

TABLEAU PROJECT ANALYZING TERRORISM INCIDENTS

ASSIGNMENT 3

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Project Overview

Analyzing Terrorism Incidents (Jan 2021 - Jun 2021)

- ▶ **Background:** [The Global Terrorism Database \(GTD\)](#) is an open-source database containing information on over 200,000 terrorist incidents worldwide from 1970 through 2020, with plans for annual updates. Statistical information contained in the GTD is based on reports from a variety of open media sources. The National Consortium for the Study of Terrorism and Responses to Terrorism (START) provides public access to GTD online to increase understanding of terrorist violence and help defeat it.
- ▶ **Objective:** The objective of this project is to explore and visualize terrorism incident data from January 2021 to June 2021 using Tableau, create interactive dashboard analyze the patterns and trends of these incidents across different countries and regions.



Dataset Description

- ▶ <https://www.start.umd.edu/gtd/contact/download?t=0988e50c596e11ef8f520e5194896103>
- ▶ The dataset covering incidents from January to June 2021. It contains detailed information on each terrorist incident that occurred during this period.
- ▶ The dataset includes 135 columns, each capturing different aspects of the incidents such as:
 - Event details (date, location, description)
 - Attack types and targets
 - Casualties and damages
 - Claims and responsibilities



Dataset Description

The dataset is quite extensive, containing many columns related to various aspects of terrorist incidents. Key columns include:

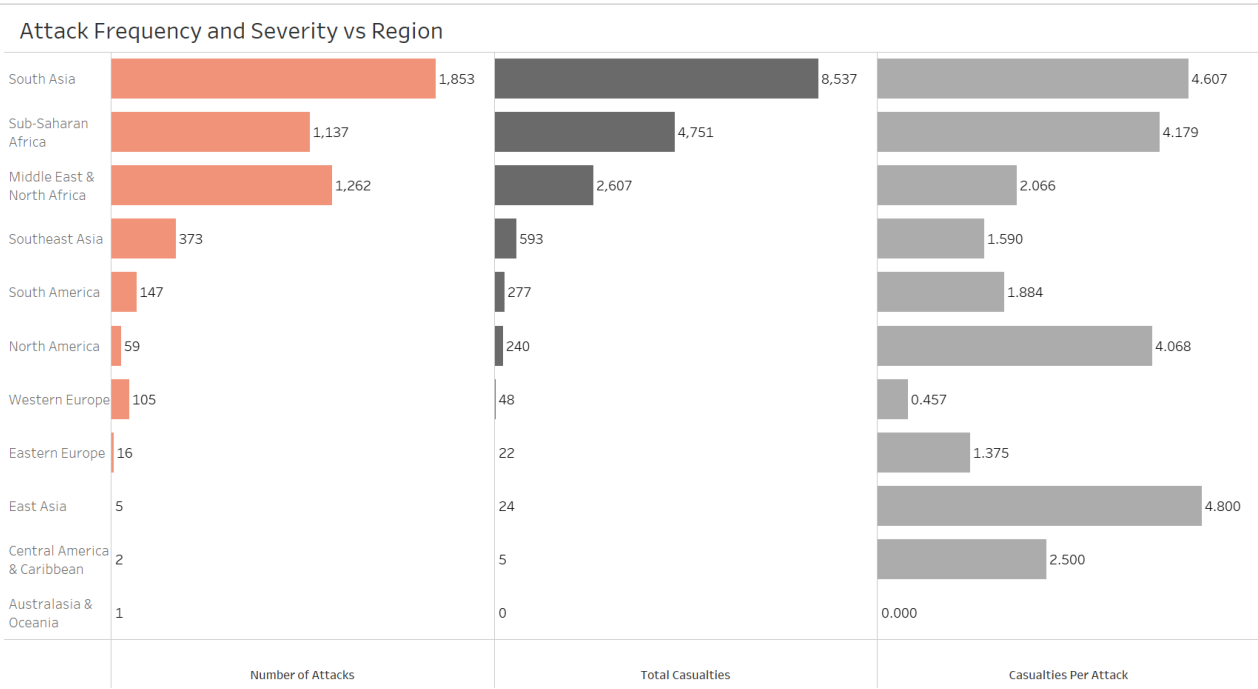
- ▶ **eventid**: Unique identifier for each incident.
- ▶ **iyear, imonth, iday**: Date of the incident.
- ▶ **country, country_txt**: Country where the incident occurred.
- ▶ **region, region_txt**: Region where the incident occurred.
- ▶ **attacktype1, attacktype1_txt**: Type of attack.
- ▶ **targtype1, targtype1_txt**: Primary target type.
- ▶ **gname**: Name of the perpetrator group.
- ▶ **nkill**: Number of people killed.
- ▶ **nwound**: Number of people wounded.



