OESON Project 4: Analyzing Terrorism Incidents

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Introduction

- **Terrorism is defined as the unlawful use of violence or intimidation to cause mass panic.**

- **Those that participate in terrorism are known as terrorists & are a serious threat during times of peace.**

- **When conducted, the consequences of terrorism include the destruction of peace, property, & people.**

- **This presentation will look into incidents of terrorism that occurred during the year 2021.**
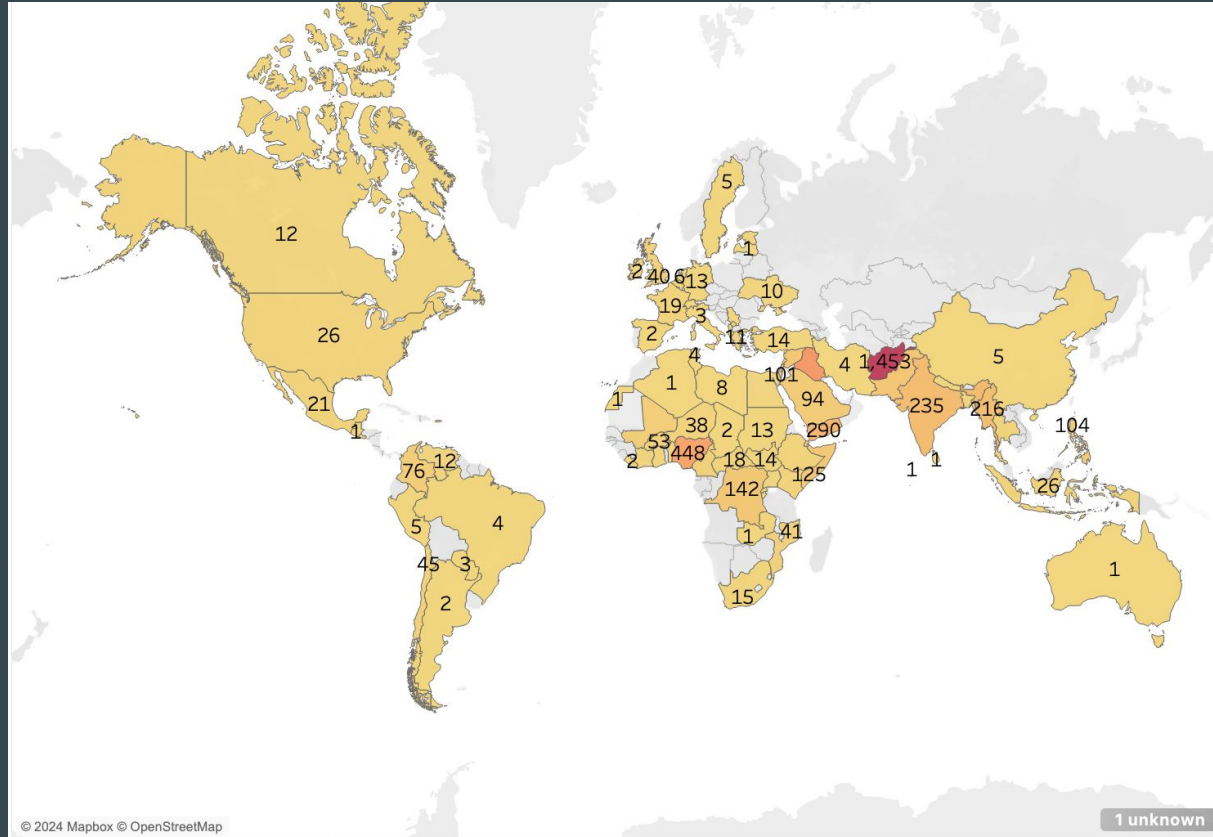
Background of the Dataset

- The dataset consists of terrosism incidents that occurred in the first half of 2021 (from January 2021 - June 2021).

- The type of information present in the dataset includes event details, attack types/targets, casualties, etc.

