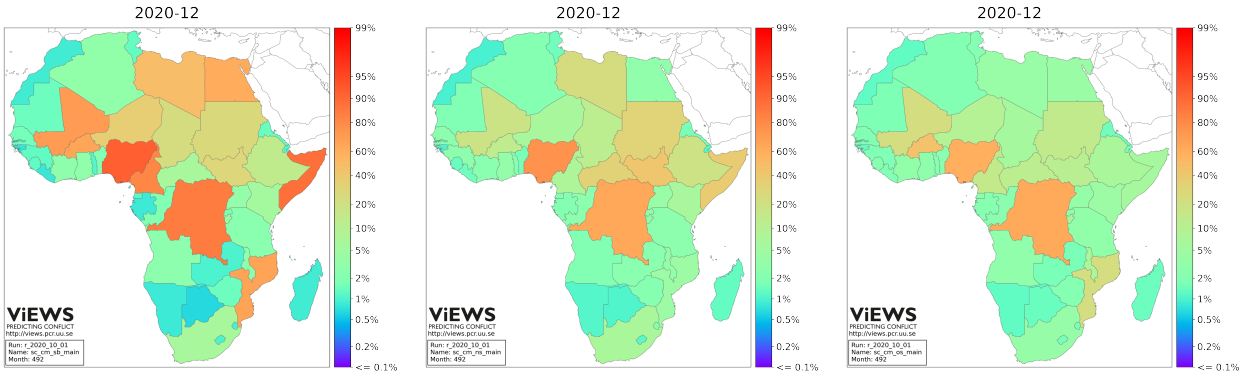
ViEWS monthly forecasts, October 2020*

Summary of forecasts

Friday 30th October, 2020



(a) State-based conflict (sb) (b) Non-state conflict (ns) (c) One-sided violence (os)

Figure 1: Ensemble forecasts for December 2020.

This report presents ViEWS forecasts at $s = 4$ for December 2020 as of 1 October 2020, which are based on data that are updated up to and including August 2020. The underlying conflict data were produced by the UCDP (`http://ucdp.uu.se`). The ViEWS compilation of these data and data from other sources are available at `https://www.pcr.uu.se/research/views/data/downloads/`.

In the following, we highlight developments in the most recent months. For a discussion of what underlies the forecasts in terms of slowly changing risk factors as well as methodological

*This report was prepared by Håvard Hegre, Mihai Croicu, Remco Jansen, Angelica Lindqvist-McGowan, and Maxine Ria Leis. The research was funded by the European Research Council, project H2020-ERC-2015-AdG 694640 (ViEWS). The simulations were performed on resources provided by the Swedish National Infrastructure for Computing (SNIC) at Uppsala Multidisciplinary Center for Advanced Computational Science (UPPMAX).

issues, see the ViEWS introductory article.[1]

Figure 1 shows our country-level forecasts (*cm*) for December 2020, Figure 5 the corresponding forecasts at detailed geographic locations (PRIO-GRID level, or *pgm*)[2], and Figure 7 shows the most recent observed conflict events. Similar reports for previous months are available at `http://views.pcr.uu.se`, along with other information on the ViEWS project.

1 Country-month forecasts for December 2020

The plots in Figure 1 show the ViEWS country-level forecasts for the immediate future – what will happen in December 2020 according to our forecasts? We show the probability of at least 25 or more fatalities in each country in December 2020, based on data up to and including August 2020. Countries with a red color have been assigned a forecast probability close to 1, whereas purple countries have been assigned a probability of less than 0.01. When the forecasts indicate that no event is as likely as at least one event, countries are drawn with a light orange color.

