

The Risk Monitor: April 2021

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

Forecasts as of 1 February 2021, based on data up until and including December 2020*

By: The ViEWS Team

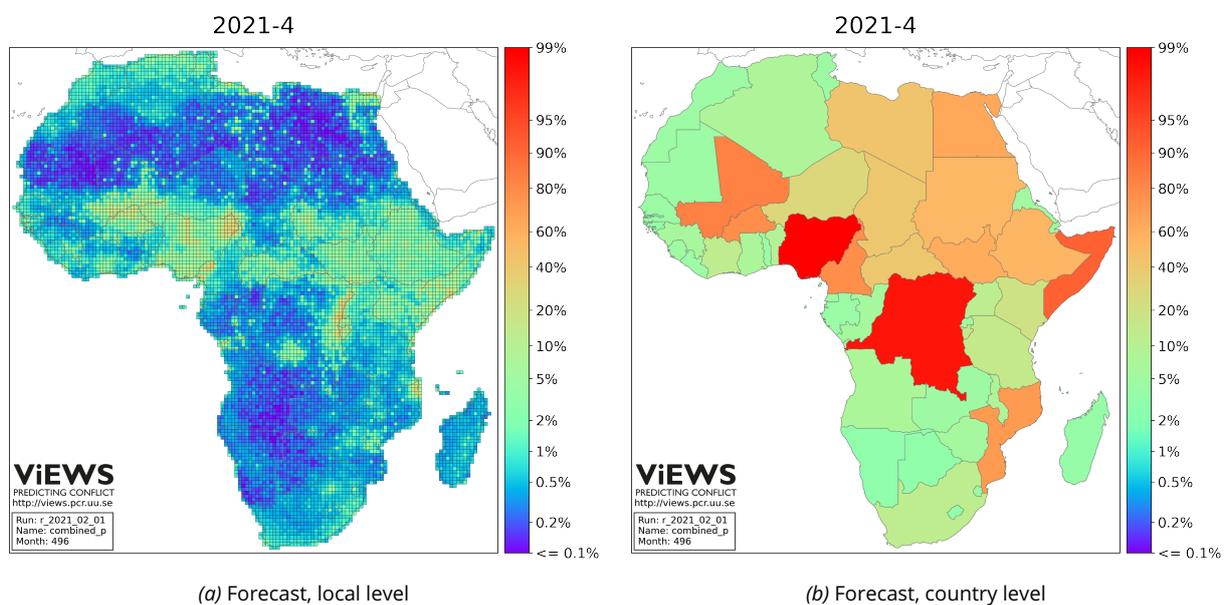


Figure 1. Combined forecasts for fatal political violence in April 2021. Predicted risk (0-100%) that at least one fatality occurs per sub-national location (left), or at least 25 fatalities per country (right)—from either state-based, non-state, or one-sided violence.

EXECUTIVE SUMMARY

As of February 2021, ViEWS continues to generate high-risk alerts for countries with a recent history of fatal political violence.

In April 2021, 25 or more fatalities from at least one type of violence that ViEWS predicts (see page 9) is almost certain in DRC and Nigeria, and highly likely in Somalia, Mali, Cameroon, Burkina Faso, and Mozambique (> 70% risk, see Figure 1b). More specifically, we find Borno and Katsina states in Nigeria, Anglophone Cameroon, the Ituri and Kivu provinces of DRC, the extended border areas be-

tween Mali, Burkina Faso and Niger, as well as the Cabo Delgado province of Mozambique to be particular 'hot-spots' for political violence, while more diffuse risks form a belt across the Sahel region, its southern neighbours, and the Horn of Africa (Figure 1a).

Changes to the country-level forecasts this month (Figure 2b) are most pronounced in Ethiopia, where reports from the November conflict in Tigray and the brutal massacres in Benishangul-Gumuz and Oromia are now surfacing and the death tolls continue to rise—over 700 fatalities from one-sided violence alone have for the period November–December 2020 been recorded in the UCDP

*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. (2021). 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.

Table I. Short-term watchlists^a

Top 5 high-risk locations in April 2021		Most notable risk elevations since last month	
Nationally	Locally	Nationally	Locally
Nigeria	Borno state (NGA)	Ethiopia*	Borno state (NGA)
DRC	The Ituri and Kivu provinces (COD)	Burkina Faso*	Katsina state (NGA)
Somalia	Anglophone Cameroon	Chad*	Anglophone Cameroon
Mali	Central Mali/NE Burkina Faso	Benin*	Tigray (ETH)*
Burkina Faso*	Cabo Delgado (MOZ)	Côte d'Ivoire	Benishangul-Gumuz, Oromia (ETH)*

^aBased on Figure 1–2. New entries this month are marked by an asterisk (*).

