



## **Deciphering the Overlapping Patterns of Disaster and Conflict Displacement in Mindanao, Philippines**

*This article considers patterns of disaster displacement and displacement related to conflict and violence in Mindanao, the Philippines. Looking at IDMC data over a five-year period, it identifies temporal and spatial correlations that might help inform displacement planning and benefit community resilience building. The article invites further research and analysis on when and how different triggers of displacement are most likely to happen at the local (sub-regional) level.*

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The seasonality of storms and monsoons on the island of Mindanao in the Philippines influences displacement patterns associated with typhoons and floods. Despite no apparent seasonal patterns behind incidents of conflict and violence, for the five years covered in this study, 2017 – 2022, the timing of displacements related to conflict and violence was found to be inversely correlated with storm-related displacements. However, regional variations within Mindanao did exist.

This short article invites further analysis and research on when and how different triggers of displacement are most likely to happen at the local (sub-regional) level. Accounting for more precise spatial dimensions can allow for better preparation and more targeted and timely mobilization of resources. Such an approach can also contribute to community resilience building by better anticipating displacements.

## Background

The Philippines, which sits in East Asia's typhoon belt, [experiences some of the highest instances of human population displacement](#) globally. A portion of these displacements occur in Mindanao. Mindanao is one of the three island groups that make up the Philippine Archipelago and is home to [at least 24 percent](#) of the entire population of the country. According to [IDMC](#), 4.4 million displacements were reported in Mindanao between 2017 and 2022, of which 83 percent were the result of disasters and 17 percent due to conflict and violence.

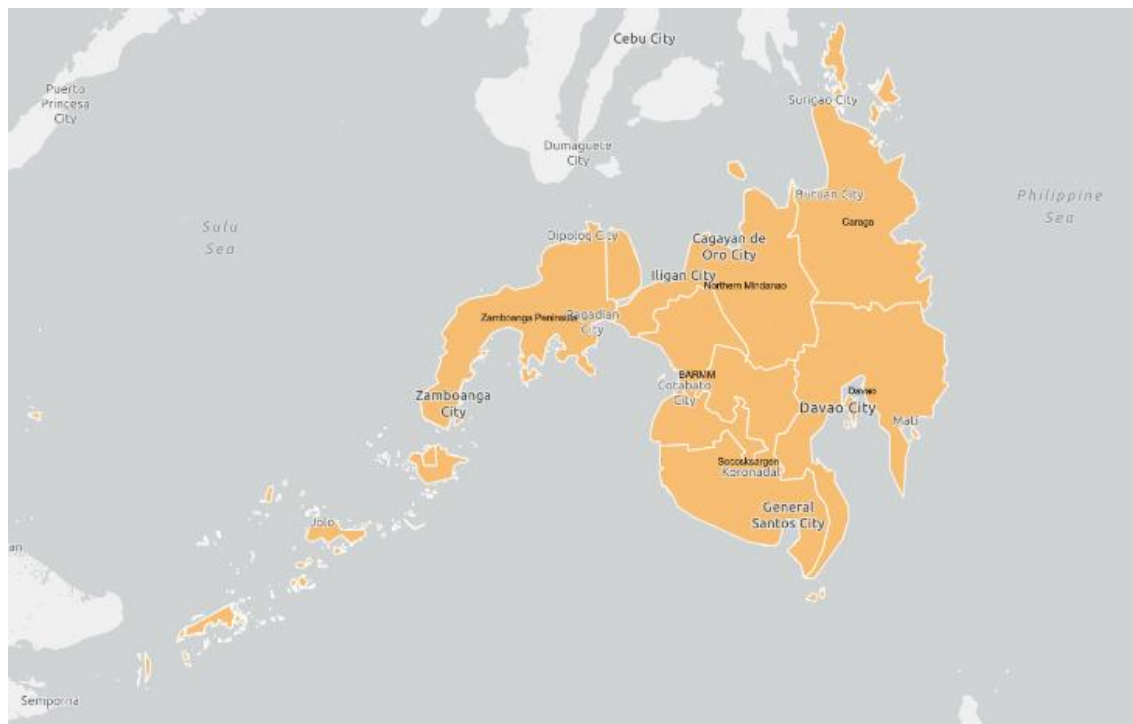


Figure 1: Map of Mindanao, Source: Author, 2023

Storm and flood-related displacements rank high in Mindanao, contributing to almost 95 percent of displacements. Storm-related displacements, including from typhoons, accounted for 49 percent, slightly more than flood-related displacements, which accounted for 46 percent. Within Mindanao, three regions account for almost 86 percent of disaster displacements: the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), Davao and Caraga.