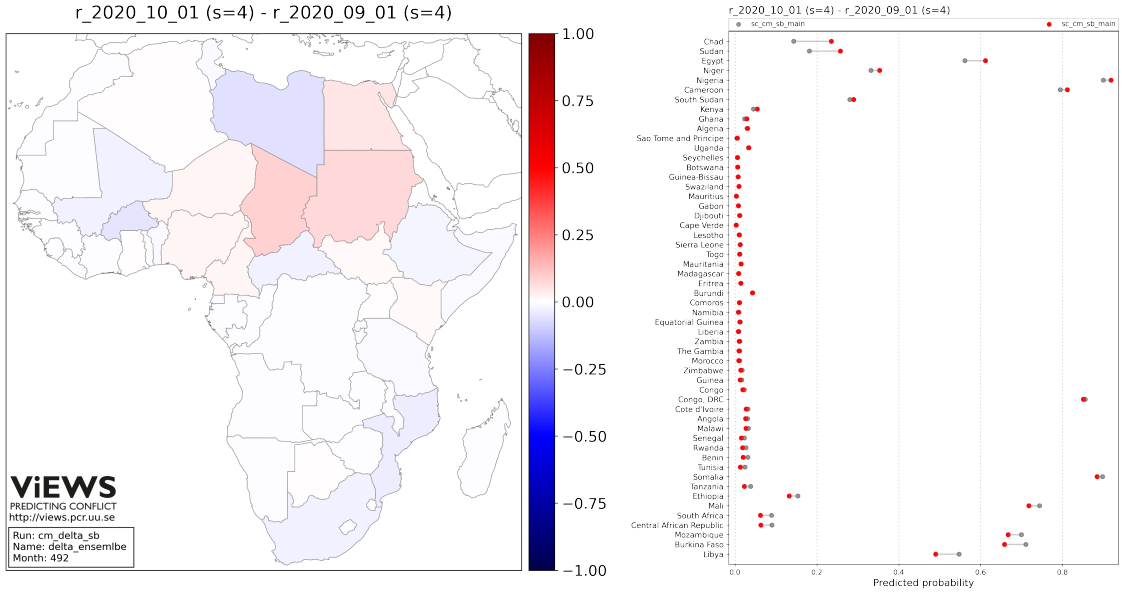


Figure 2: Change in predicted state-based conflict (sb) at $s = 4$

Our forecasts for December 2020 are mostly similar to last month's forecasts. The October 2020 run is using the same set of models as last month, thus only changes to input variables will have affected the forecasts. In the following, we focus on the input of recent violence.

[1] `https://journals.sagepub.com/doi/10.1177/0022343319823860`.

[2] PRIO-GRID is a grid structure that divides the terrestrial world into squares of approximately 55 by 55 kilometers. See `http://grid.prio.org/`.