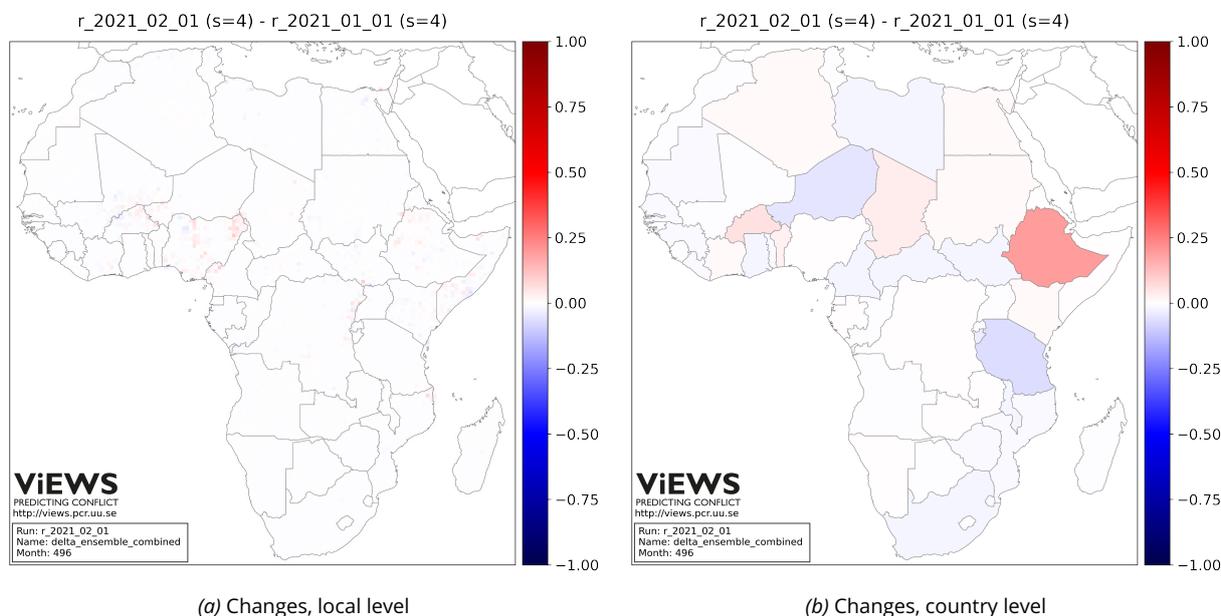


Figure 2. Changes to the combined forecasts since last month by percentage points (pp). Sub-national level (left) and country level (right).

Candidate Events Dataset since last month. Seen from Figure 2b (summarised in Table I), the greatest overall risk elevations are otherwise found in Burkina Faso, Chad, Benin and Côte d'Ivoire, albeit changes to the latter two are very moderate and not further discussed.

At the sub-national level, changes to the forecasts are with the exception of the heightened risks in Ethiopia mostly in line with prior trends (Figure 2a).

Since only a handful of conflict events in the Central African Republic had been confirmed in the UCDP Candidate dataset by the time that the February forecasts were produced, the developments in the country have largely been missed this month. The resurgence of violence should however not go unnoticed. In the lead-up to the presidential and parliamentary elections late December, six armed groups—all signatories to the 2019 Khartoum peace agreement—joined forces against the government in the Coalition of Patriots for Change (CPC). The insurrection wreaked havoc in the country, leaving the already fragile peace agreement to collapse, over 100.000 people displaced, hundreds of thousands prevented from voting in the elections, and the humanitarian crisis exac-

erbated (see e.g. UN (2021) and ICG (2021)). We can thus expect notable changes to the CAR forecasts over the next few months, as more datasets informing the ViEWS system are updated.

STATE-BASED CONFLICT (SB)

The ViEWS^a system continues to generate alerts for conflict involving a government of a state in countries with a recent history of fatal political violence and/or mass protests. In DRC, Nigeria, Somalia, Cameroon, Mali, Burkina Faso, Mozambique and Egypt, risks of 25 or more fatalities in April 2021 are high and above 50%, as seen from the bright orange fill colors in Figure 3a (red colors indicating a near-certain risk, light orange a risk equal to a coin toss, and purple < 0.1% risk.)

