The Risk Monitor: February 2021

Africa-wide forecasts from the Violence Early Warning System (ViEWS)

Forecasts as of 1 December 2020, based on data up until and including October 2020*

By: The ViEWS Team

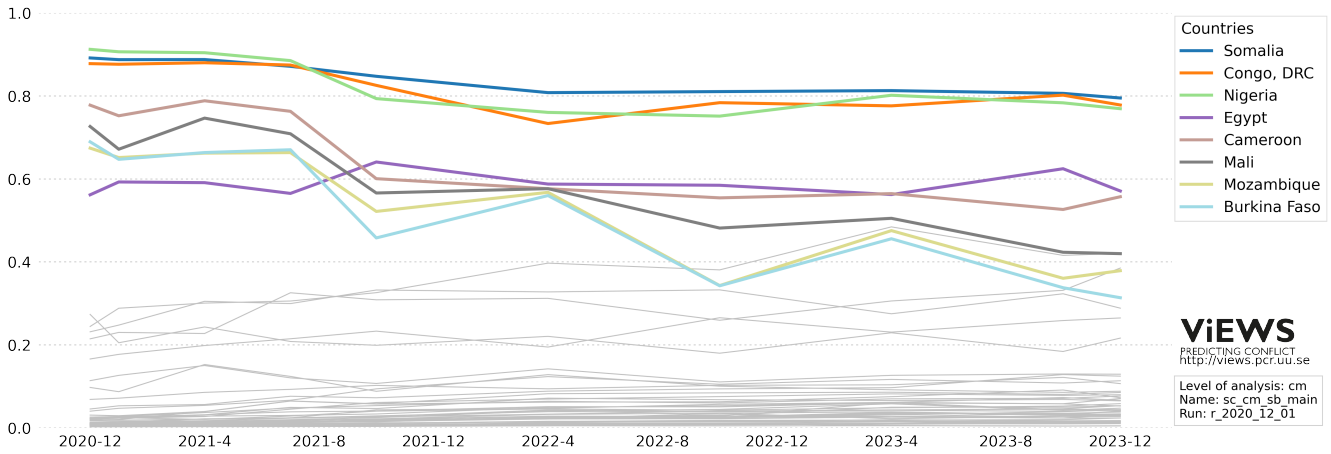


Figure 1. Country-level forecasts for the risk of at least 25 fatalities from intentional, politically motivated and organised state-based violence in December 2020–November 2023. Graphs are colored for countries facing a short-term risk of 50% (0.5) or higher. The corresponding plots for non-state and one-sided violence are shown in Figure 4.

EXECUTIVE SUMMARY

As of December 2020, ViEWS[1] continues to generate high-risk alerts for countries with a recent history of fatal political violence. In February 2021, 25 or more fatalities from either type of violence[2] is nearly guaranteed in DRC and Nigeria, and highly likely in Somalia, Mali, Burkina Faso, and Cameroon (Figure 2a).

In DRC, Nigeria and Somalia, the monthly fatality count from state-based violence alone is expected to reach or exceed 25 no less than nine to eleven times per year throughout Dec 2020—Nov 2023.[3]

With three exceptions, the overall risks of state-based violence have nevertheless remained stable or decreased since last month, illustrated by the change map in Figure 3d.

Changes to the country-level risk projections for conflicts set between two or more armed actors (neither of which is a government of a state) are more varied—elevated risks are detected in Nigeria, Benin and Ethiopia this month, whilst the most prominent change is a significantly reduced risk in Sudan (Figure 3e).

For one-sided violence, heightened risks are detected

*The full suite of data sources and descriptions of the ViEWS methodology can be found at `http://views.pcr.uu.se`, further detailed in Hegre et al. (2019) and Hegre et al. (2020a). The full list of models are carefully detailed in the corresponding online appendices to the 2020 update article on ViEWS in *Journal of Peace Research*, available at `http://files.webb.uu.se/uploader/1576/AppendixB.pdf` and `http://files.webb.uu.se/uploader/1576/AppendixC.pdf`. Brief definitions, notations and other useful information can in turn be found on page 9 of this report.

[1]To learn more about the data sources and modeling system that inform the ViEWS forecasts, please see the forthcoming *Spotlight Series*, visit our dedicated website (`http://views.pcr.uu.se`), or browse our list of publications (`https://pcr.uu.se/research/views/publications/`). Further questions are kindly directed to `views@pcr.uu.se`.

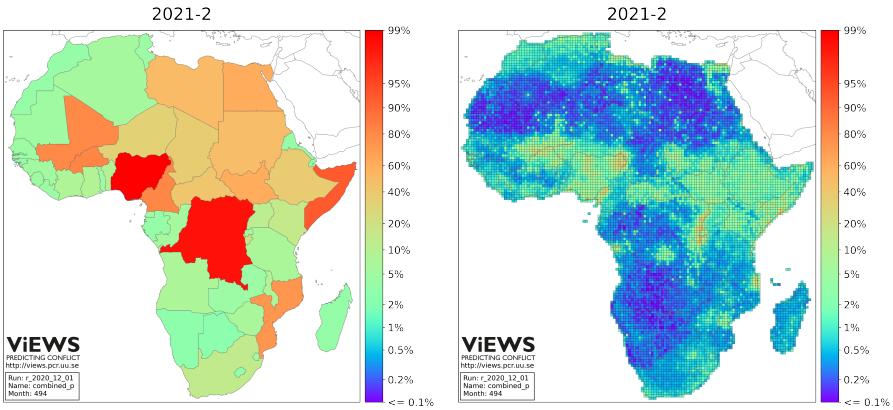
[2]Definitions of the three UCDP types of violence are found on page 9.