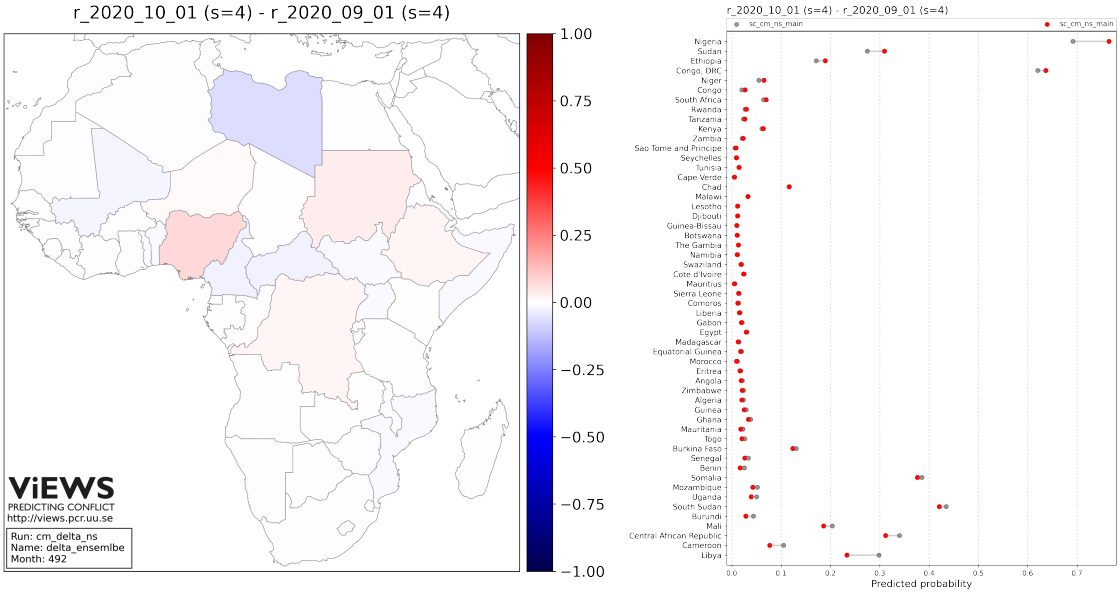


Figure 3: Change in predicted non-state conflict (ns) at $s = 4$

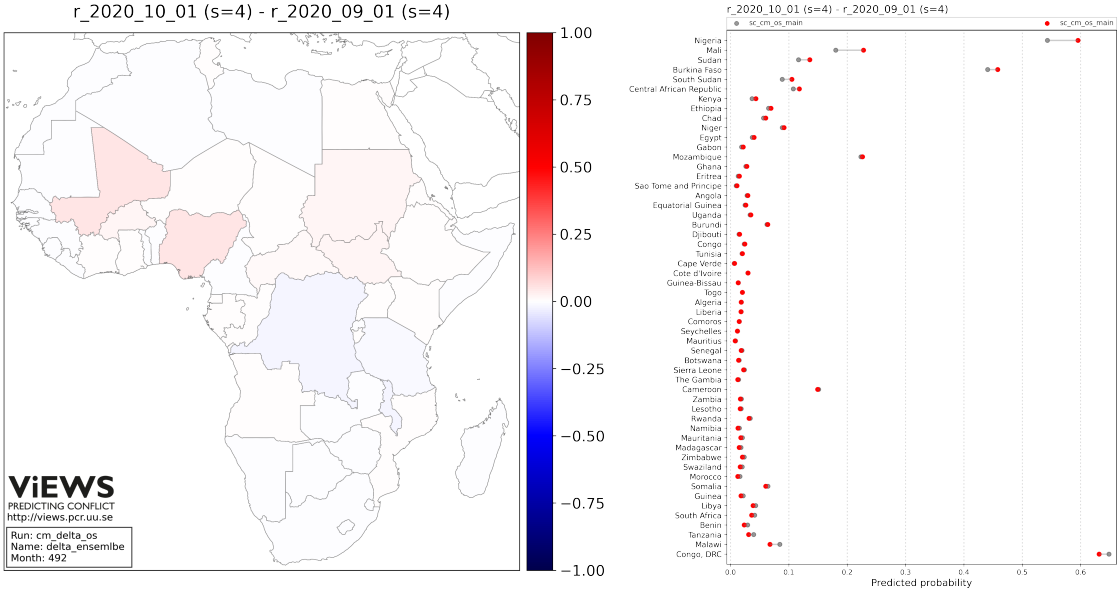


Figure 4: Change in predicted one-sided violence (os) at $s = 4$

1.1 State-based conflict (sb)

We continue to forecast a high probability of state-based conflict in countries that have a recent history of conflict or protest events. In Mali, Burkina Faso, DR Congo, Cameroon, Egypt, Nigeria, Somalia and Mozambique, the risks of state-based violence in December 2020 are high and above 0.5, even with the higher threshold of at least 25 BRDs. In Libya the new risk probability is still high but very slightly below 0.5. In Somalia, Nigeria, DRC and Cameroon conflict is nearly guaranteed as the predicted probabilities exceed 0.8 at $s = 4$, with

the maximum probability of 0.918 for Nigeria. The risk profiles are nevertheless significantly more optimistic for the large majority of the continent, for which the probability of at least 25 BRDs in December 2020 remains around and below 0.2.