Figure 3b, in turn, illustrates how the country-level forecasts have changed since last month. A red fill color here shows that the forecasting system has detected heightened risks as compared to last month; blue pointing to declining risks. The severity of each risk alteration

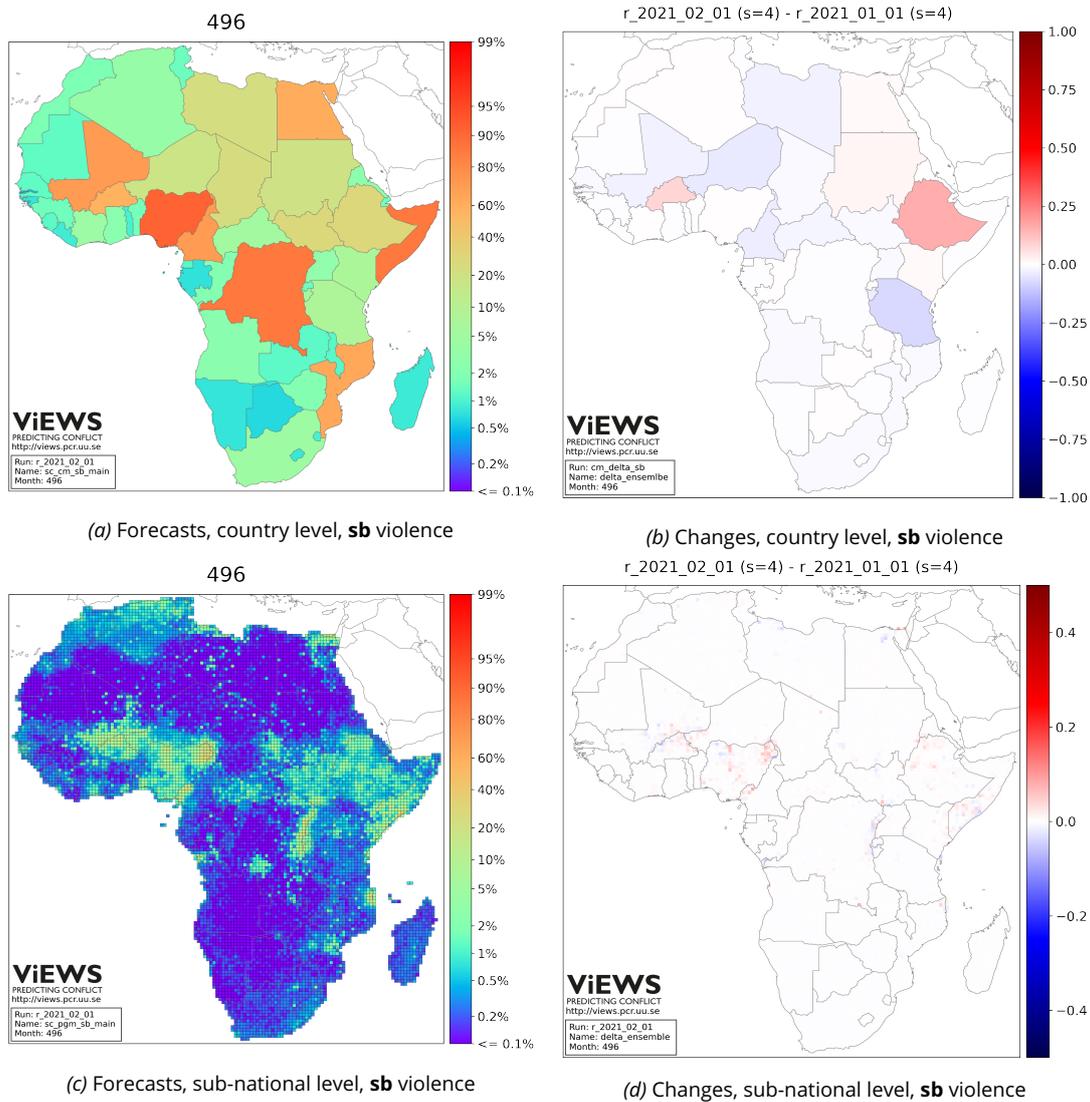


Figure 3. Forecasts for the risk of at least 25 fatalities (country level, top left) and 1 fatality (sub-national level, bottom left) from state-based (**sb**) violence in April 2021, and changes to the respective forecasts since last month by percentage points (right-hand column).

is illustrated by the color saturation of the figure; white indicating no change.

Amongst otherwise stable or declining risks of state-based violence across the continent, the Ethiopian forecasts stand out with a country-level risk elevation of over 15 percentage points (Figure 3b).¹ While the levels of violence significantly decreased between November and December 2020, the aftermath of the Tigray war, the brutal massacres in Oromia, the continued incidences of ethnic violence in Benishangul-Gumuz state, as well as the spillover to Sudan, have thus left a significant mark on the Ethiopian forecasts for the near future.