Conflict and violence in Mindanao also force people from their homes every year, with thousands of people living in protracted displacement as a result. Between 2017 and 2022, [a total of 1.4 million conflict and violence displacements](#) were recorded in the Philippines - 53 percent of them in Mindanao. Of these, displacements triggered by armed conflict were the most significant (69 percent), followed by communal violence (26 percent) and crime-related violence (5 percent). Ninety percent of conflict and violence-related displacements in Mindanao were observed in 2 regions: BARMM and Soccksargen.

The fact that there may be significant variations in the relative strength of the different drivers of displacement across the regions within Mindanao illustrates the importance of including a spatial dimension in the analysis of potential seasonal patterns that might influence displacement patterns across the different regions.

### **Analysis and Findings**

To assess the frequency of displacements in Mindanao related to storms, floods, and conflict and violence, this study drew on data from 2017 – 2022 compiled by IDMC through its [Internal Displacement Updates](#) and [Global Internal Displacement Database \(GIDD\)](#). IDMC's disaster displacement data were obtained primarily from the Disaster Response Operations Monitoring and Information Centre ([DROMIC](#)) and the National Disaster Risk Reduction and Management Council ([NDRRMC](#)). Displacement data for conflict and violence were compiled by the United Nations High Commission for Refugees in the Philippines ([UNHCR Philippines](#)) through local government units (LGUs) in Mindanao and disseminated through the [Mindanao Dashboard](#).

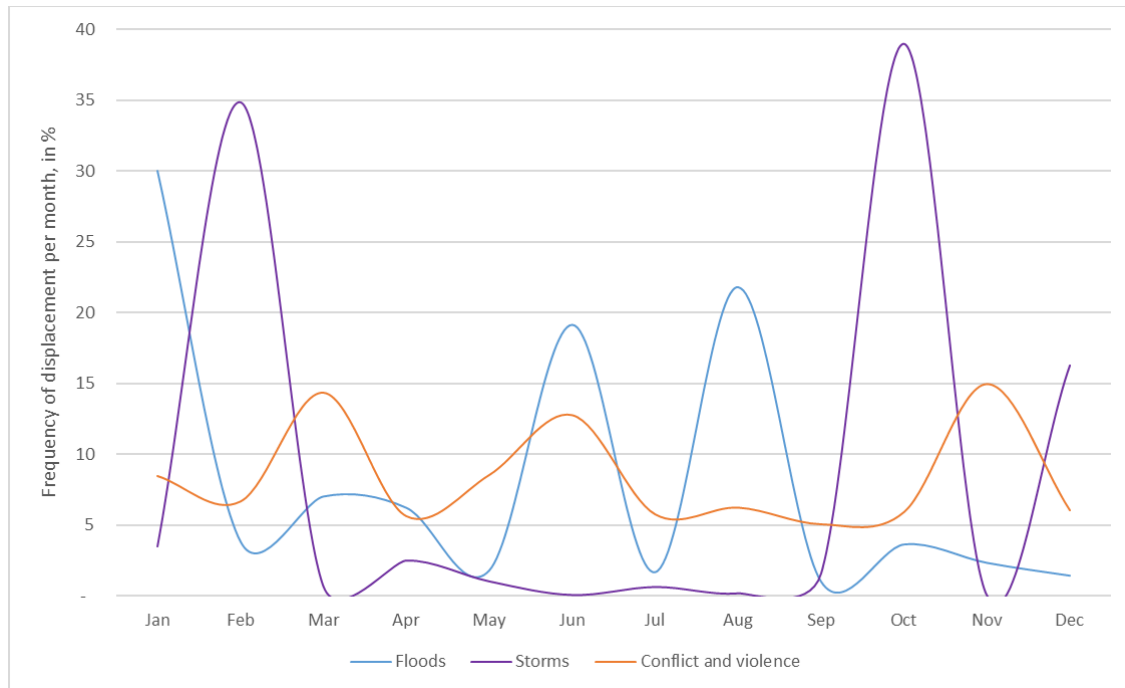


Figure 2: Monthly frequency of flood, storm, and conflict and violence-related displacement in Mindanao (2017-2022), Source: IDMC, 2023

