Assessing the Strength of Different Violence Monitoring Systems in Crises

Violence monitoring systems can play a vital role in tracking, managing, and responding to violence. Such systems typically rely on one or a combination of strategies for data collection, including old and new media monitoring. In spite of the widespread use of violence monitoring systems there is limited information on their comparative opportunities and limitations. Drawing on research conducted during the 2017 Kenya elections, this briefing explains why policymakers and practitioners should continue to invest in combined approaches to violence monitoring that make use of both old and new media to play to their relative strengths while remaining aware of limitations and biases in both.

Social media and digital technologies are changing the way information about violence is collected, analysed and used, and an increasing number of early warning and crisis response systems rely on these technologies. This briefing draws on findings of a comparison of events reported through 'old' and 'new' media monitoring (using Armed Conflict Location & Event Data (ACLED) and Twitter respectively) during Kenya's August and October 2017 elections.

System-level advantages and disadvantages

'Old' media monitoring via published sources

Traditional media monitoring typically involves researchers reviewing print media, news websites, newswires, and radio transcripts, as well as reports from governments or NGOs, to document accounts of violence.

These systems have the benefit of being reasonably low-tech. Conventions in print media such as fact-checking and source verification can also act as partial quality controls. Additionally, because traditional media are inclined to report on crises, these systems have a relatively high proportion of reports that are relevant to crisis response.

However, there are also disadvantages. One limitation is that traditional media monitoring can replicate editorial biases and selective coverage, meaning marginalised groups may be under-represented or silenced, giving only a partial picture of insecurity and risk.

'New' media monitoring via passive crowdsourcing

Passive crowdsourcing relies on filtering and analysing existing information shared on social media platforms.

The advantage of these systems is that they are relatively amenable to 'light-touch' monitoring, for example, by tracking certain social media accounts or keywords. In theory, unlike traditional media, anyone can create a social media account and share information, which can potentially 'democratise' the reporting process.

However, it is challenging, time-consuming, and costly to do more systematic monitoring, as rigorous social media tracking often requires automated systems, sophisticated machine learning technology, and/or dedicated analysts to filter and approve relevant reports. The 'signal-to-noise' ratio of these systems is poorly suited to initiatives with limited resources.

Moreover, social media are not value-neutral: platforms can replicate the biases of their users. Finally, the corresponding social media regulatory environment also matters. Online restrictions or censorship can reduce public trust and drive users to closed messaging systems, such as Telegram or WhatsApp, which cannot be ethically or systematically monitored.

Differences in reporting: coverage and speed

Geography of violence

New media has a strong geographical bias. In a comparison of reports of violence from old and new media, most Twitter reports are found to be concentrated in more-populated (often urban) areas that are more economically developed.

On average, the population density of areas of events reported by old media is 743.4 people per km^2, while it is 851.6 for those reported on Twitter. Similarly, the gross domestic product per capita in areas where Twitter users reported violence is,

on average, over US$100 higher than in areas where old media reported violence. These differences reflect inequalities in digital access and use, as well as the socioeconomic characteristics of Twitter users, who are more likely to be middle class and digitally literate. This shapes the profile of violence that users report.

These findings are particularly significant because of the claim of some digital platforms to democratise reporting and information-sharing. In fact, our findings suggest that traditional media may better capture violence in areas that are more marginalised.

Timing of reporting

Twitter reporting also varies greatly over time. New media reporting is relatively extensive, timely, and specific in the immediate period around elections. During this period, Twitter had an average delay of 1.15 days between when violence occurred and when it was reported online. This compares to an average of over four days in old media. Outside of the immediate election period, however, this relationship is reversed and old media are timelier, with more significant delays among Twitter reports.

We also see that new media reporting in the run-up to and following critical junctures such as an election is much more limited, with fewer reports. By contrast, reporting from old media is more consistent over time. This suggests that new media reporting is not as common in the time surrounding elections, and that periods of high public attention may influence the way users report insecurity.

These findings are significant because while the speed and timeliness of reporting is important for crisis response, the consistency of that reporting over time is also critical to ongoing response and relief efforts.

Policy recommendations

1. **Continue to invest in high-quality 'old' media.** Due to inequalities in access to social media and digital infrastructure, traditional media remain important for capturing information about violence in rural, less economically developed areas. However, in an age of widespread de-legitimisation of traditional media, investing in and supporting the capacity of a high-quality, transparent, and democratic media sector should remain a central policy priority.

2. **Invest in Twitter-based monitoring systems for urban violence and for short-term monitoring.** Twitter is more effective at capturing urban violence and violence immediately surrounding critical events such as elections. Investment should be combined with further research to understand how the underlying characteristics of Twitter users and changes over time affect reporting.

3. **Carefully weigh the advantages and disadvantages of different monitoring systems before implementation, and favour combined approaches.** Traditional and new media sources should be conceived as complementary as they both provide unique information that, together, paint a fuller picture of political violence. They are closely interdependent in the new media ecosystem, and both carry inherent biases and limitations which should be weighed carefully before choosing a particular system. Particular attention should be paid to questions of the accessibility and representativeness of monitoring systems.

4. **Invest in the integration of monitoring systems into wider crisis response mechanisms.** The proliferation of traditional and new media monitoring systems does not mean that they are necessarily well-integrated into rapid response mechanisms. Policymakers and practitioners should invest in reinforcing and streamlining information distribution to rapid response actors.

Further reading

Dowd, C.; Justino, P.; Kishi, R. and Marchais, G. (2018) *Comparing 'New' and 'Old' Media for Violence Monitoring and Crisis Response in Kenya*, IDS Working Paper 520, Brighton: IDS

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Wigmore-Shepherd, D. (2015) *Reporting Sources*, ACLED Working Paper 5, Armed Conflict Location & Event Data Project