The sub-national level forecasts, instead mapping the risk of at least one fatality per 0.5x0.5 degree location² in April 2021, are with the Ethiopian exception largely similar to previous months (Figure 3c). High-risk areas are found in north-eastern Nigeria, the Anglophone region of

Cameroon, the Ituri and Kivu provinces of DRC, southern Somalia, around Sinai and the Egyptian border to Israel, in the Cabo Delgado province of Mozambique, around Tripoli in Libya, in the Cabinda exclave of Angola, as well as in the extended border areas between central Mali, northern/north-eastern Burkina Faso, and south-western Niger. A more diffuse risk cluster also spans the Horn of Africa and the protest-prone regions of Morocco, Algeria, and Tunisia.

Changes to the sub-national forecasts are more refined; predominantly concentrated to the specific areas that have suffered fatal violence in the recent past (Figure 3d, but see also Figure 4a). Once more, the most pronounced risk elevations are found in Nigeria, which continues to grapple not only with IS and Boko Haram activity in Borno state but also with banditry in Katsina, Kaduna, and Zamfara states, while risks appear to be re-

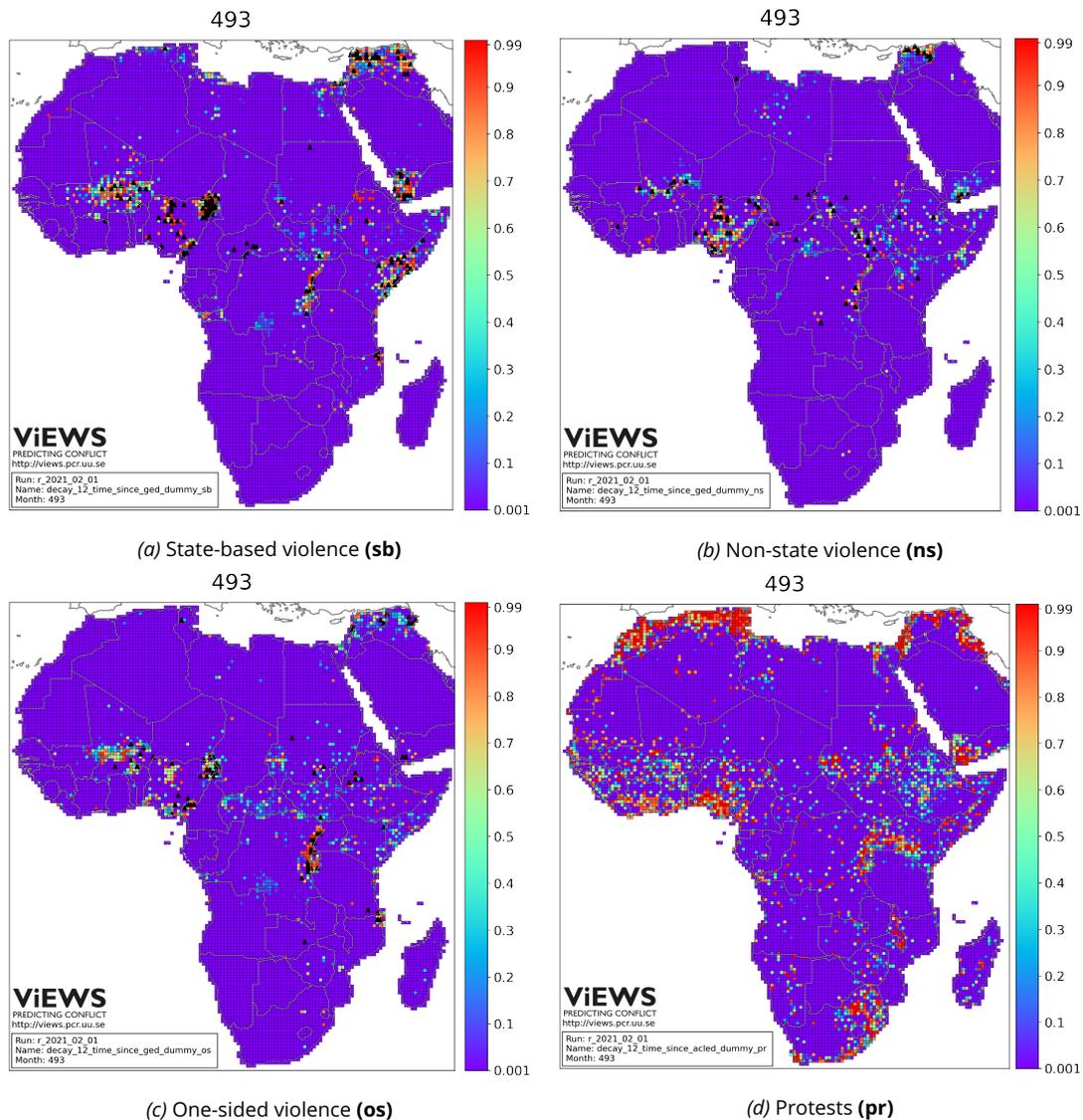


Figure 4. Illustrations of the recent history of fatal political violence as well as protests (violent and non-violent), as recorded by the UCDP (<http://ucdp.uu.se>) and ACLED (<http://acledata.com>), respectively. Red cells observed qualifying incidents in December 2020 (distinguished by a black marker) or November 2020. Purple cells have not experienced such incidents for many years.