[3]The predicted probability of 25+ deaths per month over this period lies at approximately 80–90%. We thus expect the threshold to be crossed in 80–90% of the months during Dec 2020—Nov 2023.

Table I. Short-term watchlists[a]

Top 5 high-risk locations in February 2021		Most notable risk elevations since last month	
Nationally	*Locally*	*Nationally*	*Locally*
Nigeria	Borno state (NGA)	Chad∗	Borno state (NGA)
DRC	The Ituri and Kivu provinces (COD)	Ethiopia∗	Katsina state (NGA)∗
Somalia	Anglophone Cameroon	Egypt∗	Ituri and the Kivu provinces (COD)
Burkina Faso	Central Mali/north-eastern Burkina Faso	Burkina Faso∗	Cabo Delgado (MOZ)
Cameroon∗	Cabo Delgado (MOZ)	Benin∗	Northwest region (CMR)∗

[a]Based on Figure 2. New entries this month are marked by an asterisk (∗).

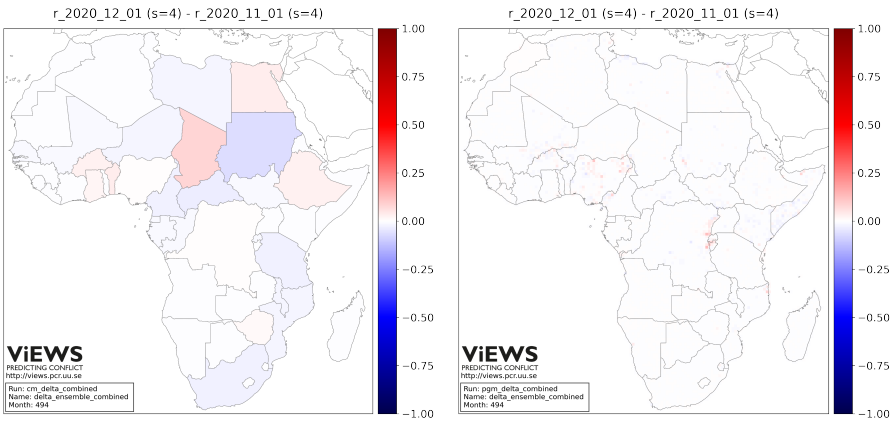


(a) Forecast, country level

(b) Forecast, local level

Combined forecasts for February 2021.

Risks of at least 1 (local level) or 25 (country level) fatalities from any type of political violence. Risks are close to 100% in red cells/countries, equal to a coin toss in orange cells/countries, and low to non-existent in purple cells/countries (less than 0.1%).



(c) Changes, country level

(d) Changes, local level

Changes to the combined forecasts since last month.

Where recent input data indicate that the risk of at least 1 (local level) or 25 (country level) fatalities has increased since last month, locations have been colored red. Where risks have decreased, locations have been colored blue. The severity of each risk alteration is illustrated by the color saturation; white indicating no change.

Figure 2. Combined forecasts for February 2021, and changes to the combined forecasts as compared to last month.

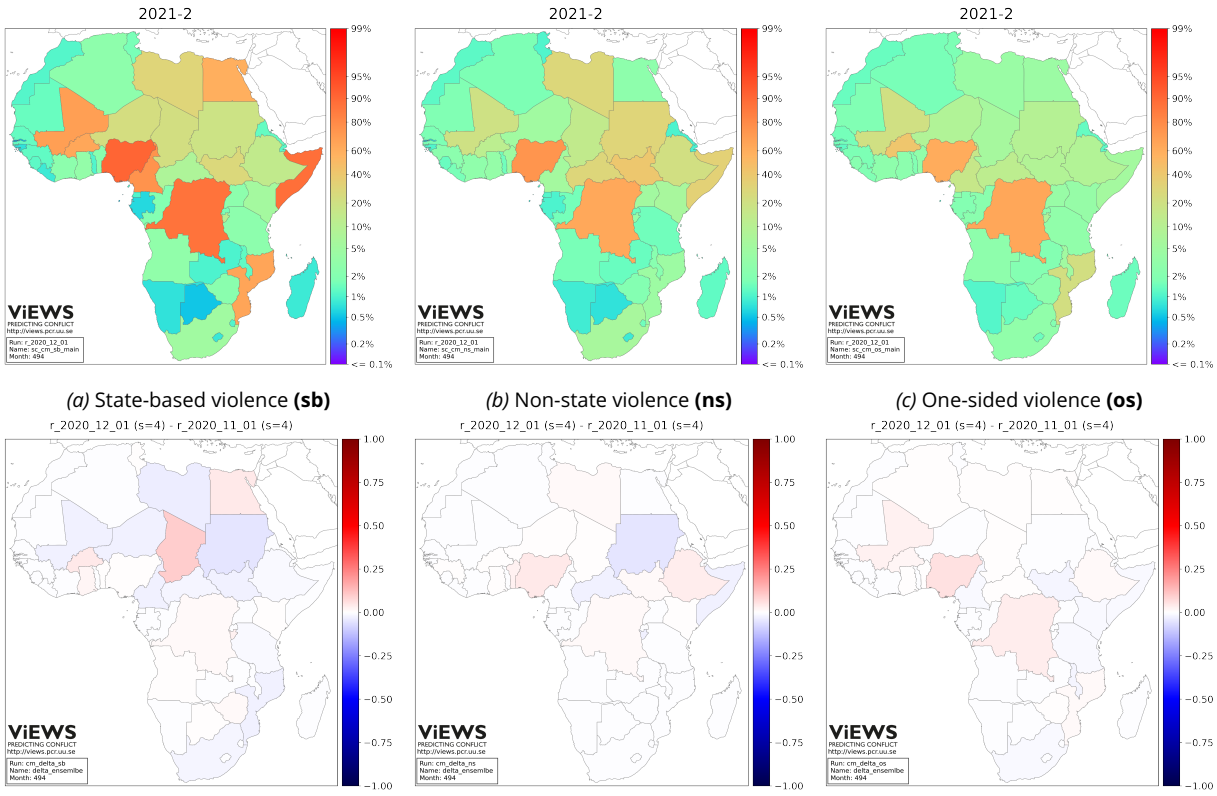
in a number of countries, most notably in Nigeria and DRC. The latter two continue to face the greatest risks of both non-state and one-sided violence on the continent, not only in February 2021 (Figure 3e–3f) but throughout the next three years (Figure 4).

