivia since January 1 until July 18, 2021, with 201,623 ha burnt in the last week, higher than 2018,2019 and 2020 for the same week. The number of fires recorded in GWIS in the last week was 565, higher than the number of fires in the same week from any year since 2015. The number of thermal anomalies until July 18, 2021 (45,347) is the highest value since 2015 for the same period. 3,498 thermal anomalies were detected by VIIRS in the last week.

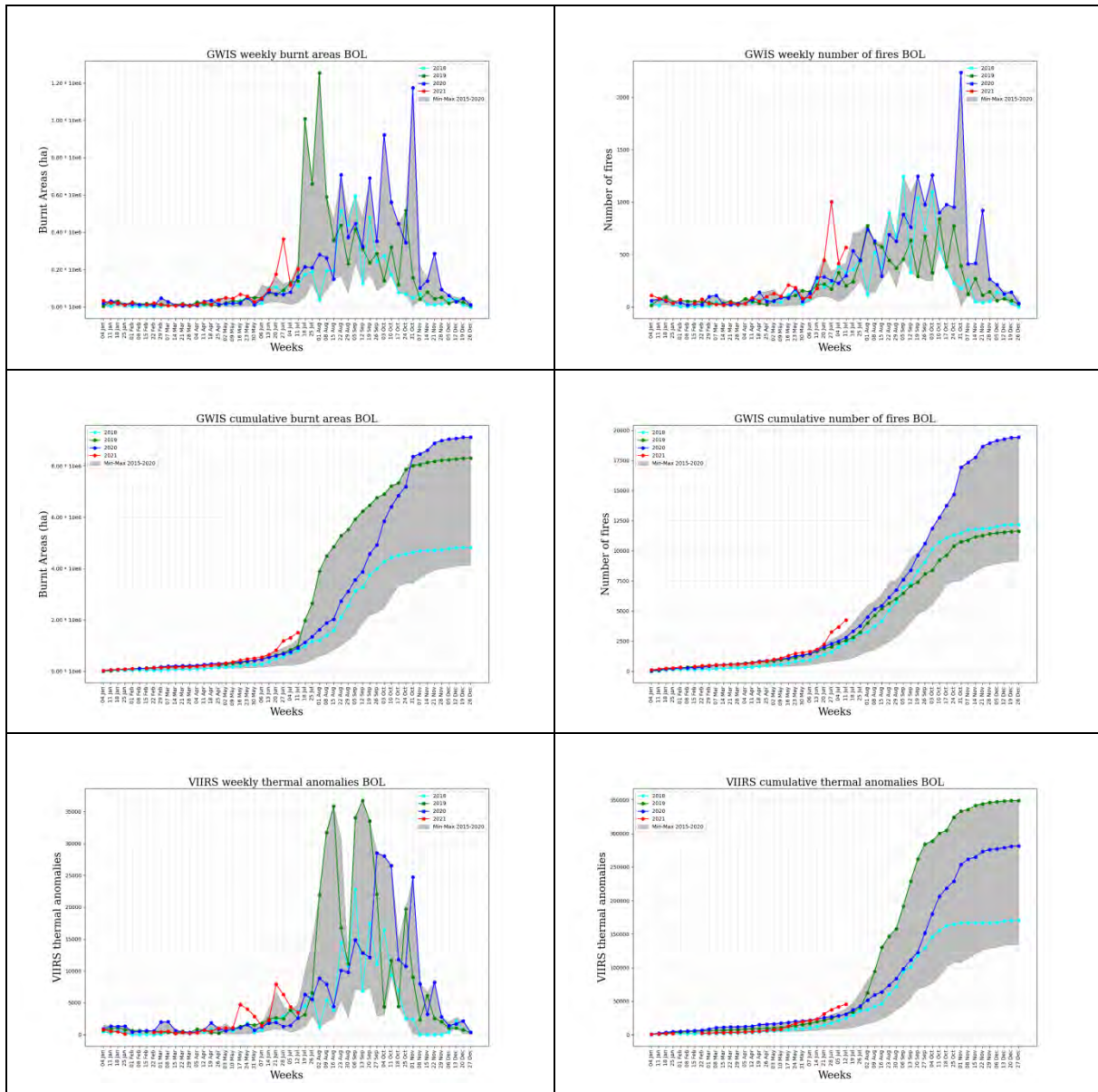


Figure 4. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

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 2.55 Mha burnt in Colombia since January 1 until July 18, 2021. Approximately 38,835 ha burnt in the country the last week. The number of fires recorded in GWIS in the last week was 181 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 July 18, 2021 (39,115) follows a typical trend in the region with similar values of 2018 but way below of 2019 and 2020. 923 thermal anomalies detected by VIIRS last week.