ducing in the DRC hotspots—the Ituri and Kivu provinces. Risk reductions are also found along the lower part of the Burkina-Faso border, while heightened risks are detected along the upper parts of the border, as well as in south-western Niger due to continued JNIM activity in the region. Incidences of separatist violence in South-West and North-West Cameroon furthermore leave the Anglophone regions at heightened risk over the near future.

Last, while both the country- and sub-national level forecasts for Central African Republic remain largely unchanged this month (Figures 3a and 3c), as only a handful of conflict events had been confirmed in the UCDP Candidate dataset by the time that this month's forecasts were produced, the resurgence of violence in the country should not go unnoticed.³ In the lead-up to the

presidential and parliamentary elections late December, six armed groups—all signatories to the 2019 Khartoum peace agreement—joined forces against the government in the Coalition of Patriots for Change (CPC), inviting other armed groups to join them. The insurrection wreaked havoc in the country, leaving the already fragile peace agreement to collapse, over 100,000 people displaced, hundreds of thousands prevented from voting in the elections, and the humanitarian crisis exacerbated. While pro-government forces were able to hold back the rebellion and the incumbent president Touadera was ultimately re-elected, the country is left in a fragile state (see e.g. UN (2021) and ICG (2021)). We are thus likely to see changes to the CAR forecasts over the next few months, as more datasets informing the ViEWS system are updated.