At the local level, the overall high-risk clusters span Borno state in Nigeria, the Anglophone region of Cameroon, the Ituri and Kivu provinces of DRC, the Cabo Delgado province of Mozambique, as well as the broader area of central Mali and northern/north-eastern Burkina Faso, seen from the combined forecasts in Figure 2b. The risk of at least one fatality from any UCDP type of political violence—and per approximately 55x55 km location—reaches or exceeds about 60% in each of these regions in February 2021.

The local forecasts for each type of violence, as well as the changes thereof since last month, are illustrated by Figure 6. Most pronounced are the steep risk elevations for state-based and one-sided violence across Nigeria and the Kivu provinces of DRC.

COUNTRY-LEVEL FORECASTS

Figures 3a–3c display ViEWS forecasts for February 2021. The plots take the form of a risk assessment of the likelihood (0-100%) that at least 25 lives are lost to organised violence that is fuelled by political motivations in each country. They capture the individual risks from each of three different types of political violence—as defined and



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

(d) State-based violence **(sb)** *(e)* Non-state violence **(ns)** *(f)* One-sided violence **(os)**

Figure 3. Country-level forecasts for the risk of at least 25 fatalities from intentional, politically motivated and organised political violence in February 2021 (top row[a]), and changes to the risk assessments since last month (bottom row[b]).

[a]Red color indicates a risk close to 100%, orange color a risk equal to a coin toss, and purple color a low to non-existent risk (less than 0.1%)

[b]Where recent input data indicate that the risk of at least 25 fatalities from any of the three respective forms of violence has increased as compared to last month, countries have been colored red. Where risks appear to be decreasing, countries have been colored blue. The severity of each risk alteration is illustrated by the color saturation; white cells indicating no change.

recorded by the Uppsala Conflict Data Program (UCDP)—namely state-based, non-state, and one-sided violence.[4] Where risks are high and up towards 100% certain, the applicable countries are filled with a bright red color. Orange colors represent risks equal to a coin toss, whereas the lowest risks are illustrated by blue ($< 1\%$) or purple ($< 0.1\%$) shades.

Figures 3d–3f, in turn, illustrate how these forecasts have changed since last month. Since there have not been any recent modifications to the modeling system, the changes visible from these maps are rather indicative of new input data. The maps in the figure illustrate where such data have led the forecasting system to revise its risk assessment. Where the system now expects that the risks of at least 25 fatalities in a given country and month have increased since last month, a red fill color can be observed. Where risks have decreased, countries have been colored blue. The severity of the risk alteration is illustrated by the color saturation; white cells indicating no change.

The forecasting system consists of a suite of forecasting models, each of which has been trained to capture the effects of a particular theme of conflict-inducing factors. At the national level, the system gives particular weight to structural, slow-moving features and patterns that often characterize countries over a longer period of time, such as the stability of political institutions, democracy indices, and socio-economic factors. It also relies heavily on a number of conflict and protest history models that capture not only the long-term trends in each country and region, but also the most recent developments in each country. Changes to the ViEWS projections are most often informed by the latter, more specifically by publicly available conflict and protest data from the Uppsala

[4]See page 9 for the full definitions.

[5]Therése Pettersson, Stina Högbladh, and Magnus Öberg (2019). "Organized violence, 1989–2018 and peace agreements". In: *Journal of Peace Research* 56.4, pp. 589–603. doi: 10.1177/0022343319856046. url: https://doi.org/10.1177/0022343319856046; Ralph Sundberg and Erik Melander (2013). "Introducing the UCDP Georeferenced Event Dataset". In: *Journal of Peace Research* 50.4, pp. 523–532. doi: 10.1177/0022343313484347; Håvard Hegre et al. (2020b). "Introducing the UCDP Candidate Events Dataset". In: *Research & Politics* 7.3, p. 2053168020935257. doi: 10.1177/2053168020935257. url: https://doi.org/10.1177/2053168020935257, http://ucdp.uu.se