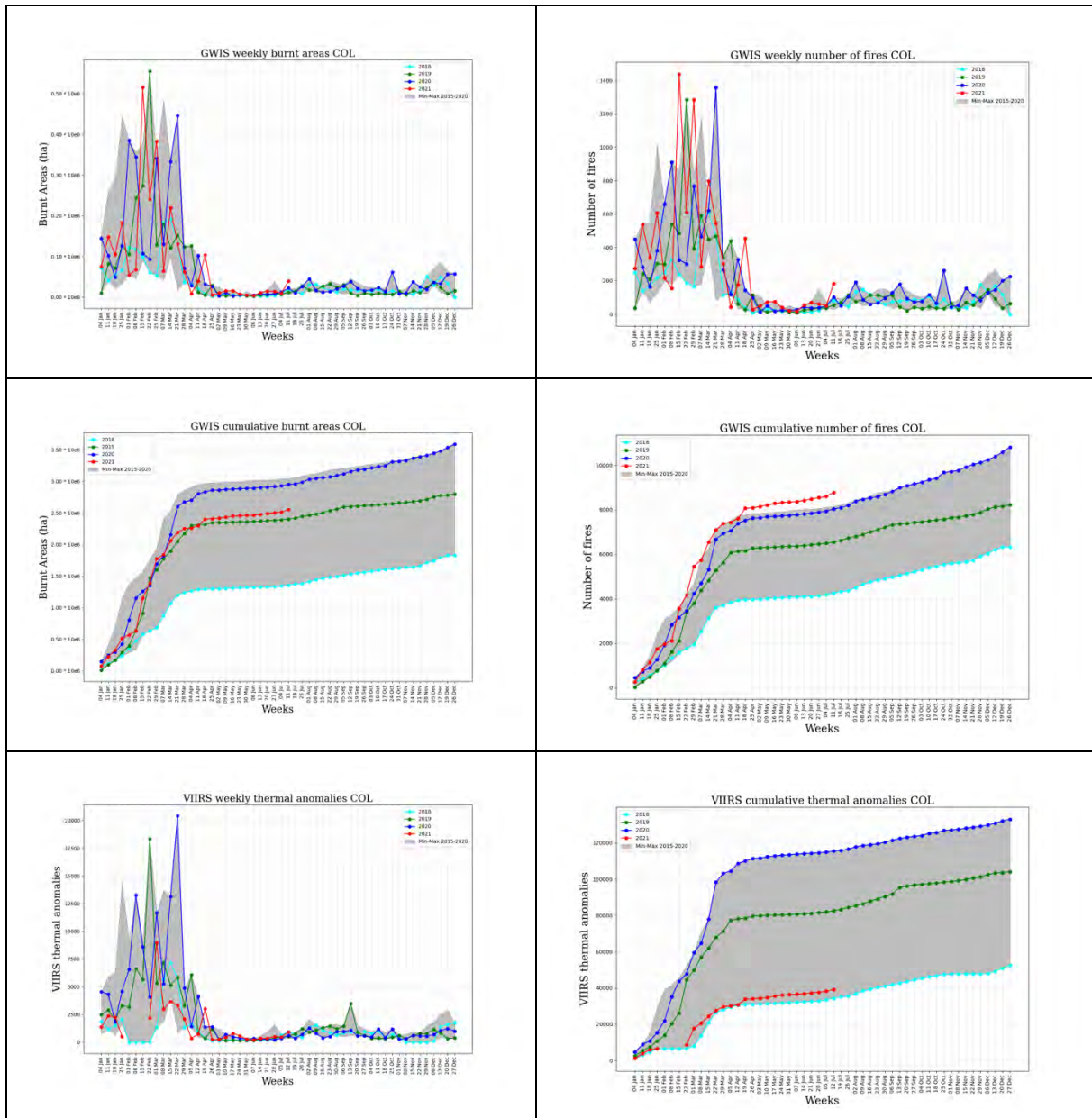


Figure 5. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

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 1.29 Mha burnt in Paraguay since January 1 until July 18, 2021. Approximately 106,851 ha burnt in the country the last week. The number of fires recorded in GWIS in the last week was 371. The number of thermal anomalies until July 18, 2021 (34,550) follows a typical trend in the region. 3387 thermal anomalies detected by VIIRS last week.

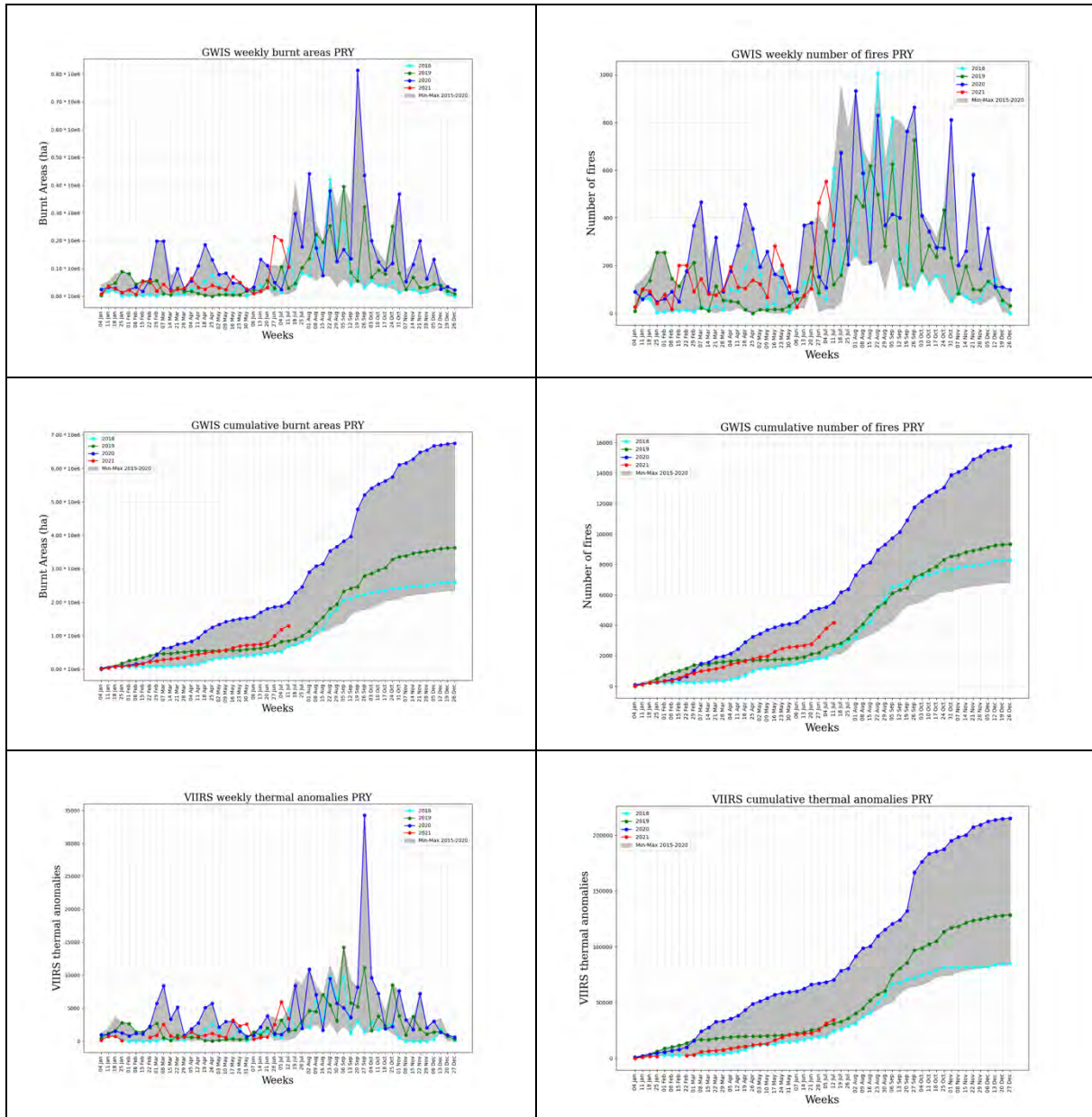


Figure 6. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

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 0.26 Mha burnt in Peru since January 1 until July 18, 2021, the highest value since 2015 for the same period. Approximately 33,136 ha burnt in the last week. The number of fires recorded in GWIS in the last week was 165. The total number of fires since the beginning of the year is 1389, the highest value since 2015 for the same period. The number of thermal anomalies until July 18, 2021 (8,964) shows a typical trend in the region. 806 thermal anomalies registered last week, increasing after the last week.