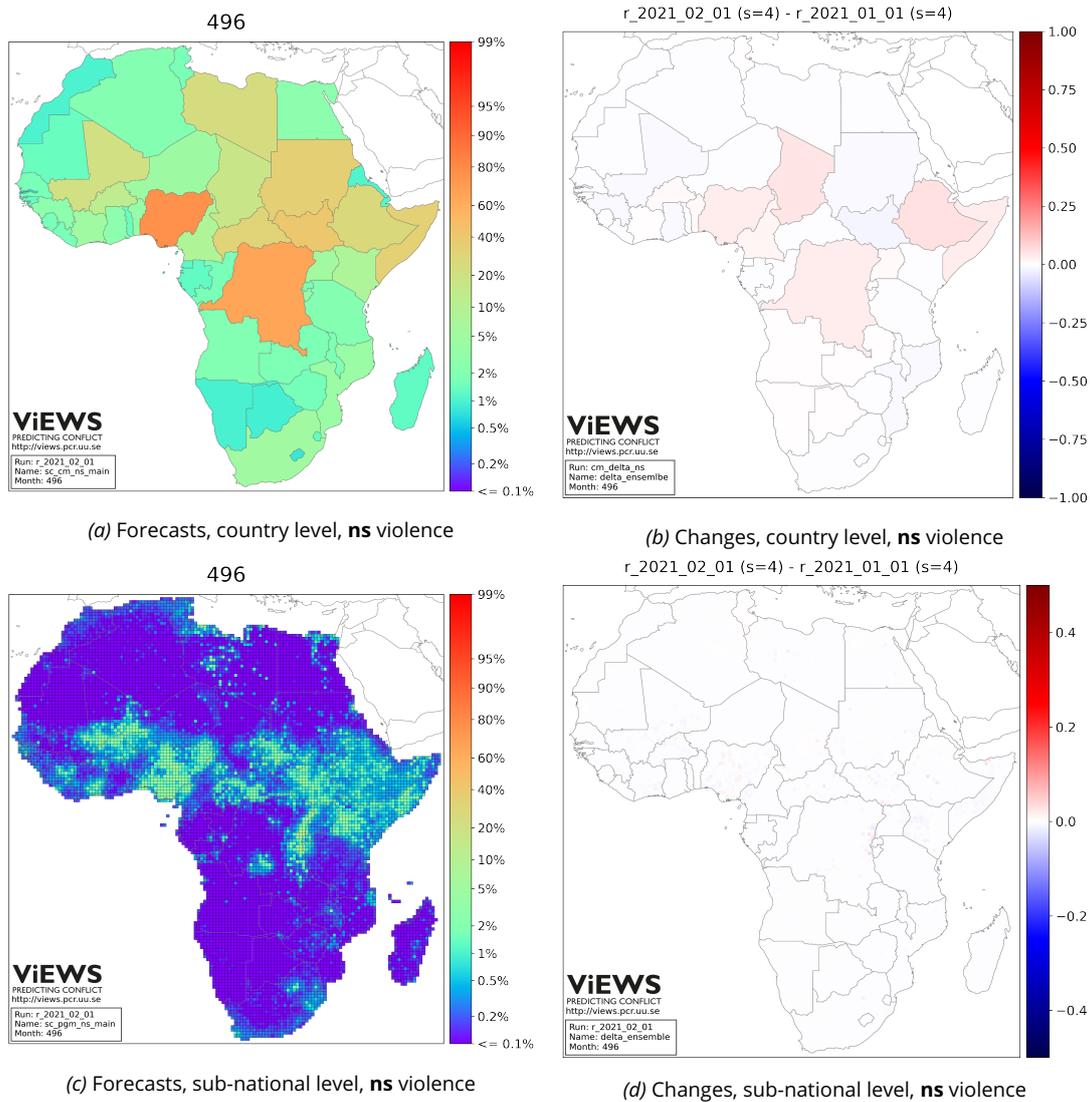


Figure 5. Forecasts for the risk (0-100%) of at least 25 fatalities (country level, top left) and 1 fatality (sub-national level, bottom left) from non-state (**ns**) violence in April 2021, and changes to the respective forecasts since last month by percentage points (right-hand column).

NON-STATE CONFLICT (NS)

Seen from the mostly blue or green shades in Figure 5a, the short-term risks of 25 or more fatalities per month from non-state violence are low for the strong majority of the African countries—most often less than 10 or even 5%. DRC and Nigeria continue to be the only two countries to exceed a monthly risk of 50% over the near future, followed by South Sudan, Sudan, Somalia, CAR, Ethiopia, Libya and Mali, all surpassing 30% in April 2021.

Changes to the country-level forecasts since last month are mostly mild or negligible (Figure 5b). A number of exceptions can nevertheless be observed. Most notable is the risk elevation in Ethiopia, where over 200 people from the Amhara, Oromo and Shinasha minorities were killed by the Gumuz in a massacre on 23

December—the latest in a series of deadly ethnic violence in the Metekel zone, Benishangul-Gumuz state. Another 36 lives were also lost to clashes in the border areas between the Afar and Somali regions late December.⁴

Risks of non-state violence are also increasing in Chad, where ethnic clashes in the Wadi Fira and Batha regions left 35 people dead in December 2020, coupled with a number of incidences of farmer-herder clashes that took another 23 lives the same month. The risk assessment for the country has consequently risen to an approximately 15% risk of 25 or more fatalities occurring in April 2021 (see Figure 5a and 5b), or an 85% probability that the threshold will be surpassed at some point over the next year.

Heightened risks are furthermore detected in DRC, Nigeria, and Somalia (Figure 5b). In DRC, the moderate alert is predominantly informed by an attack by the Mai-Mai group CNPSC and the Biloze Bishambuke on the

Twiganeho and Ngumino in Fizi territory, which killed nearly 40 people on December 21st. In Nigeria, fatal incidences of non-state violence were spread across a number of states in December, as seen from the conflict history map in Figure 4b. Causes varied from incidents of cultist violence and banditry to clashes and counter-killings between farmers and herders. For Somalia, the risk elevation is somewhat more puzzling as the UCDP has not recorded a single incidence of non-state or one-sided violence in the country in December 2020. Neither one of the ACLED-informed models indicate heightened risks of non-state violence either, and we can therefore assume that the moderate risk elevation is rather a time-lagged effect from repeated incidences in recent months.

At the sub-national level, the forecasts—here of at least one fatality per location—offer a more boiled down assessment (Figure 5d). We find a diffuse risk belt spanning the Horn of Africa, the southern parts of Sudan, South Sudan, CAR, south-western Chad, northern-most Cameroon, Nigeria, and the extended border areas between Mali, Burkina Faso and Niger. We also find an intense risk cluster over the Ituri and Kivu provinces in DRC, scattered at-risk locations across Libya, as well as risk clusters over the Nile delta, southern Côte d'Ivoire and Guinea, West Kasai in DRC, the larger cities in eastern South Africa, and Eswatini.

From Figure 5d, in turn, we find that the sub-national risk assessment for non-state violence has remained quite stable since last month—the white or very faint colors on the map indicate that changes are very moderate.