- For this project, it was ideal to focus on the first instance of certain variables as some columns had little data to work with.

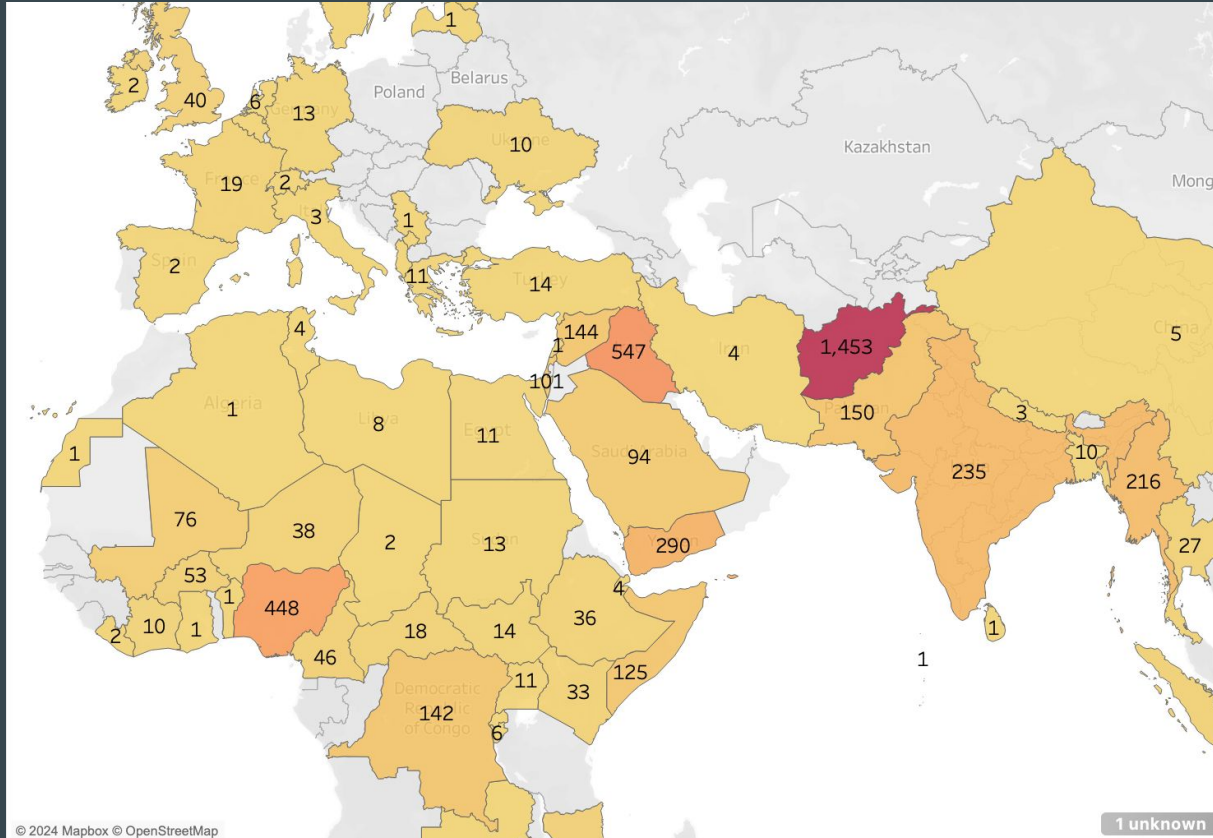- E.g. attacktype1, targtype1, targsubtype1, weaptype1.

Geographic Analysis

- To begin, a world map was created in Tableau to show the distribution of terrorist attacks around the world.

- Given that terrorist attacks are more common in some countries than others, color intensity is used to compare.

- The color palette used was Red-Gold, where colors closer to red indicate a higher intensity of terrorist attacks.