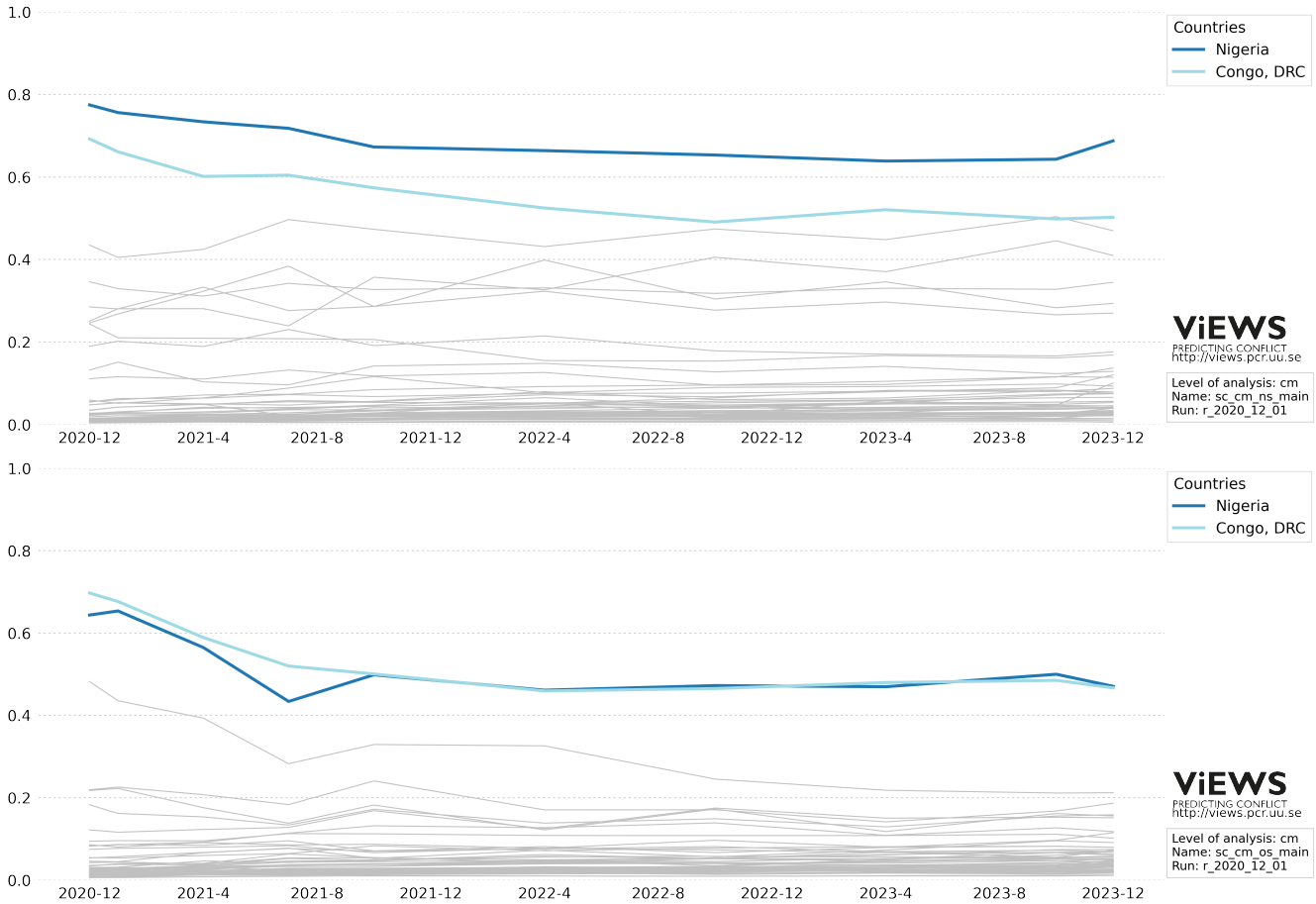


Figure 4. Country-level forecasts for the risk of at least 25 fatalities from intentional, politically motivated and organised non-state (top) or one-sided (bottom) violence in February 2021. Graphs are colored for countries that face a short-term risk of 50% (0.5) or higher. The corresponding plot for state-based violence is shown in figure 1.

Conflict Data Program (UCDP, `http://ucdp.uu.se`)[5] and the Armed Conflict Location and Event Dataset (ACLED, `http://acleddata.com`)[6]). They are consequently the focus of the discussions that follow.

State-based conflict (sb)