ONE-SIDED VIOLENCE (OS)

The short-term risks of 25 or more fatalities from one-sided violence in a given month remain very low—less than 10% or even 5%—on most of the continent. Only three countries face a significant risk of surpassing 25 fatalities in a given month over the near future: DRC, Nigeria and Burkina Faso, seen by the bright orange colors in Figure 6a. Well in line with previous trends, they are also home to some of the greatest changes to the country-level risk assessment as compared last month—all alerting to varying degrees of increasing tensions (Figure 6b). The sub-national forecasts (Figure 6c–6d) further concentrate these risk elevations to the Burkinabe border to Mali and Niger (where Islamist militant operations continue to prevail), the Ituri and Kivu provinces of DRC, as well as to Borno, Katsina, and Benue state in

Nigeria. Katsina and Benue state have both been prone to banditry, whereas Borno state continues to grapple with Boko Haram and IS-affiliated groups. The Ituri and Kivu provinces, in turn, continue to suffer from ADF attacks, police brutality, armed Banyamulenge groups (the Ngumino and Twiganeho), a Lendu militia, and—most recently—from militiamen of the Patriotic and Integrationist Force (FPIC).

Most notable this month are however the changes to the country-level risk assessments for Mali and Ethiopia (Figure 6b). The former is predominantly informed by lagged effects from the forecasting models capturing the most recent history of violence (lingering effects from JNIM attacks in January, as well as an attack by Dogon militiamen on Fulani in Mopti), whereas the latter is underpinned by the now more than 700 Ethiopian fatalities that the UCDP has recorded since last month for the period of 1 November–31 December—from one-sided violence alone.⁵⁶

The Ethiopian casualties occurred across three fronts: the states of Tigray, Oromia and Benishangul-Gumuz. In Tigray, at least 600 people were victims of a brutal massacre in the town of Mai Kadra on 9 November, which survivors believe to have been executed by an informal group of Tigrayan youth ('Samri'), aided and abetted by the former local TPLF administration before retreating from advances by the Ethiopian National Defense Forces. Contradictory reports are however surfacing, attributing some of the atrocities to Amharan pro-government forces. Records are thus likely to be updated over the next few weeks or even months as more information becomes available and both perpetrators and the number of casualties can be confirmed.

In Oromia, there are currently 60 fatalities recorded in the UCDP database from a November attack on civilians by members of the rebel group OLA (Oromo Liberation Army), a splinter group from the opposition party Oromo Liberation Front (OLF). Another 19 were killed in OLA attacks in December.

Also in Benishangul-Gumuz's Metekel zone are two of the three incidences attributed to the OLA—an attack on a passenger bus that took 34 civilian lives on 14 November, and an attack against civilians collecting their harvests on 8 December, killing 10. The third incident, also an attack on Amharan harvesters, was perpetrated by armed men that are yet to be identified in the UCDP dataset.

