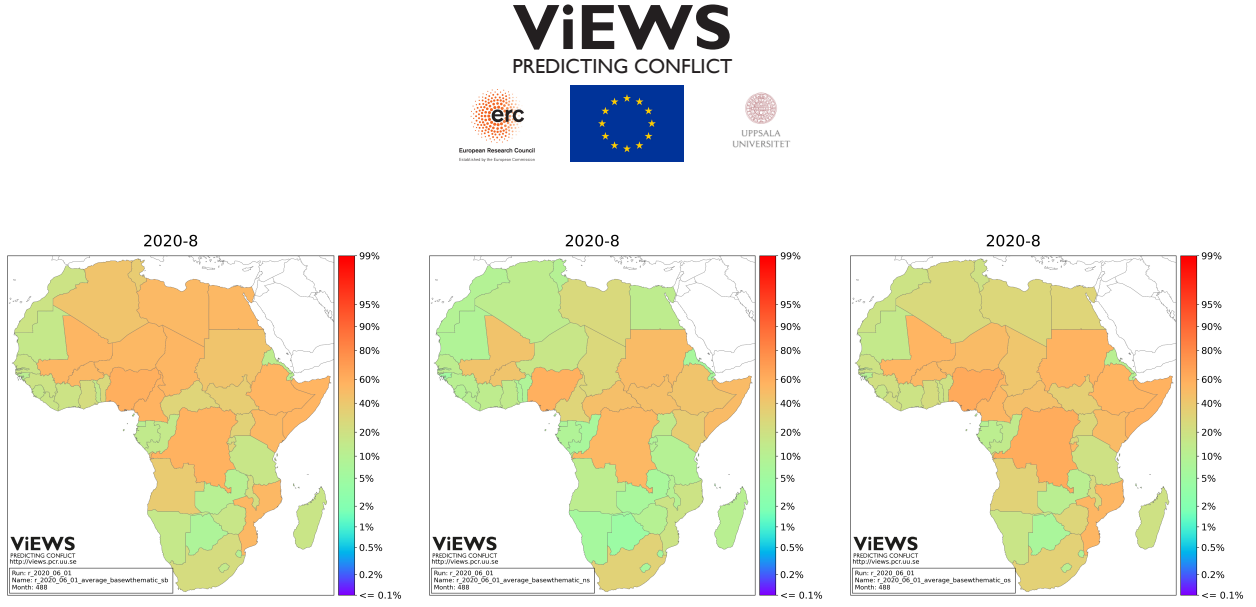


# ViEWS monthly forecasts, June 2020\*

Summary of forecasts

Friday 3<sup>rd</sup> July, 2020



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

Figure 1: Ensemble forecasts for August 2020

This report presents ViEWS forecasts at  $s = 3$  for August 2020 as of 1 June 2020, which are based on data that are updated up to and including April 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, Frederick Hoyles, Remco Jansen, and Angelica Lindqvist-McGowan. 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.<sup>1</sup> Figure 1 shows our country-level forecasts (*cm*) for August 2020, Figure 5 the corresponding forecasts at detailed geographic locations (PRIO-GRID level, or *pgm*)<sup>2</sup>, and Figure 7 shows the most recent observed conflict events. Similar reports for previous months are available at <http://www.pcr.uu.se/research/views/>, along with other information on the ViEWS project.

## 1 Country-month forecasts for August 2020

The plots in Figure 1 show the ViEWS country-level forecasts for the immediate future – what will happen in August 2020 according to our forecasts? We show the probability of at least one event leading to one or more fatalities in each country in August 2020, based on data up to and including April 2020. Countries with a red color have been assigned with a forecast probability close to 1, whereas purple countries have been assigned with 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.