1. Geographic Analysis

Geographic Analysis

- High Frequency and Severity in South Asia:**
Number of Attacks: South Asia has the highest number of attacks (1,853), indicating it is the most active region in terms of terrorist incidents.
Total Casualties: It also has the highest total casualties (8,537), highlighting the severe impact of these attacks.
- Sub-Saharan Africa's High Casualty Rate:**
Casualties Per Attack: The region has 4.179 casualties per attack, indicating that each attack tends to be quite severe.
- Notable Findings in North America and Western Europe:**
North America: With only 59 attacks, the region has 240 total casualties, leading to a relatively high casualty rate of 4.068 per attack. This suggests that while attacks are less frequent, they tend to be more severe.
Western Europe: The region has 105 attacks and 48 total casualties, resulting in a very low casualty rate of 0.457 per attack, indicating that attacks here are less deadly on average.





2. Temporal Analysis

Temporal Analysis

- **Peak Periods of Terrorist Activity:**

May 2021: Number of Attacks: 1,013, Total Casualties: 3,306
This period marks a significant peak in both the number of attacks and the total casualties, indicating heightened terrorist activity.

June 2021: Number of Attacks: 984, Total Casualties: 3,480
While the number of attacks slightly decreased from May, the total casualties increased, indicating a rise in the severity of attacks.

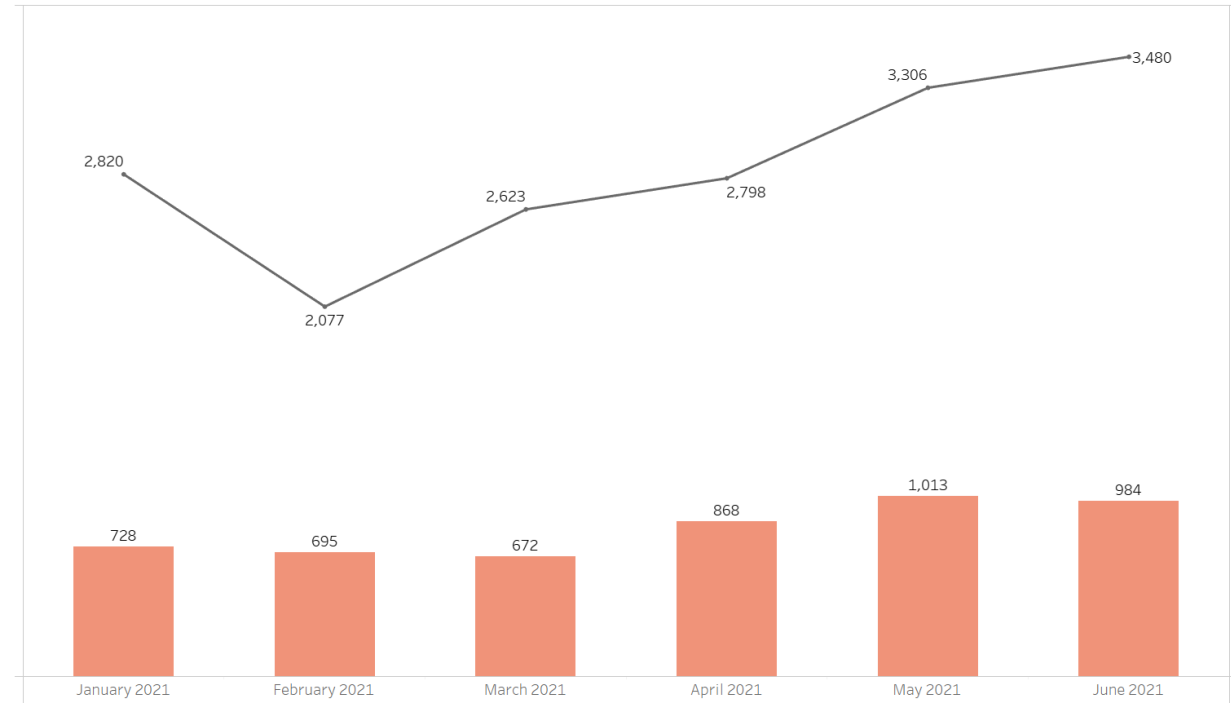
- **Analysis of the Impact of Major Events:**