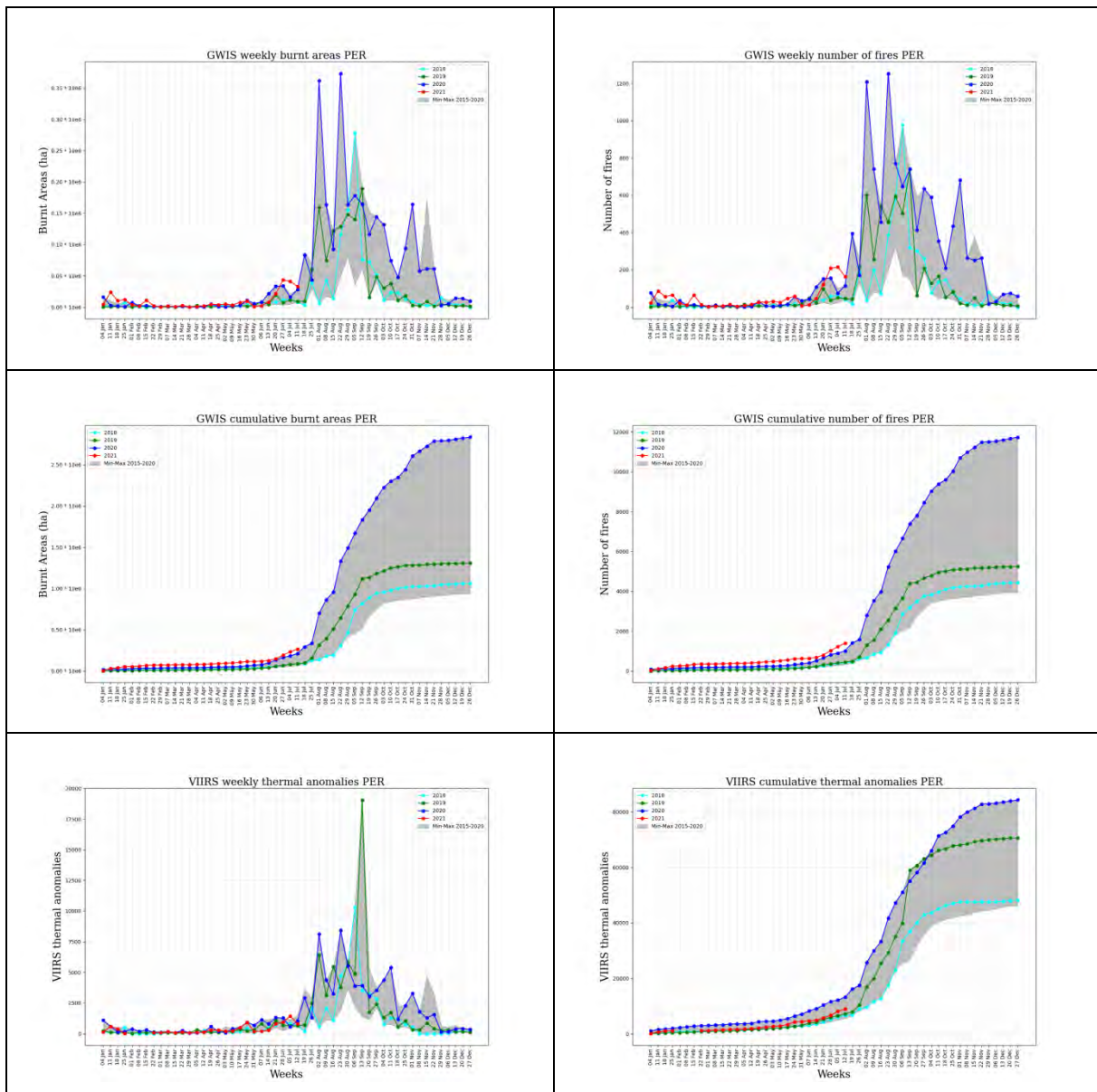


Figure 7. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

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 4.12 Mha burnt in Venezuela since January 1 until July 18, 2021, with 25,041 ha burnt in the last week. The number of fires recorded in GWIS in the last week was 110. The number of thermal anomalies until July 18, 2021 (86,373) shows a typical trend in the region. 1436 thermal anomalies were recorded by VIIRS during the last week, a value that is the highest since 2015 for the same week.