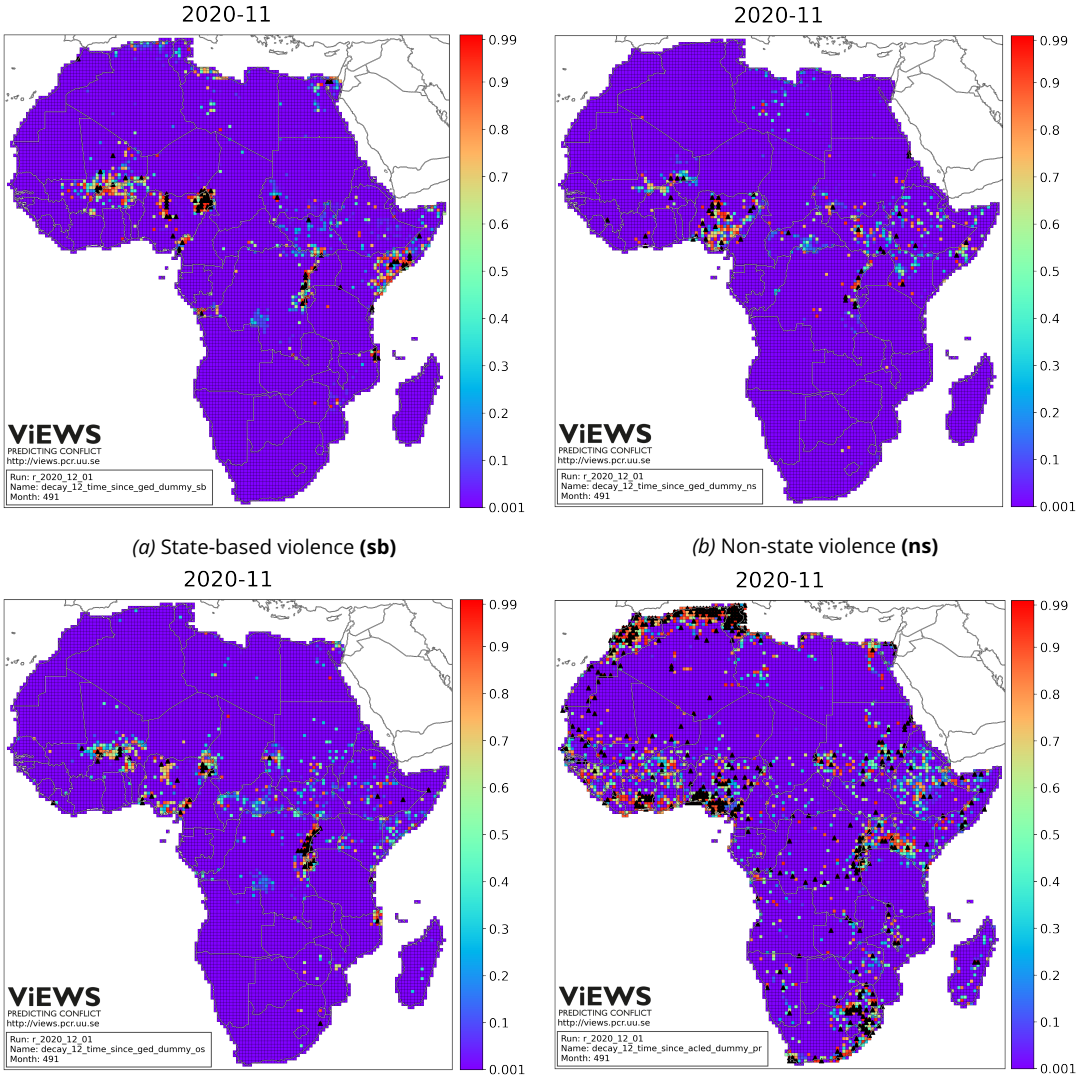
The ViEWS system continues to generate alerts for state-based conflict—involving at least one government of a state—in countries with a recent history of fatal political violence and/or mass protests. In DRC, Nigeria, Somalia, Cameroon, Mali, Mozambique, Burkina Faso and Egypt, the risk of 25 or more fatalities per month exceeds 50% not only in February 2021, but in each of the next six months (see Figure 1).

Risks are particularly high in DRC, Nigeria and Somalia, where the predicted probabilities of 25+ deaths per month reach as high as 80–90% throughout the Dec 2020–Nov 2023 forecasting window. We consequently expect the 25-fatality threshold to be crossed nine to eleven times per year throughout this period.

The forecasts for state-based violence have mostly remained stable or decreased across the continent since last month, seen from the mostly white or blue shades in Figure 3d. Three pronounced exceptions should however be noted. The first is Chad, where a significant escalation is observed as a result of renewed Boko Haram activity in the Lac and Tibesti regions of the country. Coupled with the Chadian response, it took the lives of 37 people in September 2020 and another 16 in October. As a result of the continuous coding process of the UCDP, the records of the September events have however been updated (likely increasing the number of confirmed fatalities) in the UCDP Candidate Events Dataset since last month's predictions were generated. This is likely to be the reason that the system—despite the lessened fatality count in October than in September—now detects a significant escalation.

The second exception is Egypt, where an escalation has been detected from recent developments in the

[6] Clionadh Raleigh et al. (2010). "Introducing ACLED: An Armed Conflict Location and Event Dataset". In: *Journal of Peace Research* 47.5, pp. 651–660. url: `https://doi.org/10.1177/0022343310378914`, `http://acleddata.com`



(a) State-based violence **(sb)** *(b)* Non-state violence **(ns)**

(c) One-sided violence **(os)** *(d)* Protests **(pr)**

Figure 5. Illustrations of the recent history of fatal political violence as well as protests (violent and non-violent), as recorded by the UCDP (`http://ucdp.uu.se`) and ACLED (`http://acleddata.com`), respectively. Red cells observed qualifying incidents in October 2020 (distinguished by a black marker) or September 2020. Purple cells have not experienced such incidents for many years.