Afghanistan - Taliban Offensive: In May and June 2021, the Taliban intensified their military offensive as the U.S. and NATO forces began their final withdrawal from Afghanistan. This resulted in a surge of attacks and a significant spike in terrorist activity.

Middle East - Ongoing Conflict and ISIS Activity: Particularly regions like Iraq and Syria, continued to see activities from ISIS and other extremist groups that contribute to the increase in both the number of attacks and casualties.

Nigeria - Boko Haram and ISWAP Activities: particularly intense activities during these months. This contributed to the high number of attacks and casualties in Sub-Saharan Africa, reflected in the May and June spikes.

Attack Trends Overtime





3. Attack Type Analysis

Attack Type Analysis

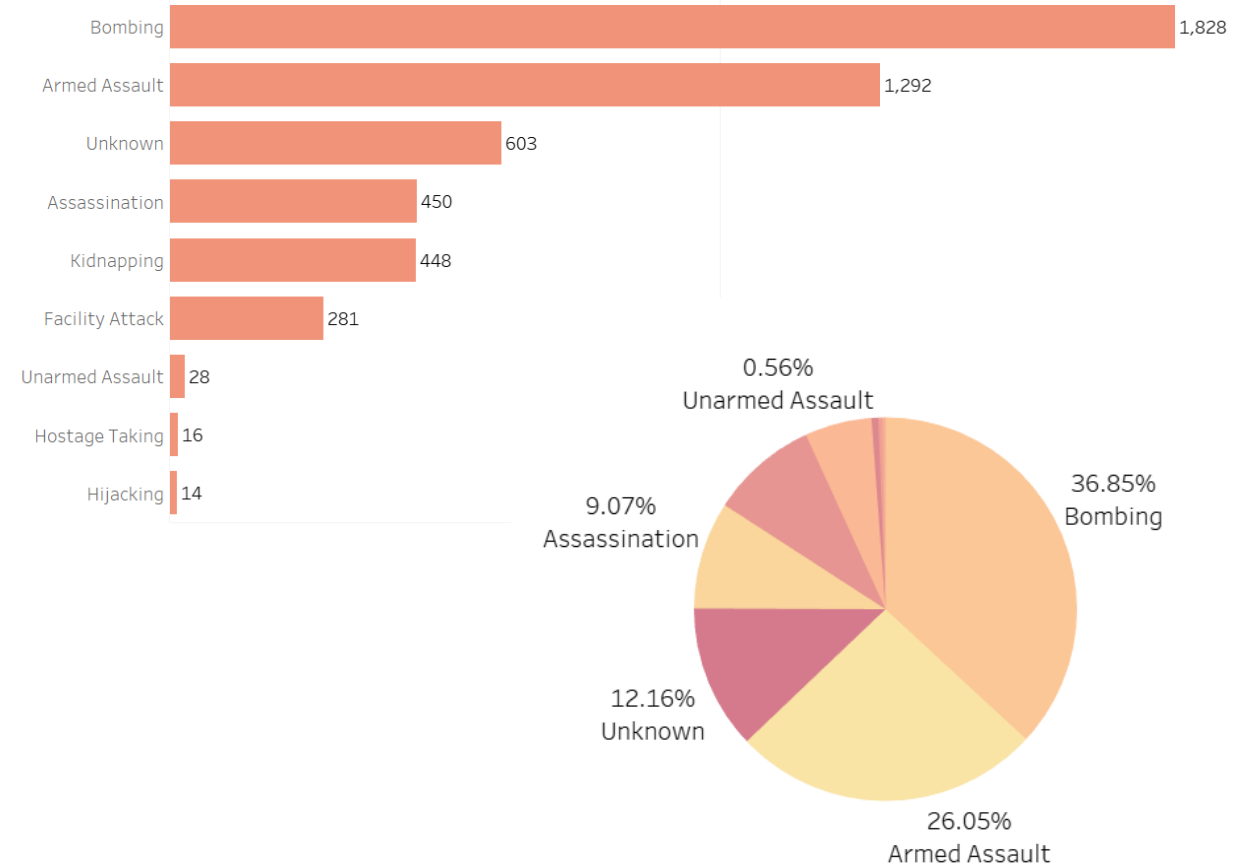
- **The most common form of attack**

Bombing/Explosion: Number of Attacks: 1,828, Percentage of Total Attacks: 36.85%, the most common form of attack. The high prevalence suggests that bombings are a key method for creating fear and disruption.