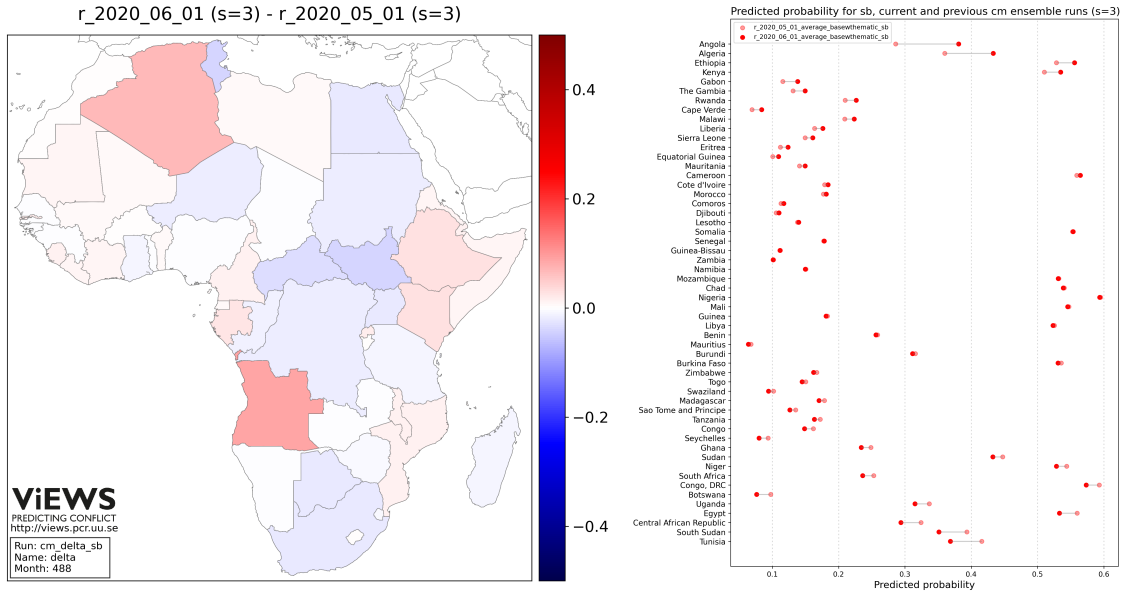


Figure 2: Change in predicted state-based conflict (sb) at  $s = 3$

Our forecasts for August 2020 are mostly similar to last month's forecasts. The June 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.

<sup>1</sup><https://journals.sagepub.com/doi/10.1177/0022343319823860>.