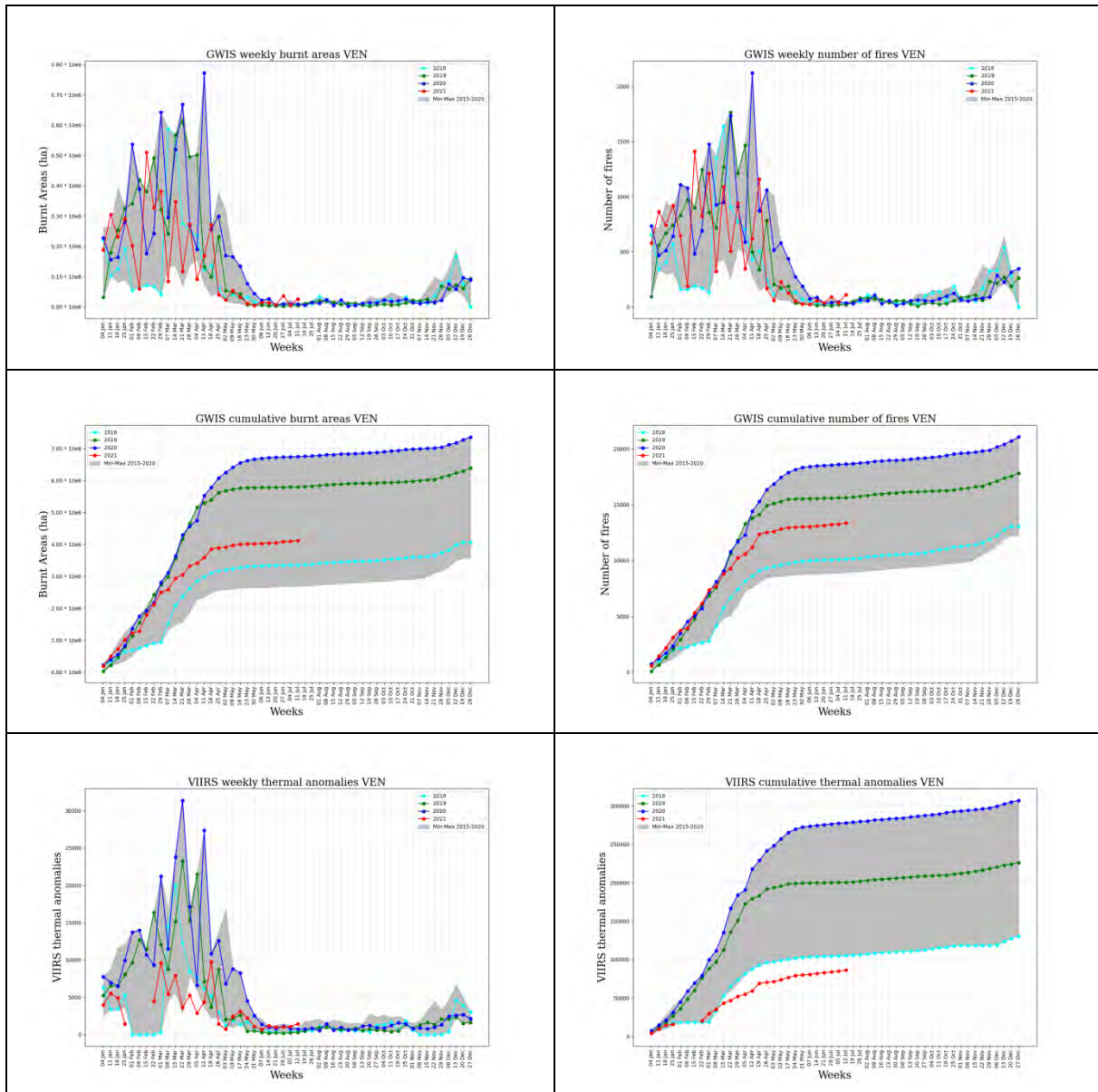


Figure 8. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

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 391,809 burnt in Chile since January 1 until July 18, 2021, with 5,885 ha burnt in the last week, the second highest value since 2015. The number of fires recorded in GWIS in the last week was 35. The number of thermal anomalies until July 18, 2021 (10,308) shows a typical trend in the region as compared to the trends during previous years. 218 thermal anomalies were detected by VIIRS during the last week, which is similar to the values in the same week during previous years.

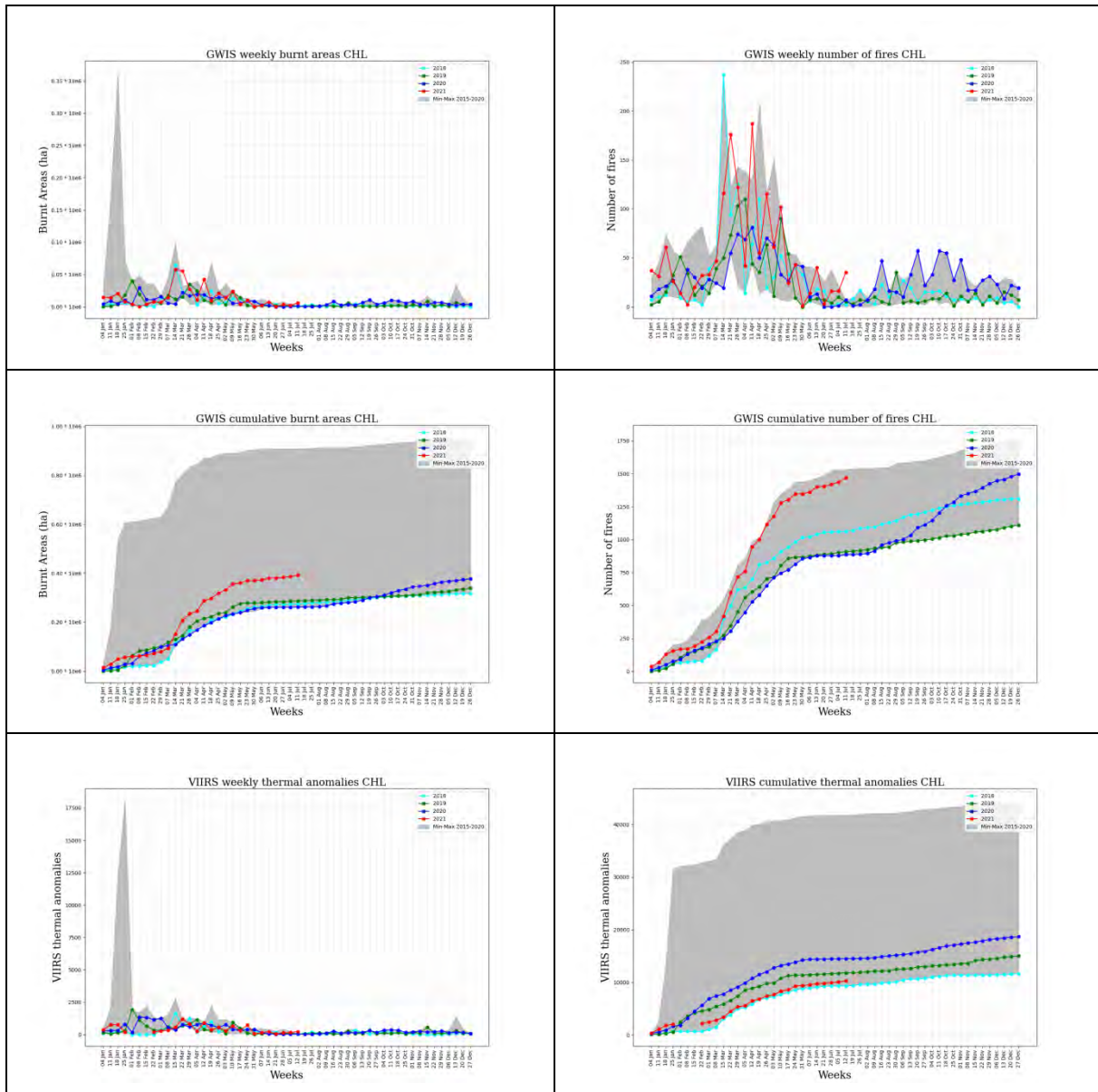


Figure 9. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

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 1.34 Mha burnt in Argentina since January 1 until July 18, 2021, with 158,170 ha burnt in the last week. These values are lower than 2020. The number of fires recorded in GWIS in the last week was 727. The number of thermal anomalies until July 18, 2021 (40,731) shows a typical trend in the region. 2764 thermal anomalies were recorded by VIIRS during the last week, a value that is like those recorded in that week the previous two years.