Armed Assault: Number of Attacks: 1,292, Percentage of Total Attacks: 26.05%, the second most common type of attack. These attacks often involve direct confrontations and result in significant casualties. The high frequency of armed assaults highlights the aggressive tactics used by many groups.

Unknown: Number of Attacks: 603, Percentage of Total Attacks: 12.16%. The "Unknown" category, while comprising a significant portion of the attacks, indicates gaps in the data or incidents where the exact method was not reported or identified.

Attack Type Distribution





4. Target Analysis

Target Analysis

- **The Most Targeted Sectors**

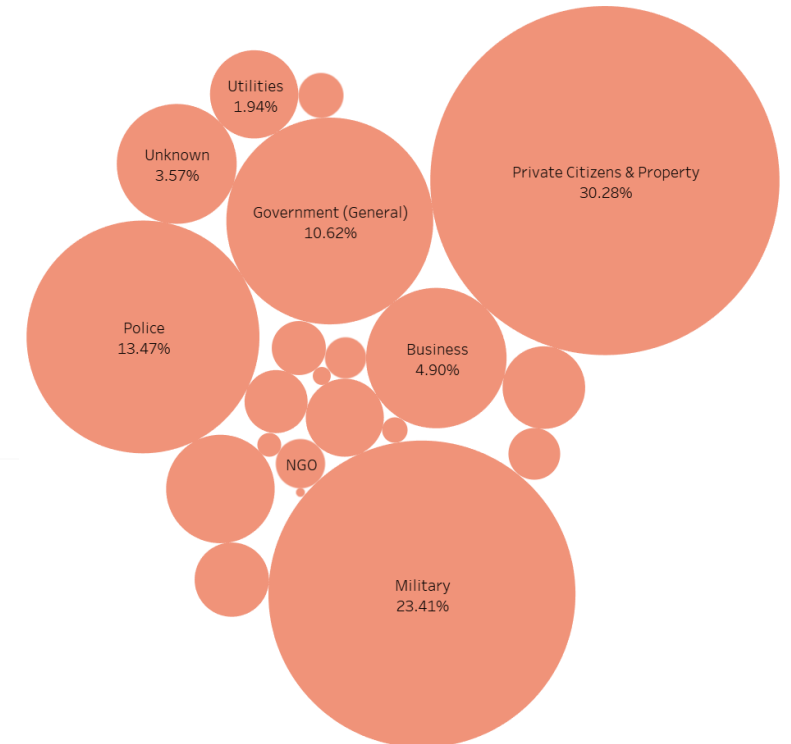
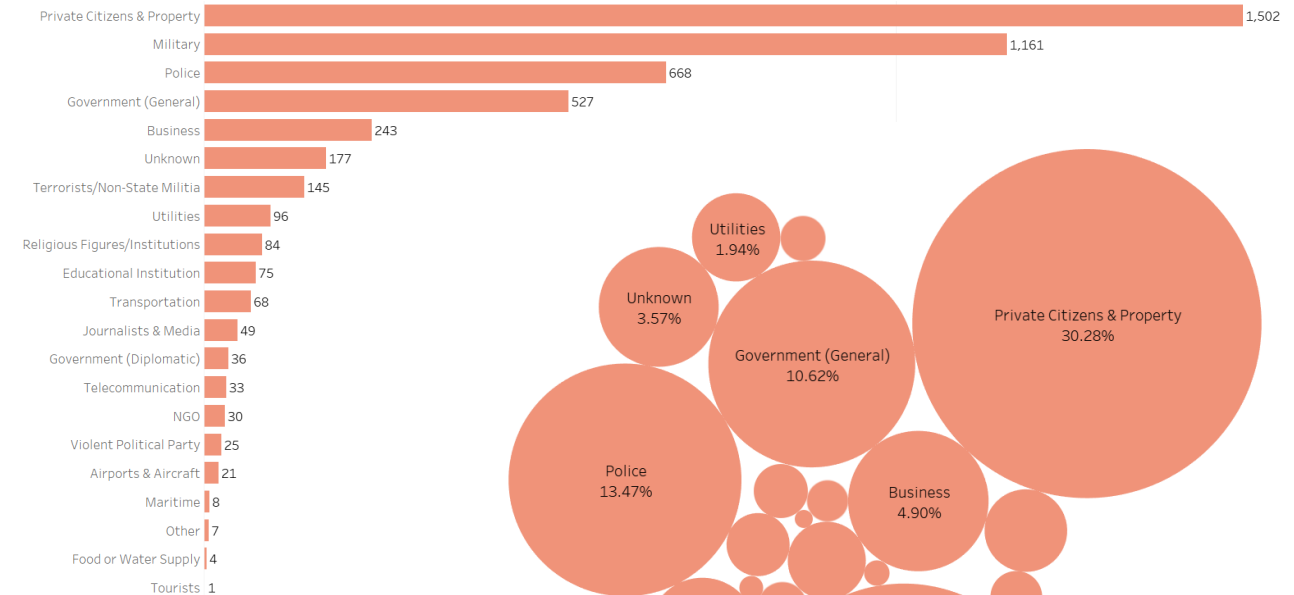
Private Citizens & Property: Number of Attacks: 1,502, Percentage of Total Attacks: 30.28%, the most frequently targeted, making up nearly a third of all attacks. This highlights the significant vulnerability of civilian populations and personal property in terrorist strategies, which often aim to spread fear among the general public.