On average, close to 95 percent of the displacements triggered by storms in Mindanao during this period took place between September and March, overlapping with the [northeast monsoon season](#) (November to May) and [the typhoon season](#) (July to October; purple line in Fig.2). Given its location, [Mindanao tends to avoid direct hits from typhoons](#) but still suffers from their passage.

Flood-related displacements, which represent 46 percent of disaster displacements, took place throughout the year, with about 90 percent of flood-related displacements occurring during the northwest monsoon (between January and April) and the onset of the [southwest monsoon](#) (between July and August (blue line in Fig.2).

Displacements related to conflict and violence occurred throughout the year in Mindanao (orange line, Fig.2). These displacements followed a wave-like pattern, with odd months (Jan, Mar, May, etc.) generally showing higher incidences of conflict and violence and hence displacements, and even months (Feb, April, June, etc.) usually showing lower incidences of conflict and violence-related displacements. In the months where storm-related displacements were at their peak,

displacements related to conflict and violence were at their lowest, as seen in February, April, July, October, and December. Because [the impacts of typhoons tend to be quite extreme](#) compared to seasonal floods in the Philippines, we hypothesize that typhoons might deter people from fighting during peak typhoon season when [more people tend to be affected](#) and displaced.

Displacements related to conflict and violence, however, seem to positively correlate with flood-related displacement, thus requiring further scrutiny. In the months when flood-related displacements in Mindanao were high, displacements related to conflict and violence were also high. A closer look at the data, though, shows that seasonal floods, although frequent, tend to be localized. People from flood-impacted localities were possibly displaced at the same time people from other localities in the same region were displaced by conflict and violence. This could potentially explain the seeming positive correlation between flood and conflict and violence-related displacements in Mindanao.

### **Regional and Sub-regional Variations and Exceptions**

There are regional variations that require further analysis:

- A closer look at regional displacement patterns indicates that while displacements due to multiple different triggers appear to have coincided in certain months of the year, there were exceptions. In almost all regions, storm-related displacements were relatively high in October. However, some regions also experienced relatively high levels of storm-related displacements outside this month. For instance, typhoon-related displacements were particularly high in February for three regions - Caraga, Davao and Northern Mindanao. Flood-related displacements affected most regions of Mindanao in January, June and August. However, the frequency of such displacements differed from region to region. For instance, Caraga experienced high levels of flood-related displacements in 4 months of the year, whereas in Davao, the region experienced high and medium levels of flood-related displacements in 11 months of the year. Some

regions are [more flood-prone than others](#), particularly areas below sea level, which are highly vulnerable to flooding.

- Regions in Mindanao were not uniformly affected by displacements related to conflict and violence throughout the year. Looking at regions in Mindanao where displacements due to conflict and violence were generally higher, there was a clear inverse relationship between displacements related to storms and those related to conflict and violence. For instance, in the Zamboanga Peninsula, low storm-related displacements in January were accompanied by significantly higher displacements related to conflict and violence. In the months where storm displacements were high (in October and December), displacements due to conflict and violence were low.
- However, this wasn't the case for BARMM, where displacements due to conflict and violence tended to be elevated throughout much of the year, with lower levels reported in June, August and October and lower storm-related displacements in June and August.
- Davao was also an outlier, where displacements due to conflict and violence were generally low, except in February.