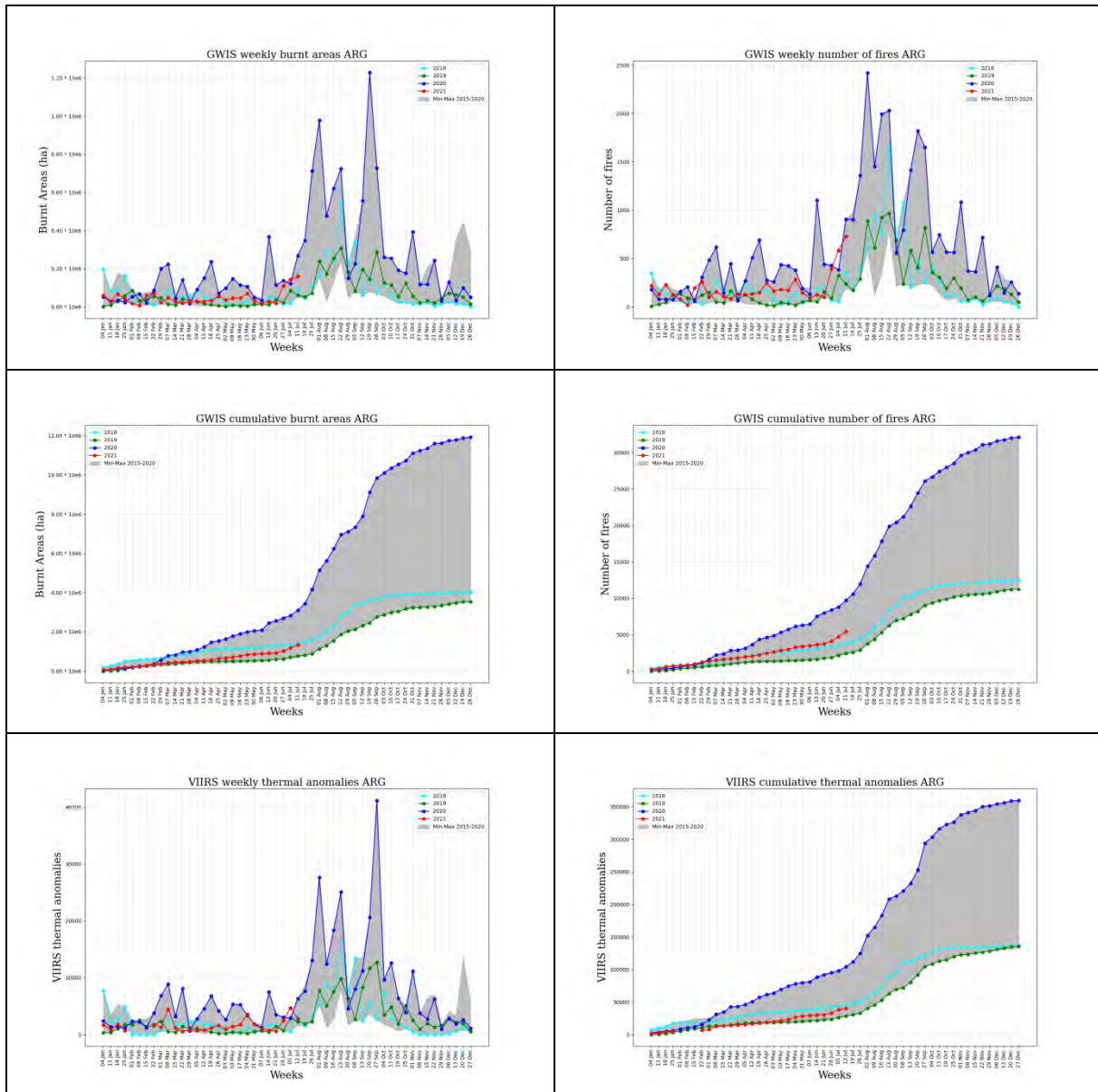


Figure 10. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

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 24,843 ha burnt in Ecuador since January 1 until July 18, 2021, with 3,703 ha burnt in the last week. The number of fires recorded in GWIS in the last week was 22. The number of thermal anomalies until July 18, 2021 (935) shows a typical trend in the region. 104 thermal anomalies were detected by VIIRS in the last week.

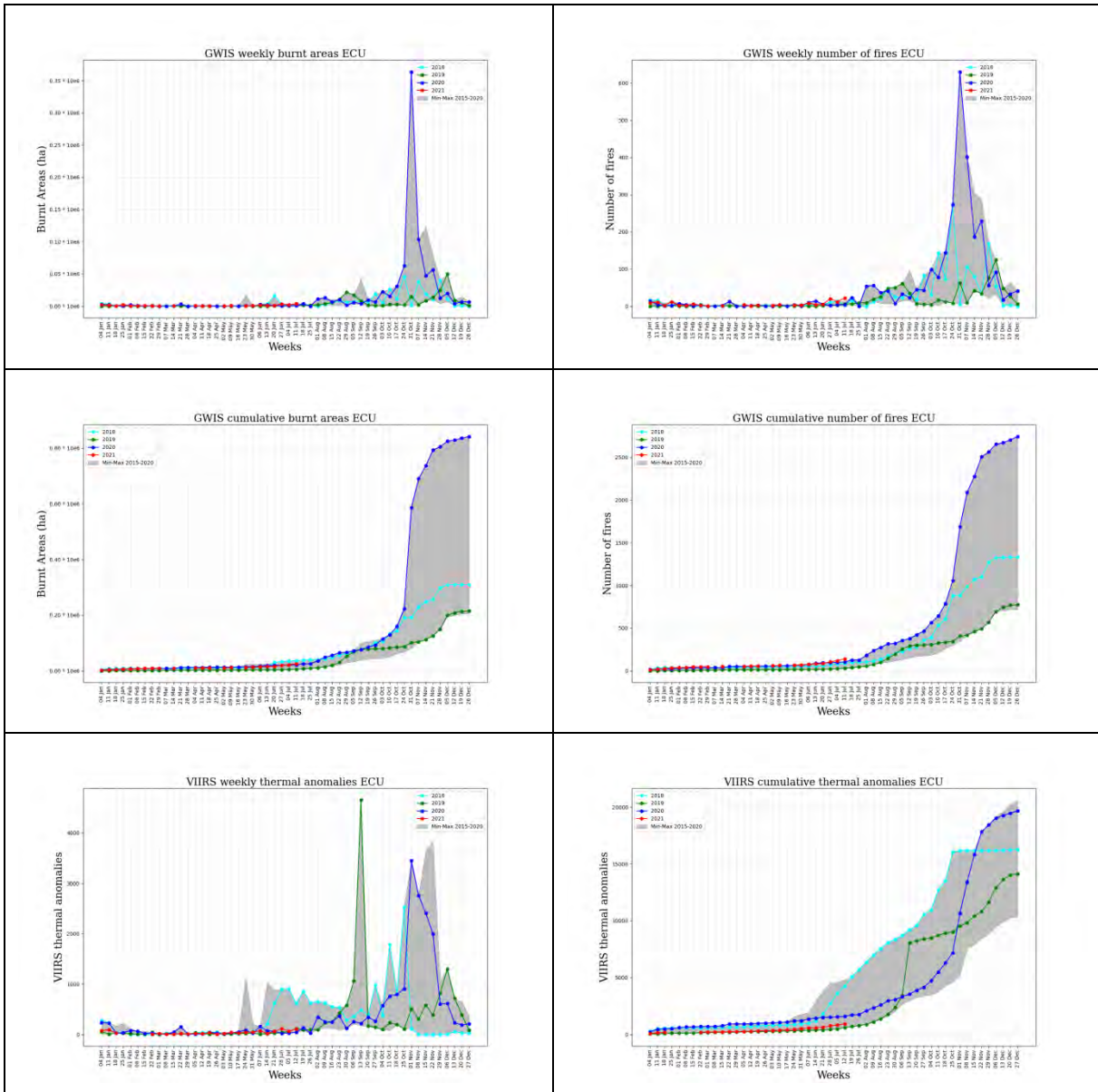


Figure 11. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

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 29,135 ha burnt in Uruguay since January 1 until July 18, 2021. No fires were recorded last week. The number of thermal anomalies until July 18, 2021 (1,035) shows a typical trend in the region.