Military: number of Attacks: 1,161, percentage of Total Attacks: 23.41%, the second most targeted sector. This reflects the ongoing conflicts and insurgencies where terrorist groups directly confront state forces.

Police: Number of Attacks: 668, Percentage of Total Attacks: 13.47%, Police forces are also highly targeted, this suggests a focus on weakening law enforcement, destabilizing public order, and reducing the government's ability to maintain security.

Government (General): Number of Attacks: 527, Percentage of Total Attacks: 10.62%. General government targets, such as officials, buildings, and institutions, are frequently attacked. This highlights attempts to disrupt governance and intimidate public officials.

Target Types Distribution





5. Perpetrator Analysis

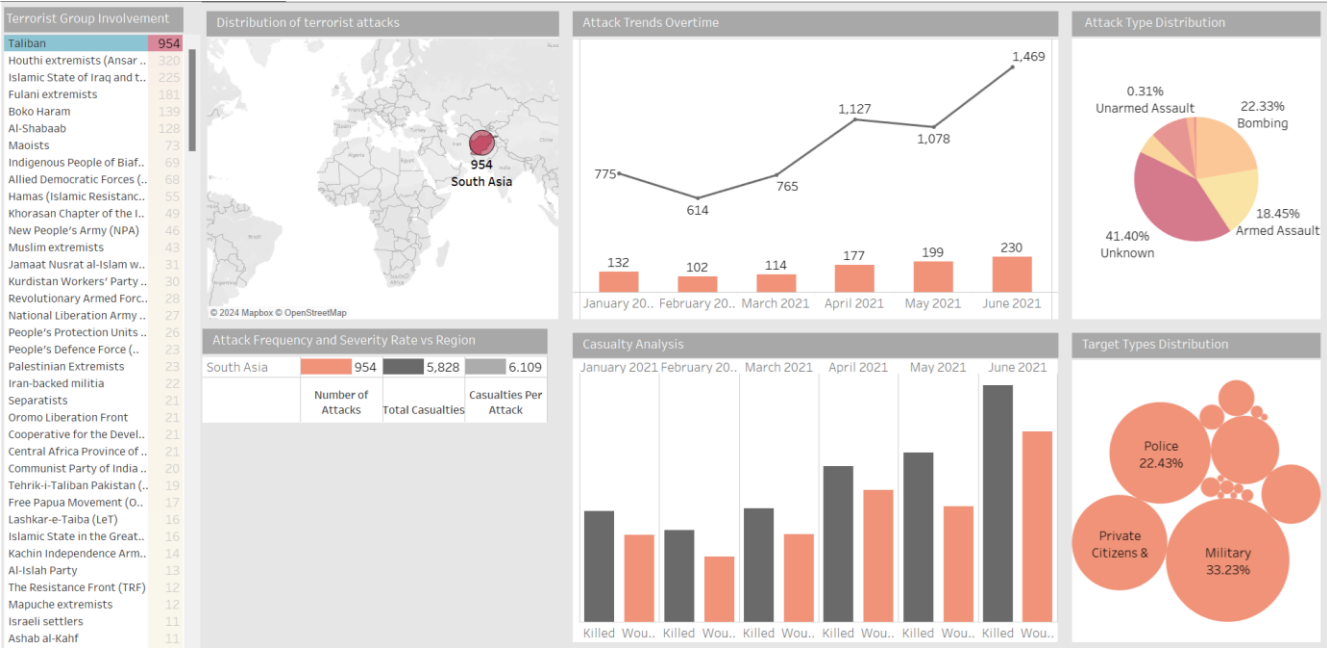
Perpetrator Analysis

- The Most Active Groups**
 - 1. Taliban:** Region: South Asia, Number of Attacks: 954, Total Casualties: 6,109 (including both killed and wounded), Casualties Per Attack: 6.11 (average)
 - 2. Houthi Extremists (Ansar Allah):** Region: Middle East & North Africa, Number of Attacks: 320, Total Casualties: 2,728, Casualties Per Attack: 8.53 (average)