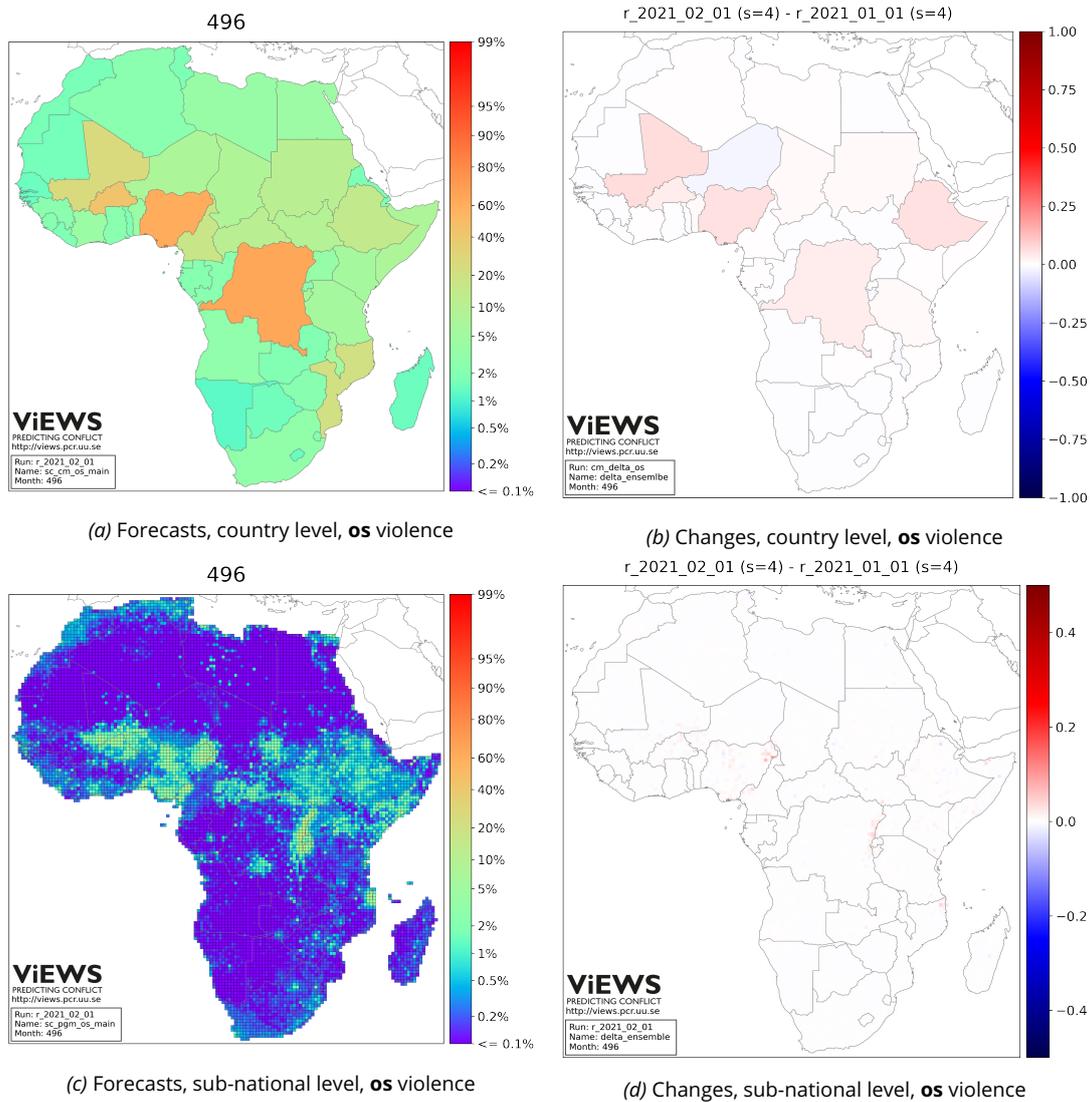


Figure 6. Forecasts for the risk (0-100%) of at least 25 fatalities (country level, top left) and 1 fatality (sub-national level, bottom left) from one-sided (**os**) violence in April 2021, and changes to the respective forecasts since last month by percentage points (right-hand column).

NOTES

[1] Since there have not been any recent modifications to the modeling system itself, changes to the risk assessments as compared to last month are indicative of effects from new input data, most commonly by publicly available conflict and protest data from the Uppsala Conflict Data Program (UCDP, <http://ucdp.uu.se>) (Pettersson, Högladh, and Öberg, 2019; Sundberg and Melander, 2013; Hegre et al., 2020) and the Armed Conflict Location and Event Dataset (ACLED, <http://acleddata.com>) (Raleigh et al., 2010).

[2] 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.

[3] The UCDP applies a continuous coding process—records are updated and added to as new information becomes available and confirmed. More than half of the conflict events that as of 9 February 2020 have been recorded for the month December 2020 in CAR were updated only a few days ago. The March run of the forecasting system will thus be better informed on CAR and likely to generate a greater alert for the country. For more information on UCDP coding, please see Högladh (2020). More on the ViEWS models can in turn be found in the *Definitions and modeling set-up* section on page 9.

- [4] We are aware that the current model weighting protocol in ViEWS does not reflect the most recent violence in Ethiopia very well. We are currently re-evaluating the model set-up for all three types of violence to correct this.
- [5] Due to the media blackouts in Ethiopia over the late fall of 2020, the January production of the ViEWS forecasts (drawing on data up until and including November 2020) was only informed by a fraction of these fatalities and consequently 'missed' the surge in one-sided violence, which the system is only now able to pick up. Ethiopian records furthermore continue to be updated; 65 of the fatalities above were added to the UCDP dataset only this February, after the cut-off date for this month's production of the forecasts.
- [6] While most of these fatalities informed the February production of the ViEWS forecasts, we are aware that the current model weighting protocol in ViEWS does not reflect the most recent violence in Ethiopia very well. We are currently re-evaluating the model set-up for all three types of violence to correct this.

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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?](https://tntcat.iiasa.ac.at/SspDb/dsd?Action=htmlpage&page=welcome)

[Action=htmlpage&page=welcome](https://tntcat.iiasa.ac.at/SspDb/dsd?Action=htmlpage&page=welcome)

Ethnic Power Relations dataset (EPR)

<https://icr.ethz.ch/data/epr/>

- **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 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 nevertheless most often informed by the latter, more specifically by data updates from the Uppsala Conflict Data Program (UCDP, <http://ucdp.uu.se>) and the Armed Conflict Location and Event Dataset (ACLED, <http://acleddata.com>).

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,

DEFINITIONS AND MODELING SET-UP

Types 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;

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.

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 December 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, $s = 3$ to the forecasts for the following calendar month, and so forth.

FUNDING

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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](https://github.com/UppsalaConflictDataProgram/OpenViEWS2)

The full list of publications are accessible at:


[https://pcr.uu.se/research/
views/publications/](https://pcr.uu.se/research/views/publications/)