Changes to the risk profiles mostly remain highly moderate to none this month, as seen from Figure 2. The probability of state-based violence is expected to decrease minimally in Libya and Burkina Faso by around 0.05. This is related to the extended time since the last conflict incidences as fewer to none battle-related deaths were reported in August 2020. In Chad, Sudan and Egypt a slight increase can be noted. The most significant increase of approximately 0.1 for Chad results from clashes between state soldiers and IS activity in August 2020 after a complete lack of conflict incidences in the previous month.

1.2 Non-state conflict (ns)

The forecast maps for non-state conflict (**ns**) follow mostly similar patterns as **sb**, albeit the risks are generally lower. In line with the forecasts for September 2020, Nigeria and DR Congo are the only two countries that exceed a probability of 50% for 25 or more fatalities related to non-state violence in December 2020. Figure 3 highlights that Nigeria is also the country with the highest risk increase since the previous month. This is a result of continued clashes between the Nigerian government, IS, and Boko Haram in Borno state, and military strikes against bandits in Katsina and Zamfara states. On the other hand, Libya sees a continuation of the expected decrease of non-state violence in December 2020.

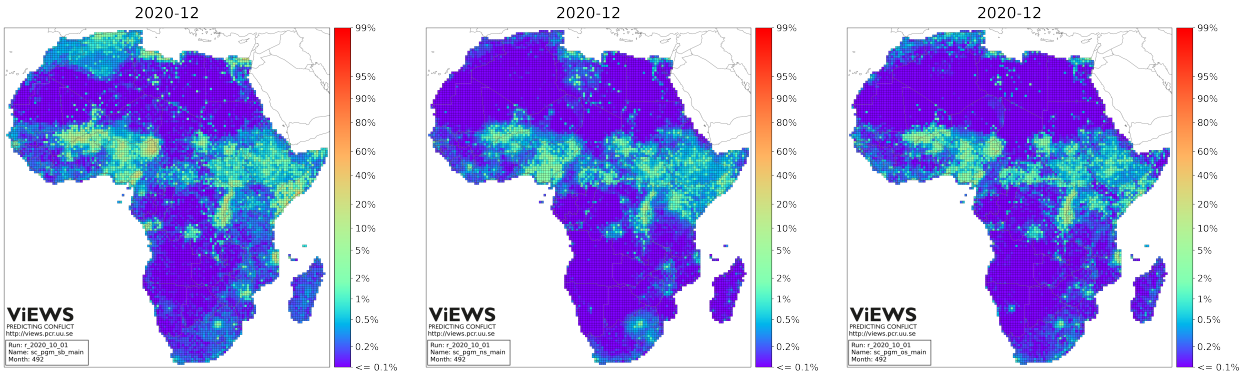
As in previous forecasts, we can note the significantly low probability of non-state violence for Mozambique, Egypt and Cameroon—all countries with a high risk of more than 0.5 for state-based violence. These trends can also be seen in 7b, showing that there have been almost no incidences of non-state violence in these countries over a period of one year.

1.3 One-sided violence (os)

In line with the forecasts for the other forms of violence, the risk of one-sided violence is highest in DR Congo (0.63), Nigeria (0.59) and Burkina Faso (0.45). For the strong majority of countries, the probability is lower than 0.1. While the changes to the risk profiles are very slight, it is interesting to note that we expect a slight decrease in one-sided violence in the DR Congo in December 2020 in contrast to the forecasts for September 2020.