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

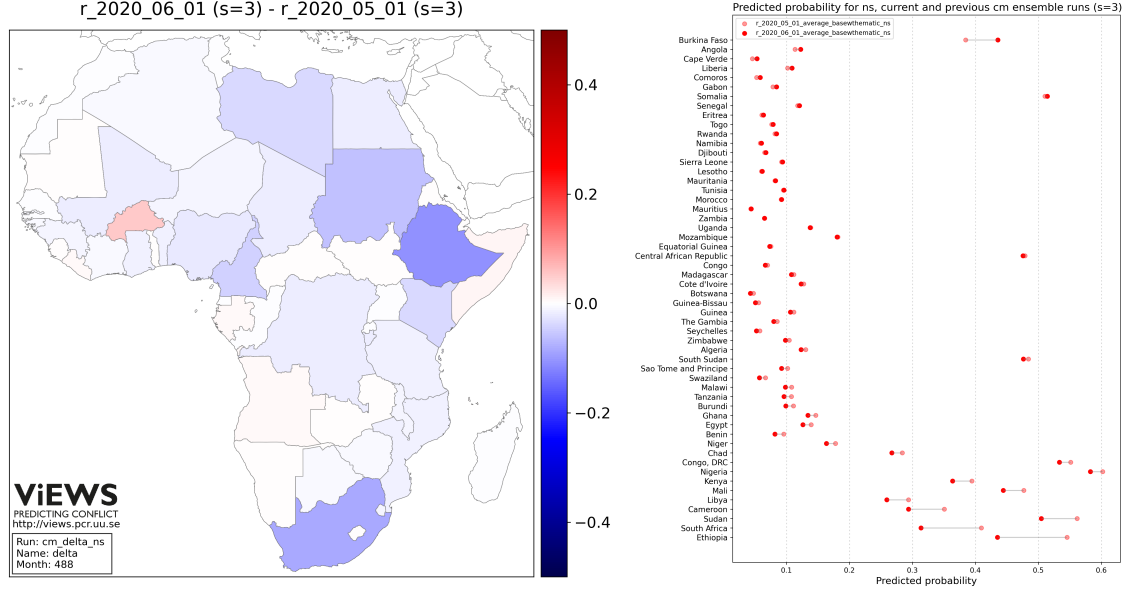


Figure 3: Change in predicted non-state conflict (ns) at  $s = 3$

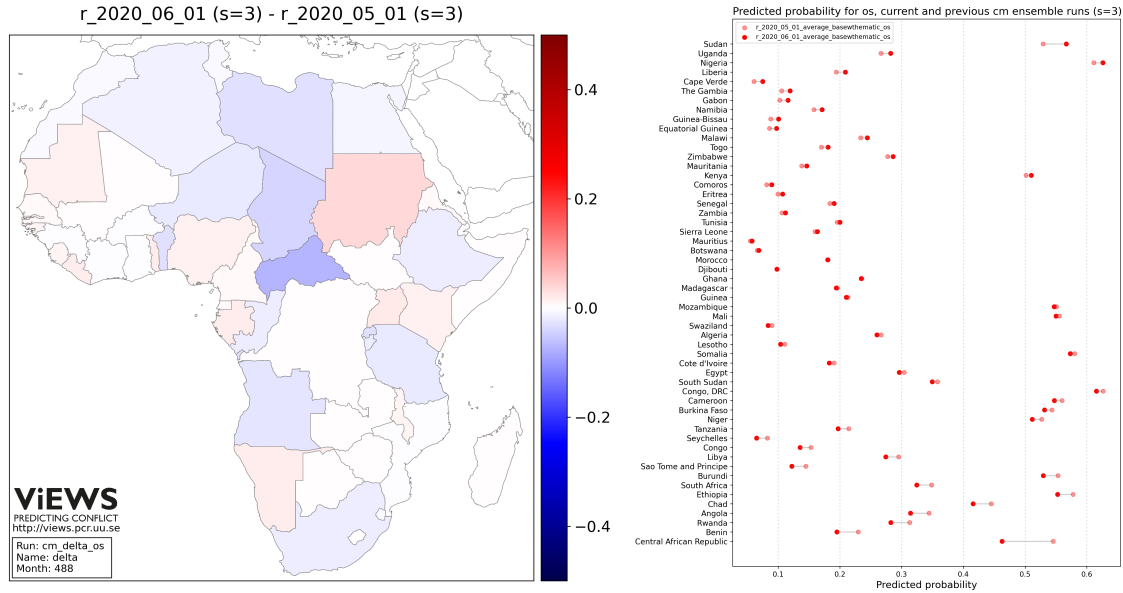


Figure 4: Change in predicted one-sided violence (os) at  $s = 3$

## 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 Burkina Faso, Cameroon, Chad, DRC, Egypt, Ethiopia, Kenya, Libya, Mali, Mozambique, Niger, Nigeria and Somalia, the risk of at least one battle-related death in state-based violence remains high and over 50%, as illustrated by Figure 1a.

Compared to the May forecasts at  $s = 3$ , Figure 2 shows that two countries see a particular

elevation of the risk of state-based violence in the June run, namely Angola and Algeria. For Angola, the risk at  $s = 3$  has increased by approximately 10 percentage points since last month’s forecasts (to a predicted probability of any fatalities just shy of 40%). This is an interesting case as neither the UCDP Candidate Event Dataset, nor ACLED, had recorded any fatalities from political violence in March or April 2020. One event without reported fatalities had nevertheless been recorded by the UCDP, which gave rise to the red grid cell in the decay map for state-based violence (Figure 7a). This is a weakness in the current forecasting pipeline that has been revised in the new forecasting ensemble, which is estimated to launch later this summer. The new ensemble will also come with a set of new features that allows for intuitive visual representation of the relative contribution of each model that informs the ViEWS forecasts. A preview of the new ensemble and its features can be found in the May newsletter (<https://pcr.uu.se/research/views/news/newsletter/>).

The second-largest risk increase is found in Algeria, where a total of three fatalities were recorded by the UCDP in April 2020 as a result of the ongoing conflict between the Government of Algeria and AQIM. The location of these fatalities are indicated by the two red grid cells in the decay map for state-based violence, found in Figure 7a. The predicted probability of any fatalities from state-based violence nevertheless remains below 50% also for Algeria.