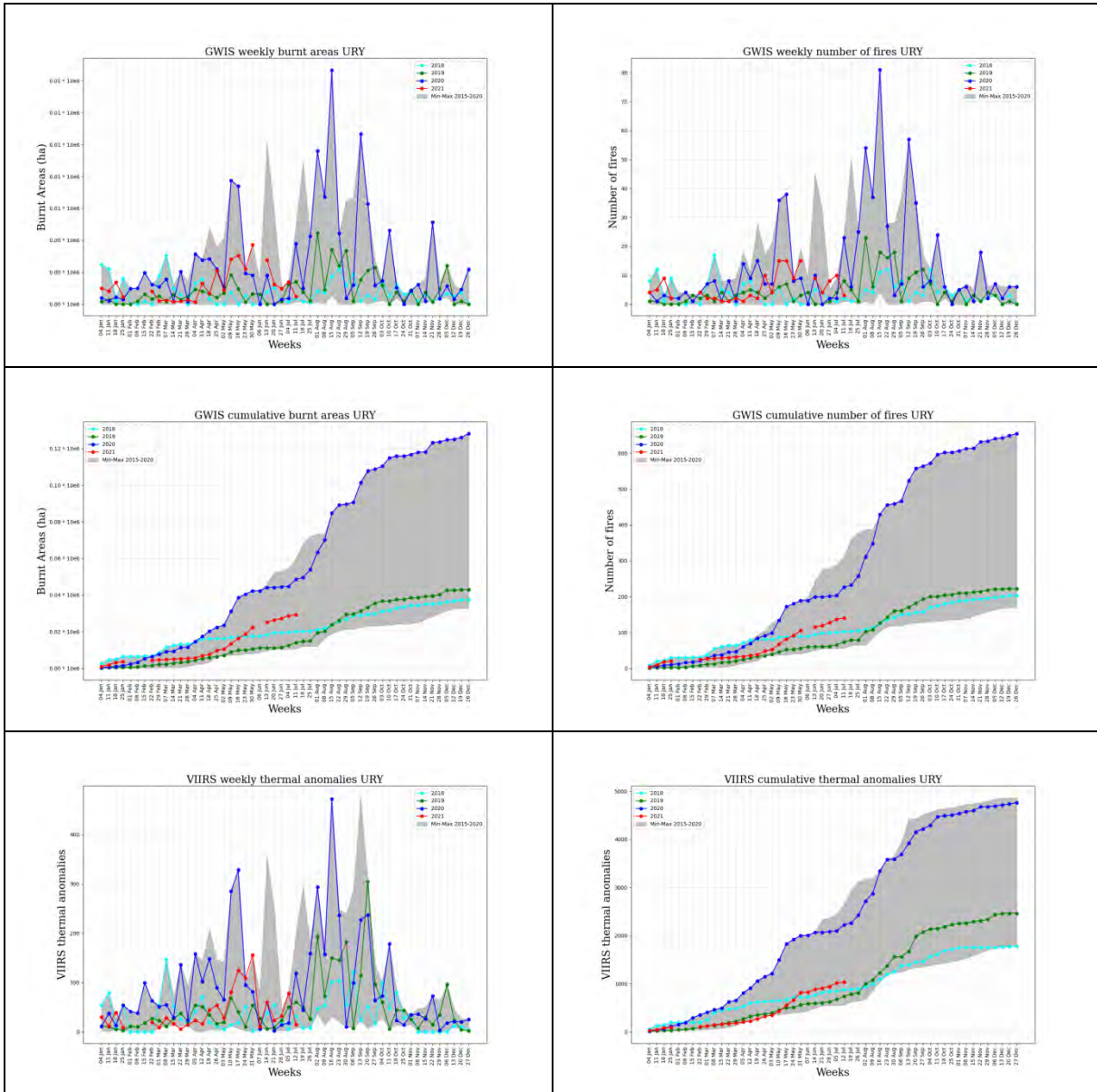


Figure 12. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

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 July 18, 2021, with no fire recorded last week. The number of thermal anomalies until July 18, 2021 (1) 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.