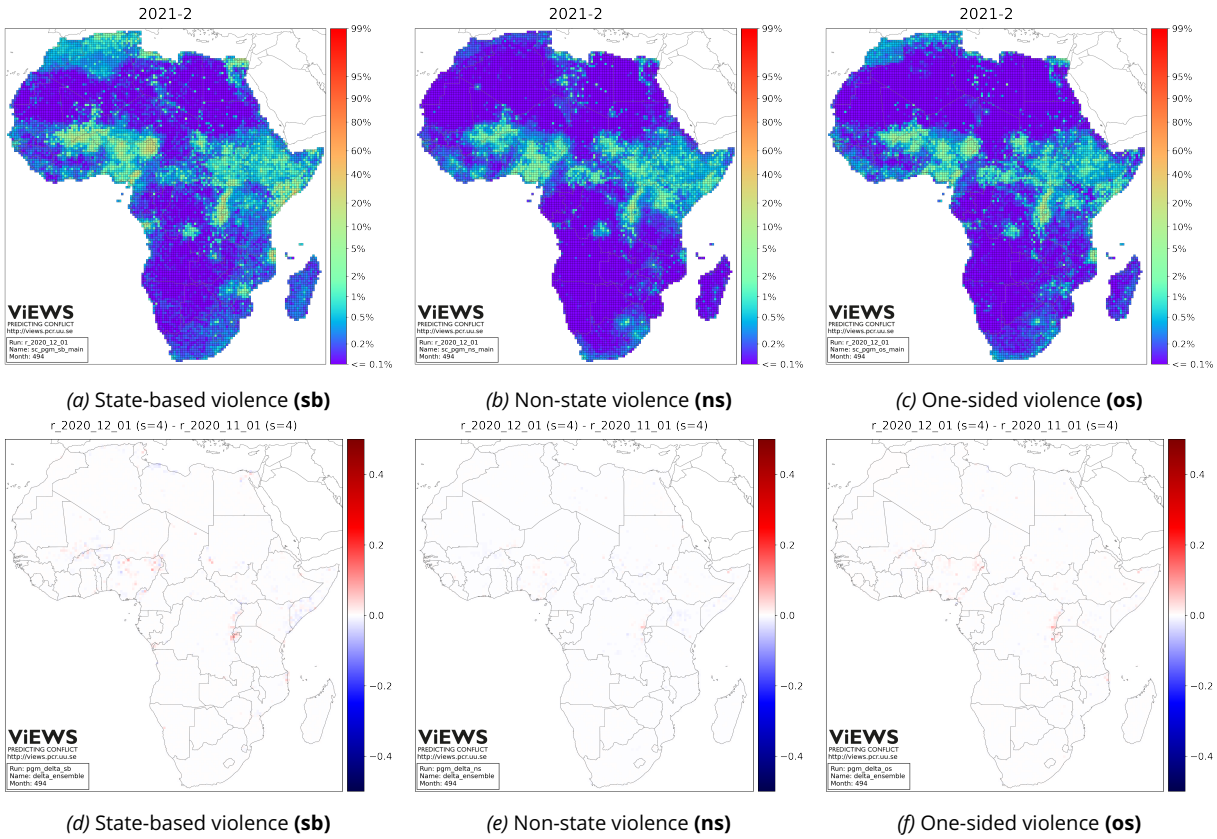
North Sinai province as five villages in the town of Bir al-Abd were occupied by IS-affiliated militants (Province of Sinai) in July 2020. Military forces have since secured the villages, allowing residents to return to their homes, but only to find them laden with improvised explosive devices from the occupation. Subsequent detonations have cost at least 20 civilians lives upon the residents' return this October, including women and children.

The risk increase in Burkina Faso, at last, comes not as a result of fatalities from state-based violence on Burkinabe soil, but as a combination of the multiple conflict events recorded from non-state and one-sided violence in the country in October 2020 and the proximity to the French air strike on the Ansaroul section of JNIM late October in Mali's Mopti region (indicated by the black marker on the border between Burkina Faso and Mali in Figure 5a).

Non-state conflict (ns)

Two countries stand out in both the short and long-term forecasts for non-state violence: Nigeria and DRC. For February 2021, the predicted probability of at least 25 fatalities is as high as 75% in the former and 64% in the latter, illustrating well the communal conflict dynamics in these two countries (Figure 3b). Looking 1–2 years ahead, the probability of 25+ fatalities per month however drops to about 65–70% in Nigeria and 50–60% in DRC (Figure 4).

While Nigeria and DRC face the greatest risks of non-state violence throughout the forecasting window, changes to the forecasts since last month are most pro-



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

(d) State-based violence **(sb)** *(e)* Non-state violence **(ns)** *(f)* One-sided violence **(os)**

Figure 6. Sub-national forecasts for the risk of at least one fatality from intentional, politically motivated and organised political violence in February 2021 (top row[a]), and changes to the risk assessments since last month (bottom row[b]).

[a]The risk is close to 100% in red cells, equal to a coin toss in orange cells, and low to non-existent in purple cells (less than 0.1%)

[b]Where recent input data indicate that the risk of at least one fatality from any of the three respective forms of violence is increasing as compared to last month, cells have been colored red. Where risks appear to be decreasing, cells are blue. The severity of the risk alterations is illustrated by the color saturation; white cells indicating no change.

nounced for Nigeria, Ethiopia and Benin (Figure 3e). In Nigeria, the risk elevation comes as a result of numerous fatal incidents of cultist violence, inter-communal clashes, and multiple attacks on civilians by gunmen and bandits, the latter being the cause of the strong majority of the over 100 fatalities in the month of October 2020.

For Ethiopia, the particular circumstances of the recorded fatalities are less clear. Nation-wide records continue to be updated as more information becomes available, but the lack of verifiable sources of conflict data have unfortunately rendered the nation's forecasts less reliable this month. Figure 5b illustrates this well in displaying three individual locations in which fatal non-state violence is to have occurred in October 2020 as of 1 December 2020 (indicated by black markers). At the point of writing, two weeks later, only one of these conflict events remain in the UCDP Candidate Events Dataset: a clash in the Metekel zone of Benishangul-Gumuz state that on October 11-12 killed at least a dozen ethnic Amhara residents, in what they argue to be one in a series of targeted campaigns against them by ethnic Gumuz militias. This is nevertheless the third in a line of brutal attacks on civilians in the Metekel zone over only two months, the first two of which left more than 150 people dead, according to the UCDP.