Some notable decreases seen from Figure 2 ought to be highlighted. Tunisia and South Sudan both see a decrease in the predicted probability of state-based violence by approximately five percentage points, followed by the Central African Republic and Egypt (although the predicted risk for Egypt still surpasses 50%). In Tunisia, the decrease come as a result of the UCDP only having recorded a single conflict event in the country for March and April, as of 1 June.<sup>3</sup> In South Sudan, in turn, there have not been any recorded fatalities in state-based violence for a number of months in the UCDP Candidate Event Dataset. This can be seen from Figure 7a. Consequently, we see a predicted probability of state-based violence below 40% in both Tunisia and South Sudan.

## 1.2 Non-state conflict (ns)

For non-state violence, the risk profiles look quite optimistic with an almost exclusive decline in the predicted probability of fatalities across the continent. Only one country sees a somewhat pronounced increased risk in the June run at  $s = 3$ : Burkina Faso. The reason lies in the violent clashes that broke out in the Soum province in April between the Islamic State in the Sahara and JNIM on the one hand, and between Islamic State West Africa Province

---

<sup>3</sup>Please note that a second event has since been recorded in Mount Salloum.

(ISWAP) and JNIM on the other hand. The clashes resulted in at least 100 fatalities.

Two significant risk declines are also observed: Ethiopia and South Africa. Both countries display a decrease by ten or more percentage points since the May forecasts. The former saw 28 reported fatalities in March and only 8 in April (according to the UCDP Candidate Event Dataset), whereas the latter lacked any at all reported fatalities in this violence category in April 2020.

Four countries remain at a high risk of non-state violence (exceeding 50%) at  $s = 3$ , despite observed decreases between the June and May runs of our forecasting system. In declining order of risk, this is Nigeria (shy of 60% risk), DRC, Somalia, and Sudan (at 50%).

### 1.3 One-sided violence (os)

Also for one-sided violence, the general trend is a declining conflict risk at  $s = 3$  in the June run of the system. Only one pronounced increase is detected: Sudan, with a spike of approximately five percentage points. The decay map for one-sided violence (Figure 7c) shows that the country had not seen violence in this category for a number of months, until a student at the University of Nyala was shot dead by gunmen in Central Darfur state on 6 April 2020 during an armed robbery of a commercial vehicle. According to a witness, the gunmen were dressed in military uniforms.<sup>4</sup>

Similar to the May system run, both Nigeria and DRC remain at a higher than 60% risk of one-sided violence at  $s = 3$ . Remaining within the 50-60% bracket, we also find Sudan, Kenya, Mozambique, Mali, Somalia, Cameroon, Burkina Faso, Niger, Burundi, and Ethiopia (see Figure 4).

The biggest decrease, at last, is found in the Central African Republic. Lacking any reported fatalities in April 2020 (according to the UCDP), the country sees a risk decline of nearly 10 percentage points in the June run of the forecasting system.

## 2 PRIO-GRID-month forecasts for August 2020

Figure 5 presents forecasts at fine-grained sub-national geographical locations for August 2020, for each of the three outcomes. The color mapping is the same as for the country-month forecasts.

---

<sup>4</sup>Another incident occurred on 21 April, during which a villager of Tamur Jamil was shot dead in an attack by gunmen. This attack was however not captured by the forecasting system this month, as the details were updated by the UCDP after 1 June (the date of the forecasting system run).