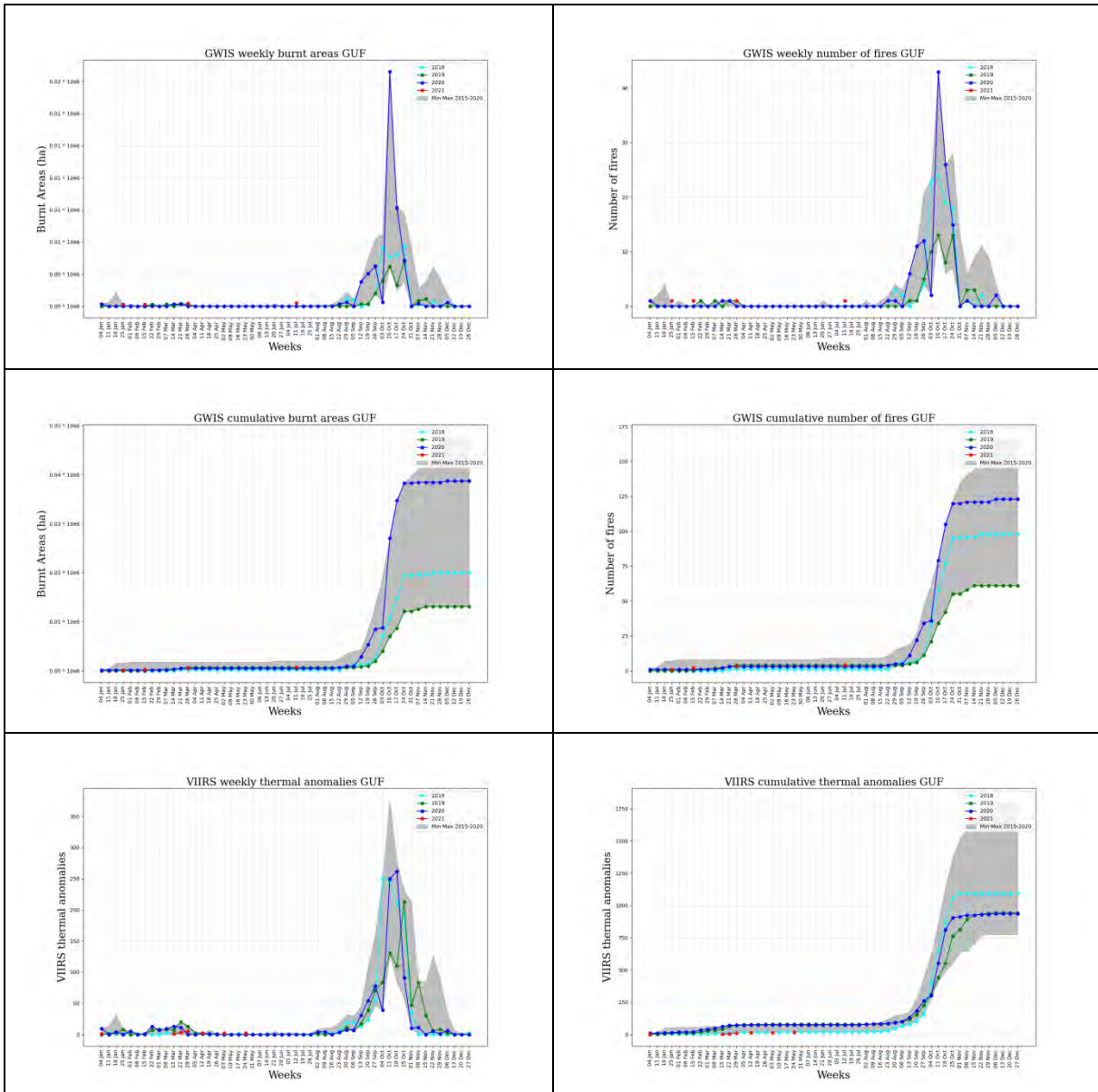


Figure 13. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

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 59,554 Mha burnt in Guyana since January 1 until July 18, 2021, with no fires recorded last week. The number of thermal anomalies until July 18, 2021 (1,136) 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.

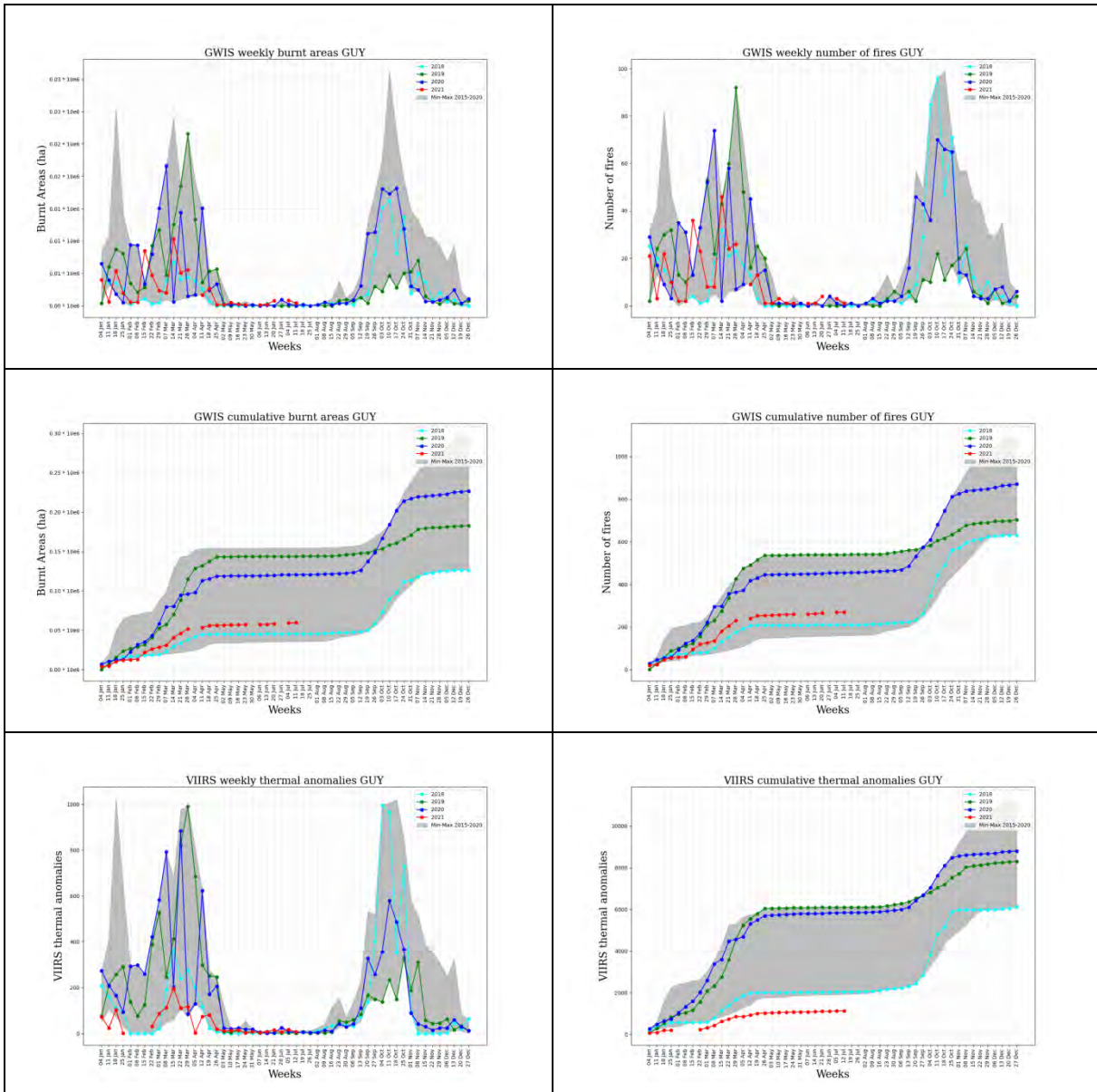


Figure 14. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

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 July 18, 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 July 18, 2021 (97) shows a typical trend in the region. 0 thermal anomalies registered last week, increasing after the last week.