 - 3. Islamic State of Iraq and the Levant (ISIL):** Region: Middle East & North Africa, Number of Attacks: 225, Total Casualties: 1,276, Casualties Per Attack: 5.67 (average)

- Key Insights:**

Strategic Focus on Bombings: All three groups predominantly use bombings as their primary attack method, indicating a shared strategy of causing widespread destruction and casualties.

Targeting Patterns: These groups heavily target military forces and civilians, with the Taliban also focusing significantly on police forces. This reflects their broader strategic objectives of destabilizing government control and spreading fear among the civilian population.





6. Casualty Analysis

Casualty Analysis

- **Fatalities vs. Injuries**

June 2021: The highest number of both fatalities (2,511) and injuries (1,762), indicating a significant peak in the severity of attacks during this month.

- **Average Casualties Per Attack:**

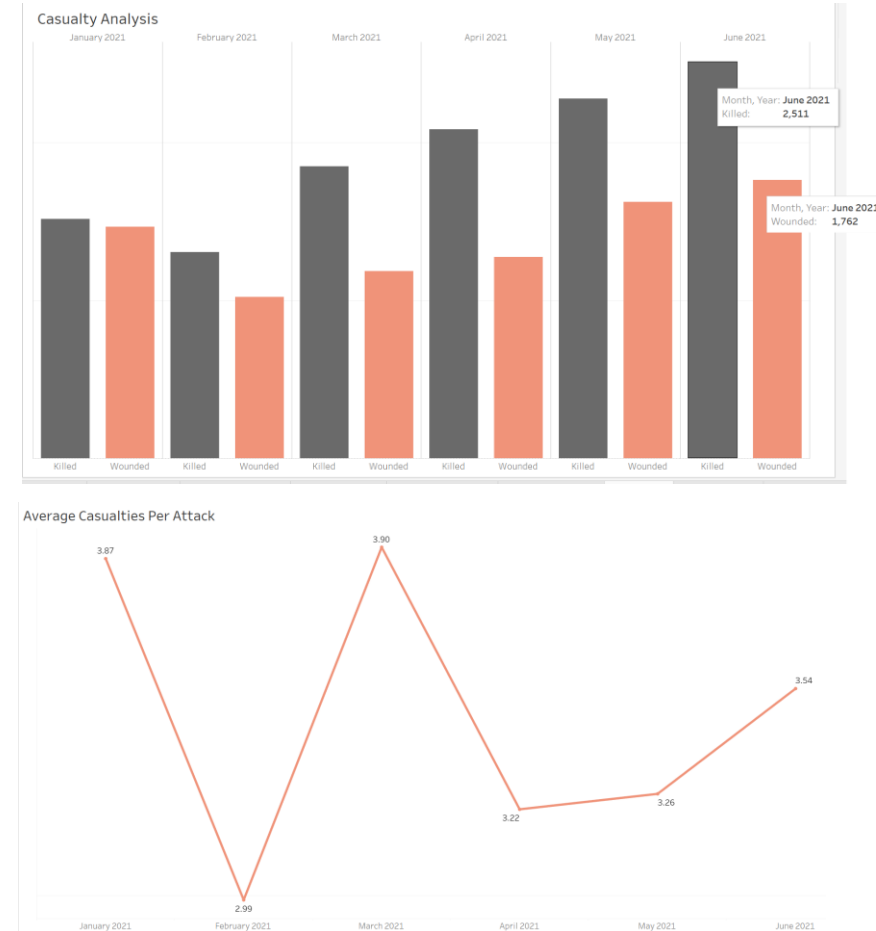
June 2021: A significant rise to 3.54, aligning with the high total casualties seen in the previous chart, indicating that the attacks in this month were not only frequent but also particularly deadly.