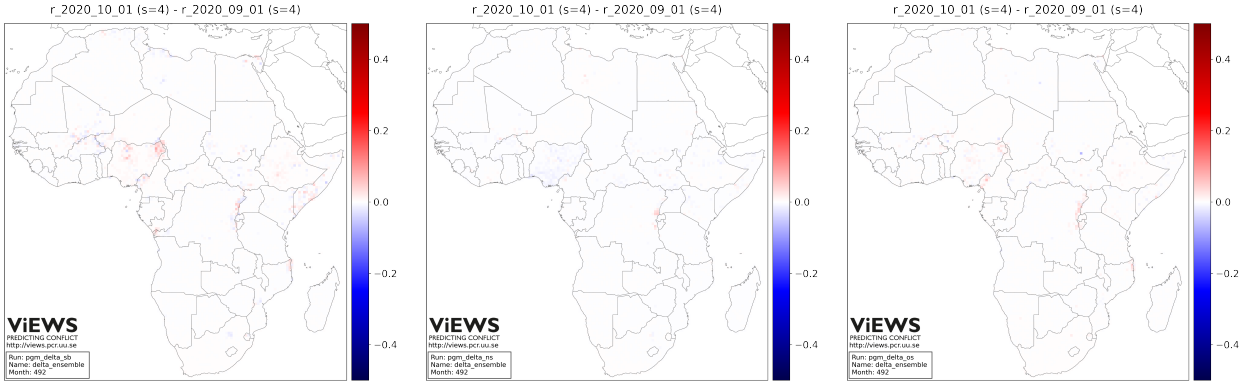
2 PRIO-GRID-month forecasts for December 2020

Figure 5 shows the probability of at least one fatality in December 2020 in each fine-grained sub-national geographical location ('PRIO-GRID cell') and for each of the three outcomes. The forecasts are based on data up to and including August 2020. The color mapping is the same as for the country-month forecasts.



(a) State-based conflict (sb), December 2020 (b) Non-state conflict (ns), December 2020 (c) One-sided violence (os), December 2020

Figure 5: Ensemble forecasts for December 2020



(a) State-based conflict (sb) (b) Non-state conflict (ns) (c) One-sided violence (os)

Figure 6: Change in *pgm* predictions at $s = 4$ compared to last month

2.1 State-based conflict (sb)

The densest risk clusters at the *pgm* level and $s = 4$ for state-based conflict continue to be found in north-eastern Nigeria, the Anglophone region of Cameroon, the Ituri and Kivu provinces of DRC, southern Somalia, the Nile delta and Sinai in Egypt, around Tripoli in Libya, the Cabo Delgado province of Mozambique, and in the extended border areas between

central Mali, northern Burkina Faso, and south-western Niger. Broader clusters at lower risk also continue to span the Horn of Africa, the protest prone regions of Morocco, Algeria, and Tunisia, as well as West Africa.

Changes in the risk assessment at the PRIO-GRID level overlap generally with the above identified conflict clusters. In line with previous forecasts, the risk of state-based violence is expected to further elevate in north-eastern Nigeria. This trend is related to clashes between the government and the Islamic State as well as Boko Haram. A further increase is displayed for the Kivu provinces in DR Congo resulting from continued clashes between the Armed Forces of the DR Congo and multiple rebel groups in August 2020.

Both local risk increases and decreases are found across central Mali and the border areas between Mali and Burkina Faso, illustrating the transient conflict dynamics of region well. For a deeper analysis of this specific region, please see the related country report from October 2020, available at `https://pcr.uu.se/research/views/historic-forecasts/`.