While a slight risk elevation can be observed in Benin (Figure 3e), not a single fatality has been recorded in the country by the UCDP since February. The risk projection for February 2021 also remains below 5% and is most likely informed by the heightened risk in neighbouring Nigeria.

Last, some risk reductions can also be observed this month, most notably in Sudan but also in CAR and Somalia .

One-sided violence (os)

With the exception of a handful of countries, the risks of 25 or more fatalities from one-sided violence in February 2021 remain very low—less than 10%—on the strong majority of the continent. Only three countries face a risk higher than 40% in February 2021, namely Nigeria (62%), DRC (65%) and Burkina Faso (42%). The former two are

not only the locations of the most significant risk elevations since last month (Figure 3f, further discussed in the local forecasts), but also the countries that top the long-term watchlist for one-sided violence with a minimum 50% probability of 25 or more fatalities each and every month over the three-year forecasting window (Figure 4).

LOCAL FORECASTS

In Figure 6, we shift our focus to the local level once more, in the top row assessing the likelihood of at least one fatality in February 2021 in square areas measuring approximately 55x55km.[7]

The bottom row, in turn, displays the changes to the forecasts since last month, in the same manner as in Figure 3. Here, the changes however refer to revised risks of at least one fatality in each given locality, in line with the lowered threshold for risk alerts.

Figure 5, at last, displays the recent conflict and protest history across the continent, delimiting each locality by means of the grid structure above. The maps in the figure are informed by UCDP and ACLED data up until and including October 2020. Figures 5a–5c show the time since the last fatal conflict event, whereas Figure 5d show the time since the last protest event (violent or non-violent). Red cells observed such incidents in October 2020 (distinguished by a black marker) or September 2020. Purple cells have not experienced such incidents for many years.

While the national level forecasts do inform the the local forecasts—and vice versa—the forecasting models employed at the two levels of analysis differ from each other. While models informing the national level forecasts, for instance, bring valuable structural and historical factors to the table, models tailored to the sub-national level excel in accentuating effects from local compound risks. This includes—but is not limited to—heightened risks related to local demography, terrain, proximity to natural resources, local precipitation levels, droughts, and conflict history in neighbouring areas. The two sets of forecasts should therefore be seen as separate assessments, which nevertheless are best interpreted in conjunction with each other.

State-based conflict (sb)

At the local level, the high-risk clusters for February 2021 are found in north-eastern Nigeria, the Anglophone region of Cameroon, the Ituri and Kivu provinces of DRC, southern Somalia, Sinai in Egypt, the Cabo Delgado province of Mozambique, around Tripoli in Libya, in the Cabinda exclave of Angola, and in the extended border areas between central Mali, northern/north-eastern Burkina Faso, and south-western Niger. In each of these regions, the risk of at least one fatality from state-based violence in February 2021 reaches or exceeds about 40–50% in several localities. These local variations are illustrated in Figure 6a. As seen from this map, broader clusters at lower risk also span the Horn of Africa, the protest prone regions of Morocco, Algeria, and Tunisia, as well as a large part of West Africa.

The most pronounced changes to the risk assessment since last month mostly align with the high-risk clusters (Figure 6d). With the exception of Tripoli and southern Somalia—where risks appear to be reducing this month—changes mostly concern elevated risks.

The most significant elevation this month is found along the border to Burundi in DRC's South Kivu province, where Congolese forces after three days of intense fighting forced members of the Burundian rebel group FNL out of their stronghold late October, killing 27 rebels while losing three of their own. The day before, on October 23, the FARDC also attacked the CNRD in Uvira territory, killing four of the militia men.

Individual locations in Nigeria also face a notable risk elevation since last month, as the government continues to grapple with the Islamic State and Boko Haram in Borno state and several fatal bandit attacks took place in Katsina in October 2020 (Figure 6d).

Last, the enclave of Cabinda has generated renewed alerts of elevating risks of state-based violence this month following an alledged attack by Angolan armed forces on suspected FLEC soldiers near the border to Cabinda in Kongo-Central, killing six. The incident remains to be confirmed, but has led the forecasting system to expect heightened tensions in Cabinda over the next few months. On October 7, FLEC-FAC however decreed a ceasefire across the enclave in response to the global appeal by the UN Secretary-General to allow an effective response against the COVID-19 pandemic. No fatalities have been recorded in the region since.

[7] The systematic grid structure formed is known as the PRIO-GRID. It is the most spatially granulated level that the ViEWS system currently produces forecasts for. See page 9 for the full definition.

Non-state conflict (ns)

The risk projections for non-state violence in February 2021 are quite optimistic as compared to the other violence categories. A broad risk cluster forming a belt over the Horn of Africa, CAR, Chad, Nigeria, Niger, Mali, Burkina Faso, and the Kivu provinces of DRC remains intact. The predicted probability of at least one fatality in February 2021 does however not exceed 30–40% in any given 55x55km location on the continent. In most locations, the risk of non-state violence does not even exceed 20% in February 2021, as seen from the color coding in Figure 6b.