- **Trends in Casualty Rates:**

Overall Increasing Trend: The data shows an overall increase in both fatalities and injuries from January to June 2021, with notable peaks in March and June as June 2021 stands out as a period of extreme violence, with both the highest total number of casualties and a high average of casualties per attack.

- **Fluctuations in Severity:**

There are noticeable fluctuations in the severity of attacks that could be due to specific high-casualty events or a change in the tactics of the terrorist groups during these periods.

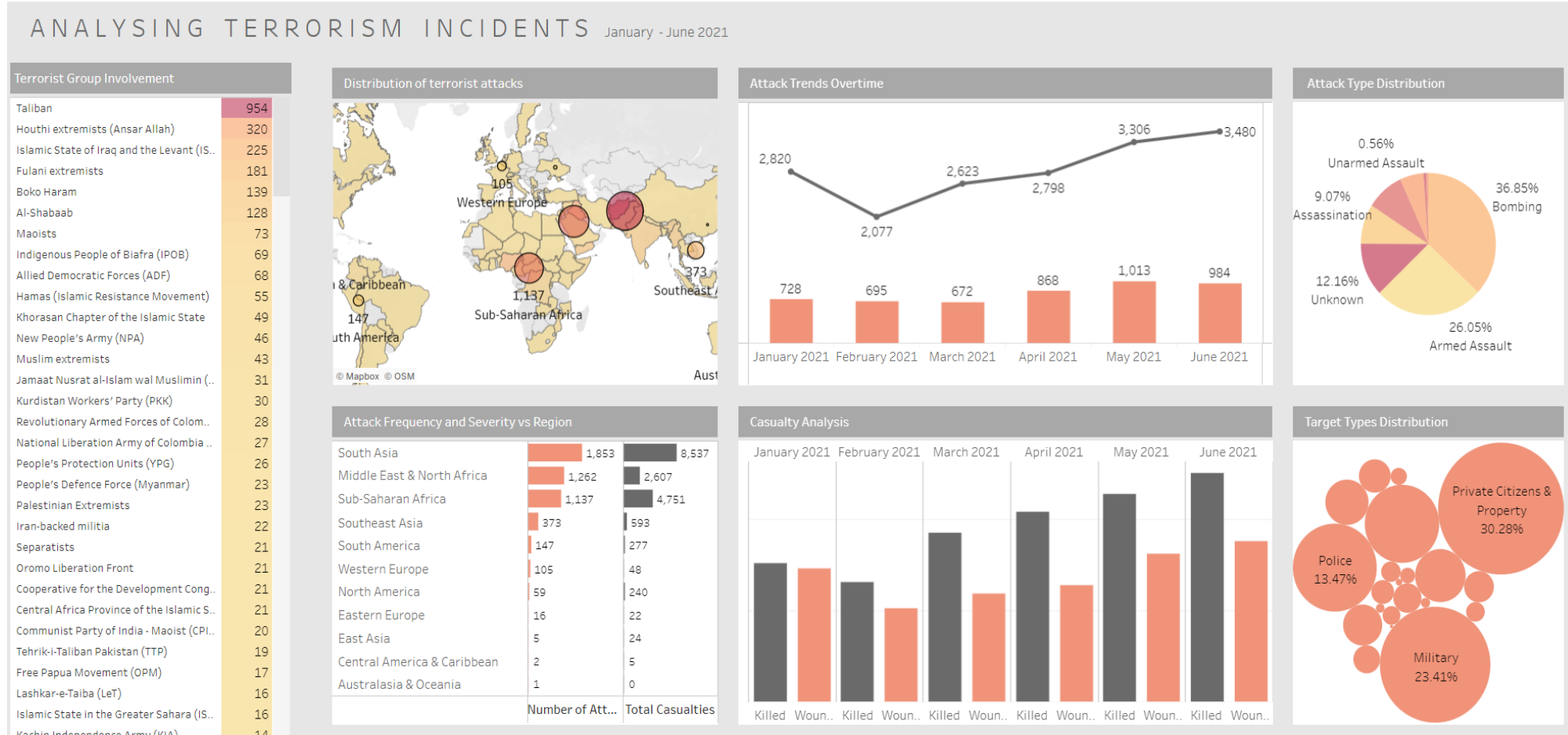




Dashboard

Dashboard Analyzing Terrorism incidents

- This interactive dashboard allows users to explore terrorism incidents by selecting different terrorist groups from the "Terrorist Group Involvement" list.
- All other visualizations update dynamically to reflect data specific to the selected group, providing a deep dive into the group's geographic reach, attack methods, casualty impact, and targeted sectors.
- This feature makes it a powerful tool for analyzing the specific behaviors and impacts of individual terrorist groups.





Conclusion

- ▶ **Geographic Concentration of Terrorism:** South Asia is the most affected region, remains a critical area for counter-terrorism efforts. Sub-Saharan Africa also exhibits a high casualty rate per attack, suggesting that they tend to be more deadly.
- ▶ **Temporal Trends in Terrorist Activity:** The highest number of terrorist incidents and the most casualties occurred in June 2021 suggests that the severity of attacks increased during this period, potentially driven by specific geopolitical events, such as the Taliban's offensive in Afghanistan.