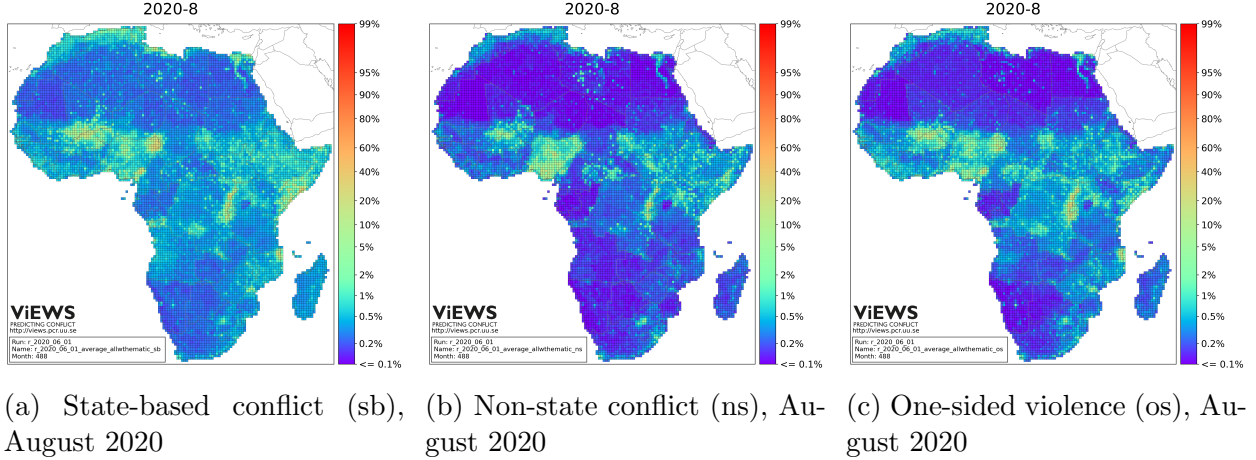


Figure 5: Ensemble forecasts for August 2020

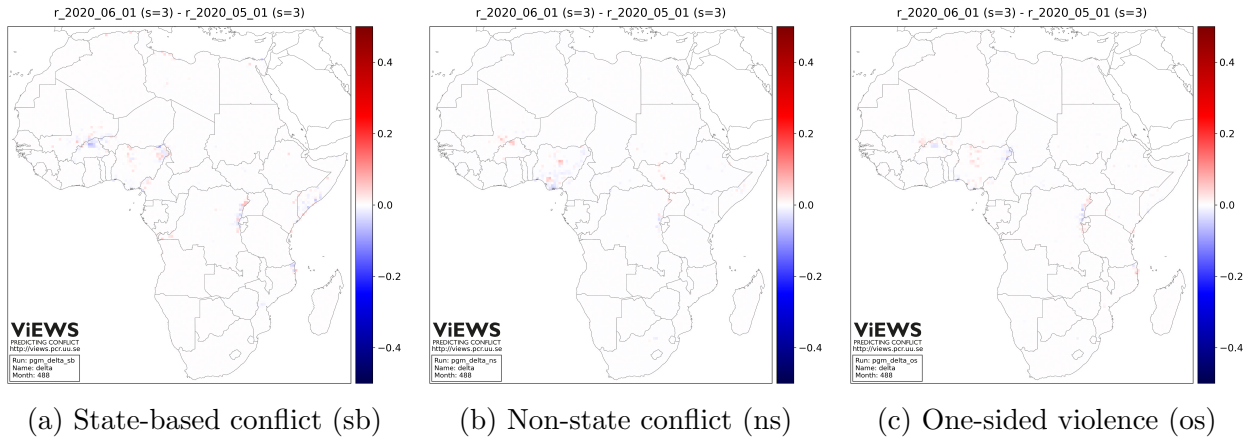


Figure 6: Change in *pgm* predictions at  $s = 3$  compared to last month

## 2.1 State-based conflict (sb)

The densest risk clusters at *pgm* level for state-based conflict at  $s = 3$  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 border areas between central Mali, northern Burkina Faso, and south-western Niger.

Compared to our May forecasts at  $s = 3$  (see figure 6a), the most pronounced changes in the risk assessment at the PRIO-GRID level also mostly align with the high-risk clusters.

We continue to see both local increases and decreases across central Mali and northern Burkina Faso, illustrating the local dynamics of the conflicts (Figure 6a). The changes however predominantly concern increases in Mali, whereas decreases prevail across the Nord, Centre-Nord and Sahel regions of Burkina Faso. The decreases in Burkina Faso can be

understood by an analysis of the conflict data recorded by the UCDP over the past number of months, particularly the number of conflict events (incidents of violence). In April 2020, 6 fatalities were reported in the Nord region (two conflict events between the Government of Burkina Faso and JNIM), and 38 in the Sahel region (one conflict event resulting in seven fatalities in violence between the government and JNIM, and three conflict events resulting in 31 fatalities in violence between the government and IS). Neither fatalities nor conflict events were reported in Centre-Nord. In March, however, 9 fatalities were reported in Nord (three conflict events), 7 in Sahel (three conflict events), and 12 in Centre-Nord (three conflict events). Thus, the forecasting system has detected one less conflict event in April (as compared to March) in the Nord region, one added conflict event in Sahel, and three less events in Centre-Nord. The most pronounced decreases are also found in the Nord and Centre-Nord regions (see the change map in Figure 6a), whereas the decrease in Sahel is quite faint (seen by the color intensity in the figure above). The reason that the change map continues to display a decrease in Sahel despite the additional conflict event is likely a result of the steep decrease in conflict events as compared to February, when no less than 9 separate conflict events had been recorded by the UCDP Candidate Events Dataset.