2.2 Non-state conflict (ns) and one-sided violence (os)

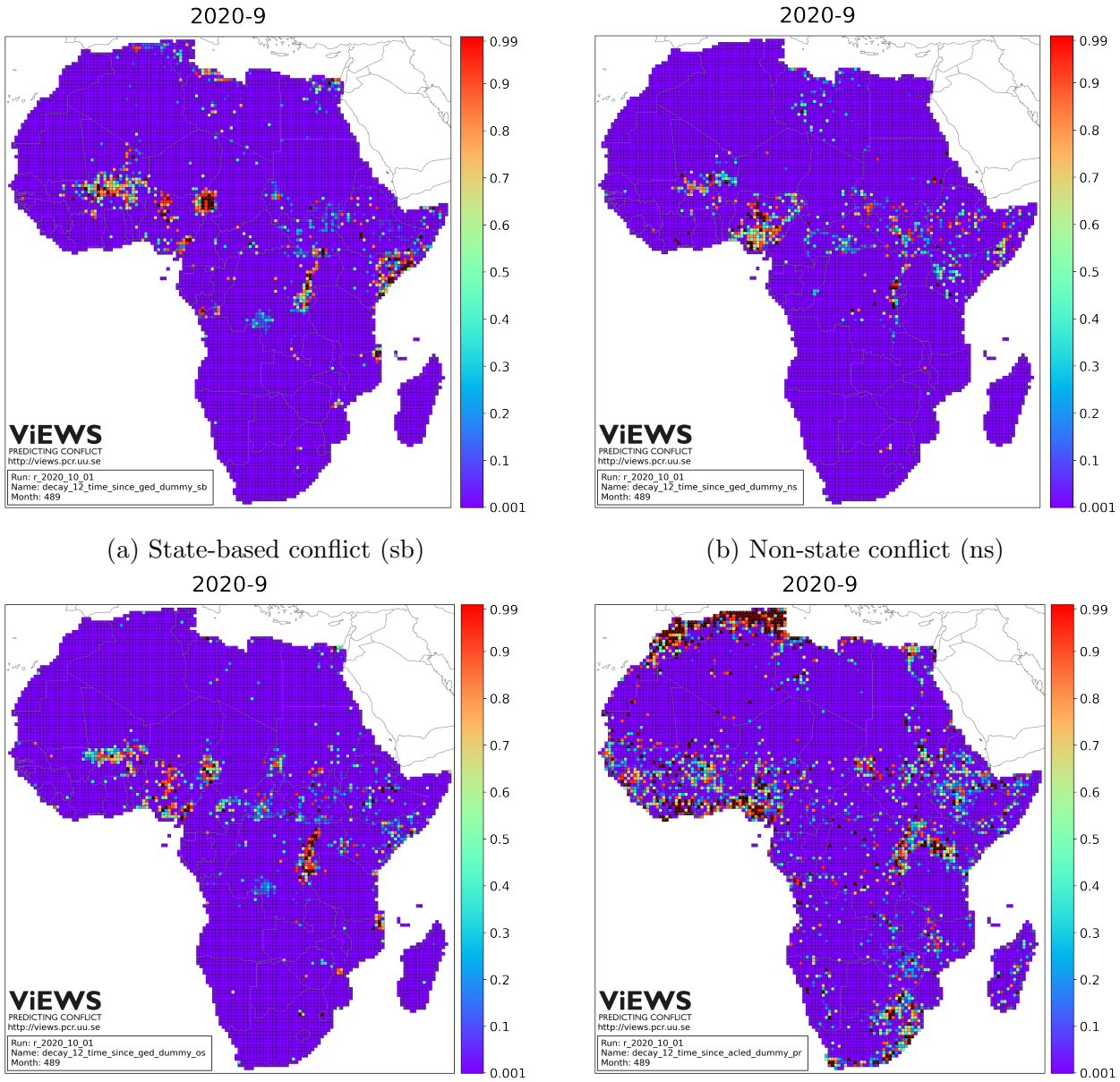
The conflict clusters for non-state conflict are similar to the previously identified regions for state-based violence. With one exception, figure 6b furthermore shows that no significant changes in the risk assessment are expected. The exception in question is the highly localised risk increases in the Kivu provinces of DR Congo, well in line with the reporting of a number of clashes between different armed groups in the region.

With regards to one-sided violence, Figure 6c displays an increased risk in the Anglophone region of Cameroon, as well as in the Kivu provinces of DR Congo. A significant decrease since last month is also reported for one specific grid cell in Sudan, were Nuba people were reportedly executed by members of the Rapid Support Forces (RSF) between May and July, but no conflict events were reported in August 2020.

3 History of UCDP organized violence

Figure 7 presents the the recent history of violence in each PRIO-GRID cell. Red cells experienced violence in August 2020, and purple ones have not seen armed conflict in many years.

Figures 7a, 7b, 7c show state-based, non-state, and one-sided violence respectively from the UCDP. Figure 7d shows data on protests from ACLED (`https://www.acleddata.com`).



(a) State-based conflict (sb)

(b) Non-state conflict (ns)

(c) One-sided violence (os)

(d) Protests (pr)

Figure 7: Decay function maps of observed conflict up until August 2020