From Figure 6e, in turn, we find that the risk assessment for non-state violence remains quite stable as compared to last month. With the exception of a few adjacent locations along the border of North and South Kivu in DRC, and an individual location in Nigeria and Somalia, the changes that can be observed this month are all moderate to none. This is illustrated by the high opacity of the colored cells in Figure 6e.

By comparing the conflict and protest history maps in Figure 5b and 5d with the change map in Figure 6e, we find that the aforementioned locations of elevated risk all suffered from conflict and/or protest events in October 2020, as reported by the UCDP (Figure 5b) and/or ACLED (Figure 5d). The most pronounced elevation, attributed to the cluster of red cells in North Kivu, relate to a number of fatalities in Rutshuru territory, which locals believe to be the result of inter-communal clashes between Hutu and Nande.

One-sided violence (os)

In the one-sided violence category, the regions at highest risk of 25 or more fatalities in February 2021 are the Ituri and Kivu provinces of DRC, Borno state in Nigeria, the Anglophone region of Cameroon, and the Cabo Delgado province of Mozambique. This is also where the majority of the fatalities categorised as one-sided violence occurred in October 2020 (see Figure 5c), and where the changes to the risk projections as compared to last month are most pronounced (Figure 6f).

In DRC, no less than 68 fatal conflict events categorised as one-sided violence were recorded by the UCDP in October 2020. The most fatal one took place in North Kivu, where the NDC-R reportedly massacred 100 people (the majority of which belonged to the Bashi tribe) at the Matungu mining site over the end of October and early November.

In Nigeria, the elevation is informed by a series of attacks on civilians by Islamist extremist groups, criminal gangs, sects, bandits, and Nigerian police and military. Fatalities include the killing by Nigerian security forces of a number of EndSARS protesters on 20-21 October in Lagos and Ondo state. The location of these incidents are seen from the conflict history map in Figure 5c.

In Anglophone Cameroon, reports relate to attacks on civilians by alleged separatist and fatal raids by soldiers, while the incidents in the Far North are a result of continued Boko Haram activity.

In Mozambique's Cabo Delgado, at last, the violence is attributed to continued jihadist activity.

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DATA SOURCES

Conflict and protest data

Uppsala Conflict Data Program (UCDP)
http://ucdp.uu.se

Armed Conflict Location and Event Data (ACLED)
https://acleddata.com

Other input data

Varieties of Democracy (V-Dem)
https://v-dem.net

World Bank World Development Indicators (WDI)
https://datacatalog.worldbank.org/dataset/world-development-indicators

International Crisis Group's Crisis Watch (ICGCW)
https://www.crisisgroup.org/crisiswatch

PRIO-GRID dataset
https://grid.prio.org/#/

REIGN Rulers, Elections, and Irregular Governance dataset (REIGN), https://oefdatascience.github.io/REIGN.github.io/

SPEI Global Drought Monitor (SPEI)
https://spei.csic.es/index.html

Shared Socioeconomic Pathways dataset (SSP)
https://tntcat.iiasa.ac.at/SspDb/dsd?Action=htmlpage&page=welcome

Ethnic Power Relations dataset (EPR)
https://icr.ethz.ch/data/epr/

DEFINITIONS

Forms of violence

The ViEWS forecasts take the form of monthly probabilistic assessments of the risk and likely severity of three forms of organized political violence occurring in a given month, as defined by the Uppsala Conflict Data Program (UCDP):

- **State-based (sb) violence**: the use of armed violence over either government or territory between armed actors, in which at least one is a government of a state;
- **Non-state (ns) violence**: the use of armed force between two organized armed groups, neither of which is a government of a state, and;
- **One-sided (os) violence**: the deliberate use of armed force by the government of a state, or by a formally organized group, against civilians.

Levels of analysis

The results are presented at three levels of analysis using the calendar month as the temporal unit of analysis:

- The country-month (*cm*) level, which follows the country outline determined by CShapes (Weidmann, Kuse, and Gleditsch, 2010), and;
- The PRIO-GRID-month (*pgm*) level, which is outlined by fine-grained geographical locations known as PRIO-GRID-cells, a global quadratic grid structure with cells measuring 0.5 x 0.5 degrees in longitude and latitude, spanning approximately 55 km^2 along the equator (Tollefsen, 2012, https://grid.prio.org/#/).

Model descriptions

The full suite of forecasting models are described in detail in Appendix B and C to our forthcoming article in *Journal of Peace Research*, available at https://pcr.uu.se/research/views/publications/

Steps s ahead

In some figures, you may see a reference to a particular step s. This refers to the internal ViEWS notation for what number of months ahead (1-36) a given forecast is produced. In any given run of the forecasting system, $s = 1$ refers to the first calendar month following the last month of available data. In this report, the last month of available data was October 2020). Forecasts for $s = 1$ would thus effectively have referred to forecasts for last month, $s = 2$ to the 'nowcast' for the month of writing, and $s = 3$ to the forecasts for the following calendar month. The *Risk Monitor* presents the ViEWS forecasts for $s = 4$.

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COLLABORATIONS

ViEWS has an active interaction with other projects, including CLIMSEC, CAVE and CROP at PRIO (`https://prio.org/`), the MISTRA Geopolitics project, and most importantly the Uppsala Conflict Data Program (`https://ucdp.uu.se/`) at Uppsala University.

CODEBASE & PUBLICATIONS

ViEWS' codebase is available at:

`https://github.com/UppsalaConflictDataProgram/OpenViEWS2`

The full list of publications are accessible at:

`https://pcr.uu.se/research/views/publications/`