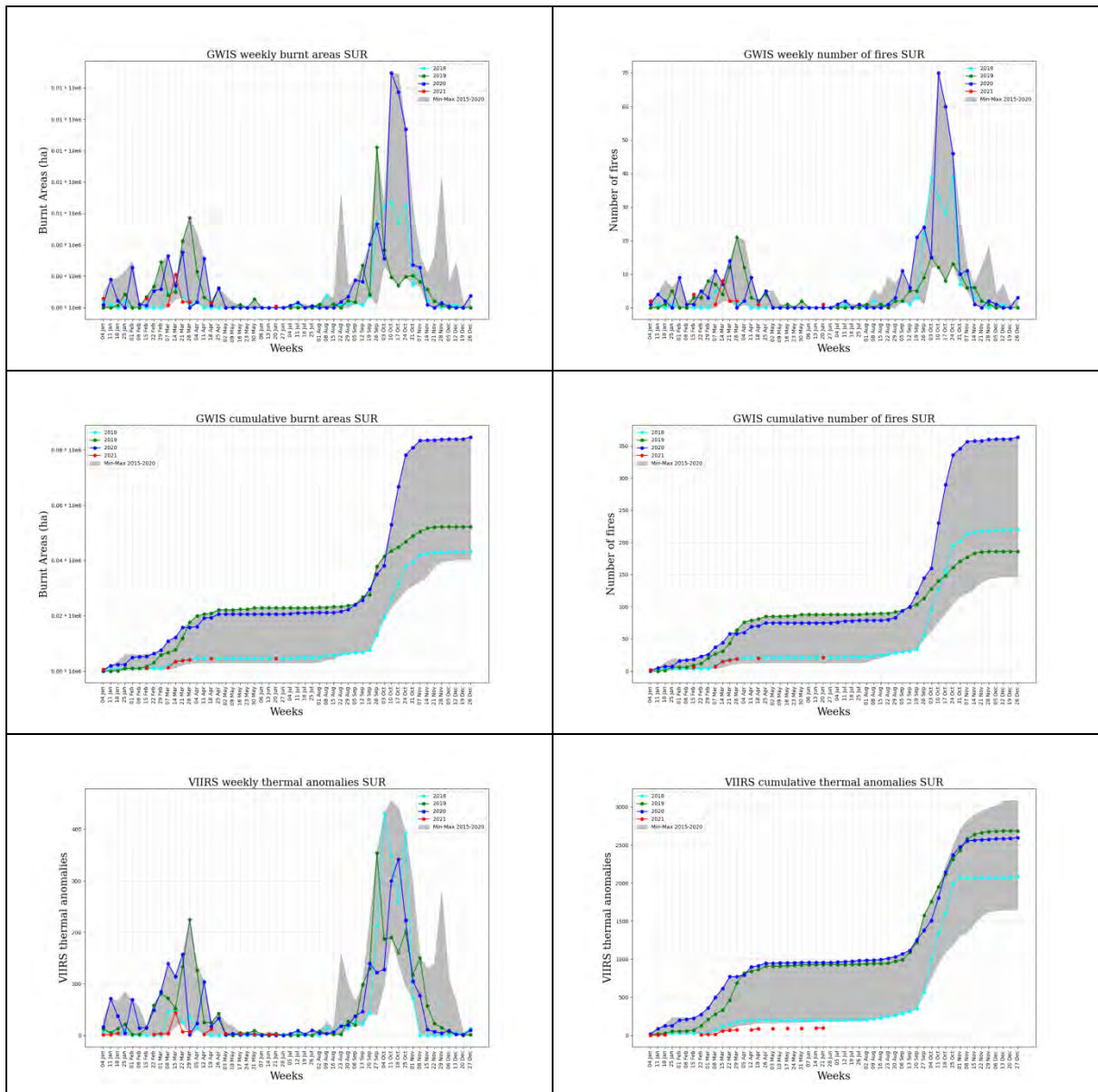


Figure 15. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last two years.

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 July 19 to July 25, 2021. 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 very high to extreme in the central and eastern part of Brazil and moderate to high in eastern and southwestern Bolivia, Paraguay and northern Argentina.

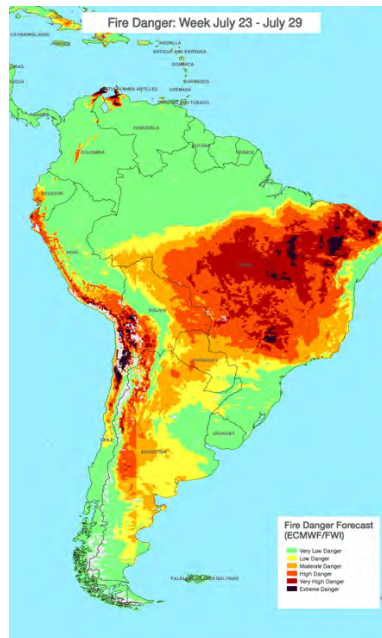


Figure 16. Average Fire danger forecast. Week, July 19- July 25, 2021.

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, southern Bolivia and Argentina. Below average temperatures are forecasted in southern Brazil. The models estimate an above average precipitation rates for next week mainly in northern Brazil, Colombia and Venezuela. Below average precipitation is foreseen mainly in southern part of Brazil and Bolivia.

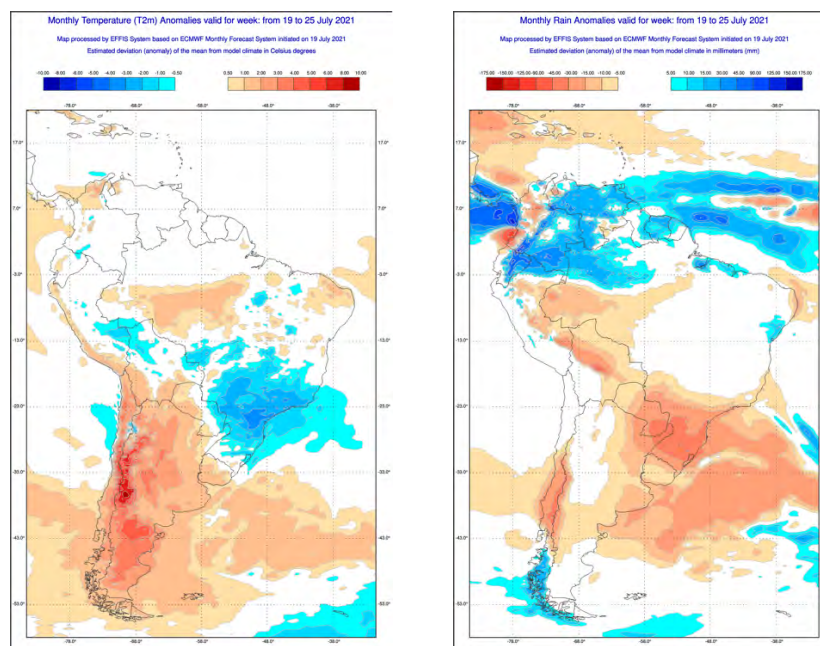


Figure 17. Fire weather anomalies of the current week, July 19 - July 25, 2021.

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

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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 ...**Error! Bookmark not defined.**

Figure 2 Trend of burnt areas and number of fires as compared to data in the last 5 years..... **Error! Bookmark not defined.**

Figure 3. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last 5 years. **Error! Bookmark not defined.**

Figure 4. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last 5 years. **Error! Bookmark not defined.**

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Figure 15. Trend of burnt areas, number of fires and thermal anomalies as compared to data in the last 5 years. **Error! Bookmark not defined.**

Figure 16. Average Fire danger forecast. Week, July 26- August 1, 2021.....**Error! Bookmark not defined.**

Figure 17. Fire weather anomalies of the current week, July 26- August 1, 2021.....**Error! Bookmark not defined.**

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