In the Tillaberi region of Niger, we see an increased risk in the north-east following clashes between the government and IS that resulted in 67 fatalities in early April (4 Nigerien soldiers and 63 ISWAP members). With some time lapsed since the violence in Ayorou town of Tillaberi (February and March) and the Diffa region (March) without any new clashes, we however now see blue grid cells – indicating decreased risk – in both of these areas and regions.

We continue to see a geographic differentiation in the risk assessment for north-eastern Nigeria, whereas the north-western regions (and one grid cell in Nassarawa) display an increased risk of state-based violence in August 2020. With the exception of the Nassarawa incident, in which four suspected Boko Haram members were killed by the Nigerian military, all reported fatalities in the north-west involved clashes between the government and armed bandits.

In Cameroon, we see spikes in the conflict risks in both the Anglophone regions and in the Far North due to continued and renewed violence, respectively. DRC, Somalia, and Mozambique however remain largely the same with geographic differentiations in conflict risk, illustrating the local conflict dynamics well.

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

The forecasts for non-state and one-sided violence largely depend on the same factors as the forecasts for state-based violence, albeit with somewhat different implications.

Seen from Figure 5b, Nigeria and the Ituri and Kivu provinces of DRC continue to be hotbeds for non-state conflict, along with the larger risk cluster that remains dispersed over the Horn of Africa. Likewise, the steady risk clusters over Sinai and the Nile delta in Egypt, as well as the protest prone regions in Morocco, Algeria, and Tunisia, remain intact.

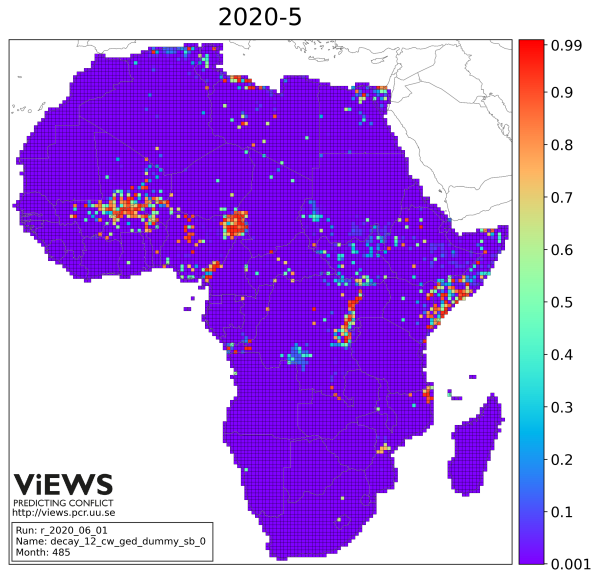
The most prominent changes in the predicted probability of non-state violence as compared to the May forecasts are mostly confined to Mali, Burkina Faso, and Nigeria, along with a small number of grid cells indicating an increased risk in central and southern South Sudan (see 6b). In Warap, Western Bahr-al-Ghazal, and Lakes state of South Sudan, the risk increases follow communal and inter-communal violence that in April 2020 killed 17, 3, and 21, respectively. In Central Equatoria State, in turn, the new risk clusters were likely caused by SPLM/A-IO attacks on NAS positions in three different locations on 26 April.

Also for one-sided violence (Figure 5c), the forecasts look largely the same as last month. Mali, Burkina Faso, north-eastern Nigeria, the Anglophone regions of Cameroon, the Kivu provinces of the Democratic Republic of Congo, as well northern-most Mozambique all continue to feature the strongest risk clusters. Compared to the May forecasts at  $s = 3$  (Figure 6c), most visible is the elevated risk in central Mali, the risk decline in northern Burkina Faso, the dispersed increase spanning Zamfara, Katsina, Kaduna, and Niger states in Nigeria, and the varying changes in the Ituri and Kivu provinces of DRC – all of which largely follow the same patterns that are seen in the change map for state-based violence (Figure 6a). These similarities also illustrate the strong connection between the three forms of violence that the UCDP records.