- ▶ **Attack Methods:** Bombings/Explosions are the most prevalent attack methods, followed by armed assaults are favored by terrorist groups due to their potential for mass casualties and widespread fear. The prevalence of unknown attack methods indicates gaps in reporting, suggesting the need for better data collection and analysis.
- ▶ **Target Selection:** Private Citizens & Property and Military are the most frequently targeted, highlighting the vulnerability of civilians and state security forces to terrorist activities.
- ▶ **Perpetrator Analysis:** The Taliban is the most active terrorist group. Their activities align with their goal of destabilizing Afghanistan during the U.S. and NATO withdrawal.
- ▶ **Casualty Trends:** There is an overall increasing trend in casualties indicates a period of intensified terrorist activity and more deadly attacks.



Actionable Recommendations

- ▶ **Strengthen Regional Security:**
Prioritize South Asia and Sub-Saharan Africa with increased international cooperation, focusing on intelligence sharing and joint counter-terrorism efforts.
- ▶ **Monitor Geopolitical Triggers:**
Proactively address events like the Taliban's offensive that lead to spikes in terrorist activity through intensified diplomatic efforts.
- ▶ **Enhance Bomb Prevention:**
Invest in advanced bomb detection technologies and public awareness campaigns to mitigate the most common and deadly forms of attacks.
- ▶ **Protect Vulnerable Targets:**
Increase security for civilians, military, and police, with strategies like fortified checkpoints and community surveillance.
- ▶ **Improve Data Collection:**
Focus on better intelligence gathering to reduce the number of "unknown" attack methods, enhancing overall threat assessment.
- ▶ **Research Terrorist Tactics:**
Study the impact of geopolitical changes and evolving terrorist tactics to develop more effective defensive strategies.

THANK YOU



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