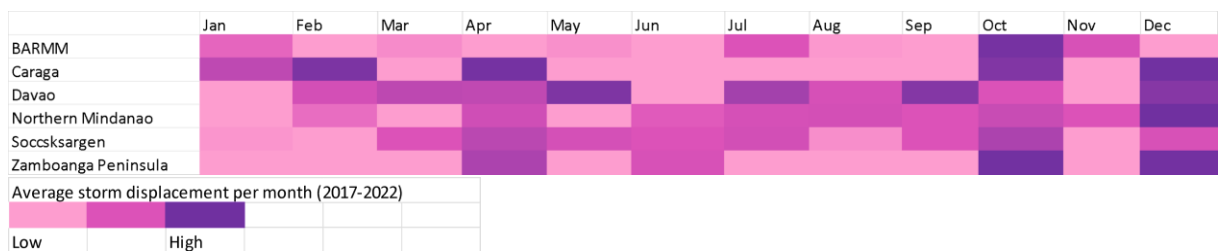


Table 1: Frequency of storm-related displacement by region (2017-2022). Source: IDMC, 2023

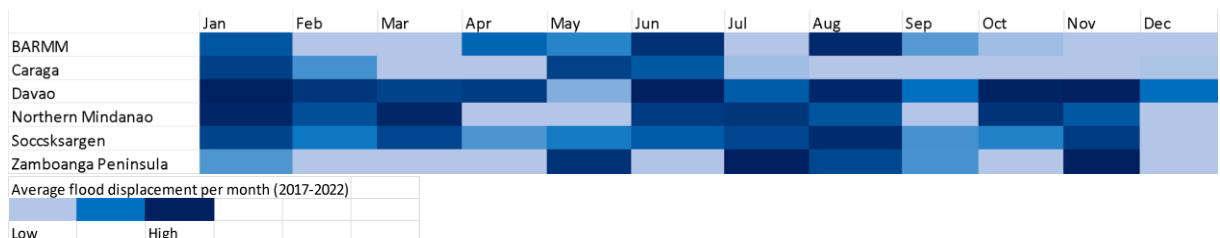
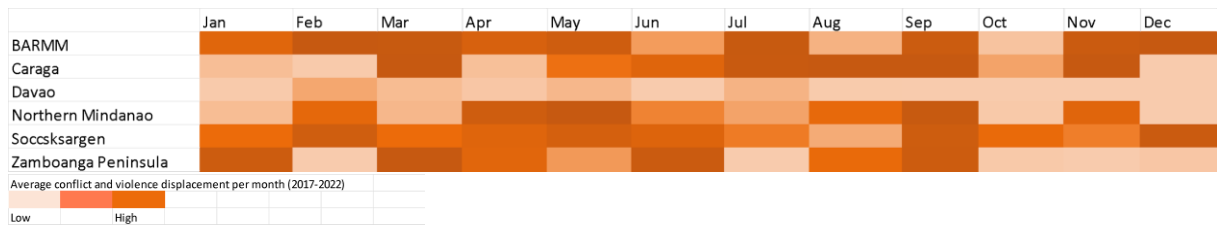


Table 2: Frequency of flood-related displacement by region (2017-2022). Source: IDMC, 2023



*Table 3: Frequency of conflict and violence-related displacement by region (2017-2022). Source: IDMC, 2023*

Further disaggregation of data by location (down to the lowest administrative geographic level) would likely provide more valuable insights on when specific locations might expect higher concentrations of displacements and where such instances are likely to occur. Further disaggregation might even provide insights into whether disaster displacements can be used to help predict conflict and violence displacements.

## Conclusion

This analysis illustrates the importance of understanding when different types of displacements occur, especially in contexts where different types overlap with regularity and thus might inform preparation strategies and targeted responses. In countries or regions where conflicts and disasters tend to alternate, exacerbating internal displacement and repeatedly disrupting people’s lives, national authorities and humanitarian relief agencies no doubt experience heightened demands – in displacement preparedness planning, in shifting between the provision of disaster relief and conflict relief, and in adequately resourcing both types of displacement. The ability to anticipate such cycles, especially given that [climate change is likely to intensify seasonal weather events](#) further, would be of great benefit.

Consistent monitoring and reporting are the foundations by which policymakers and relevant relief agencies can better prepare for displacement and effectively manage their operations. Moving forward, the analysis of disaggregated data can provide a basis for better predictive analytics.

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