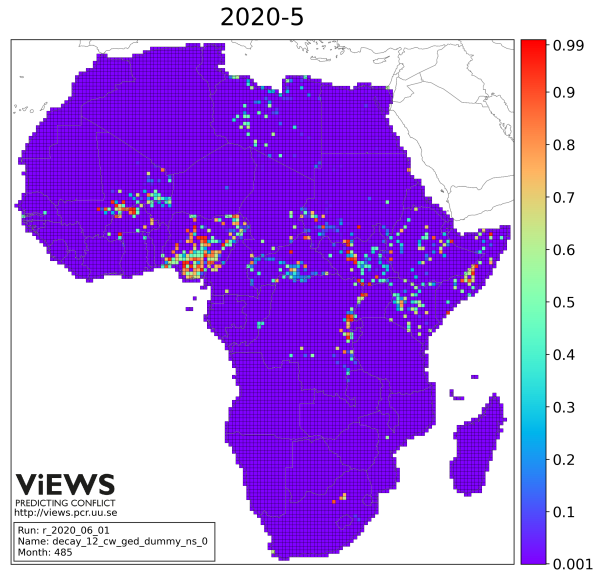
### 3 History of UCDP organized violence

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

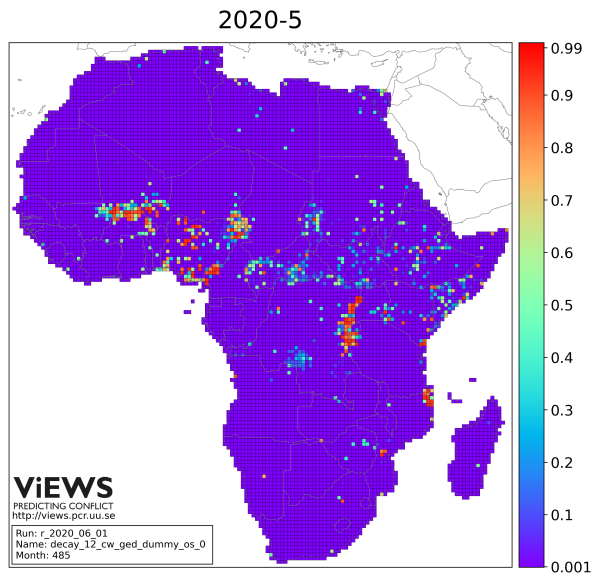
Figures 7a, 7b, 7c show state-based, non-state, and one-sided violence respectively from the UCDP. Figure 7d shows data on protests from ACLED (<https://www.acleddata.com>).



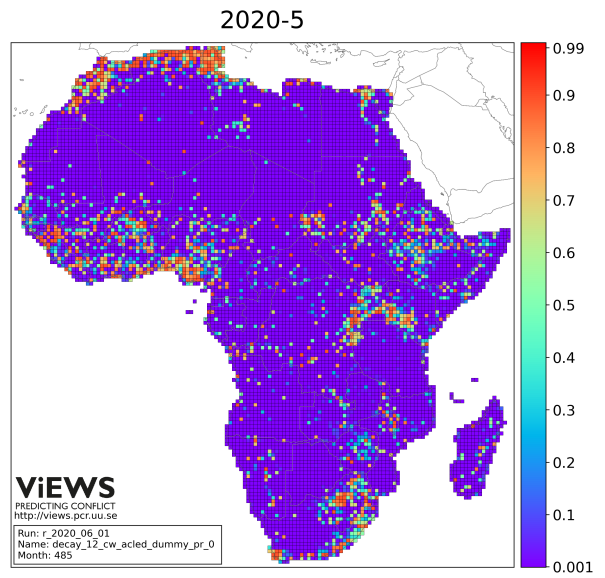
(a) State-based conflict (sb)



(b) Non-state conflict (ns)



(c) One-sided violence (os)



(d) Protests (pr)

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