- Other visuals are incorporated to explore trends in attack frequency and severity.
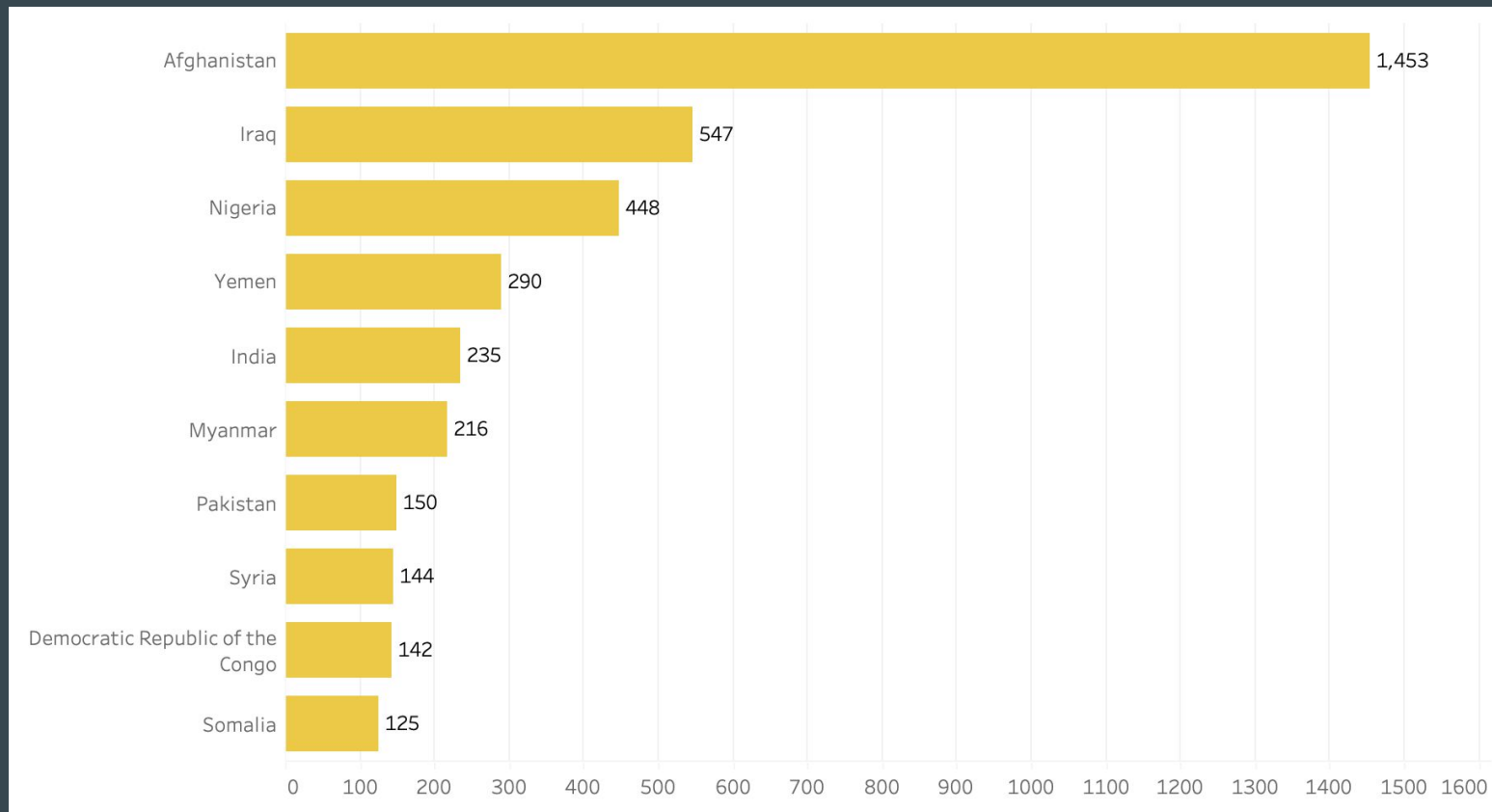
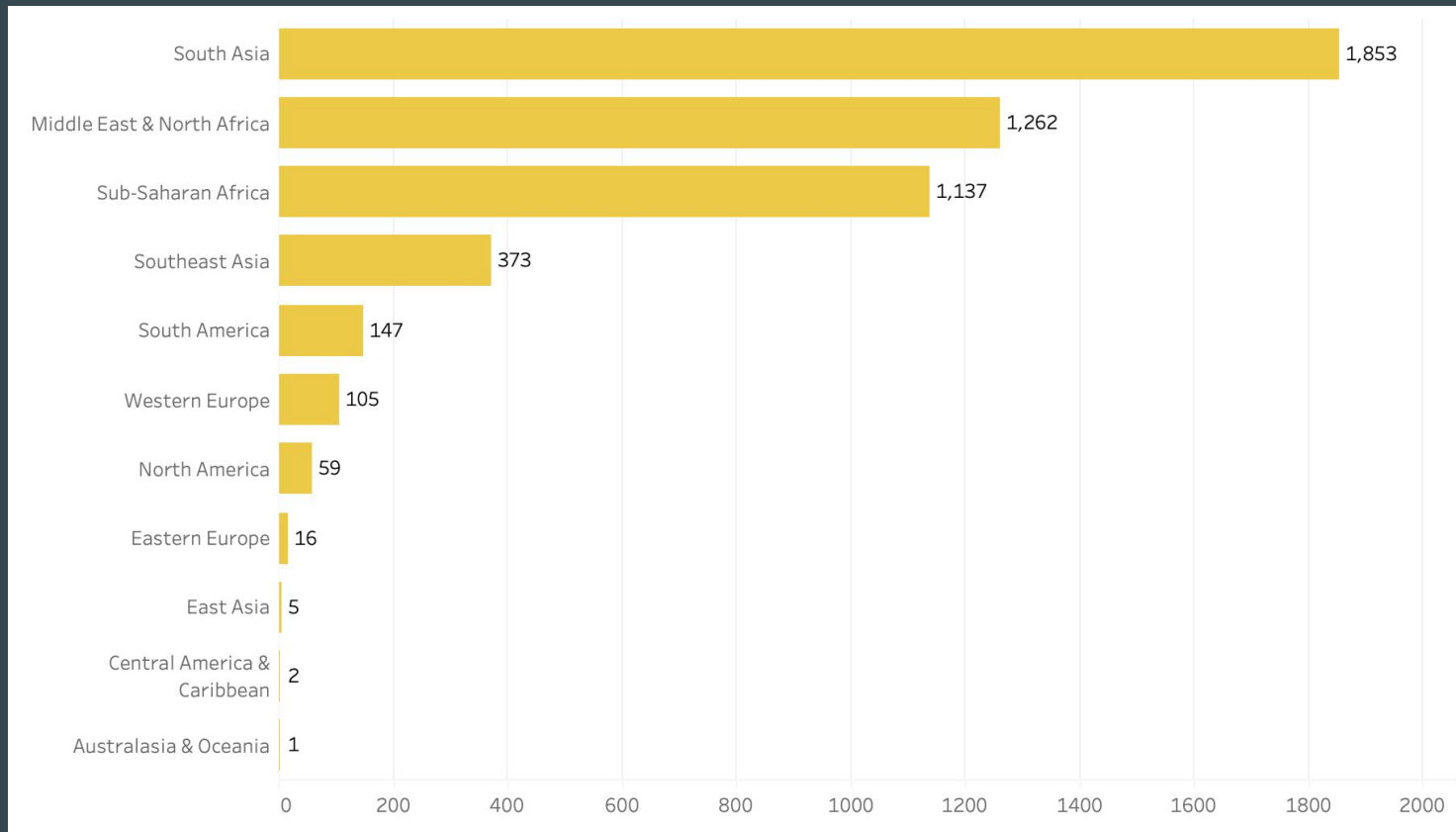# World Map of Terrorist Incidents

A Closer Look at the World Map

Countries with the Highest Attack Frequency

Country	Attacks
Afghanistan	1,453
Iraq	547
Nigeria	448
Yemen	290
India	235
Myanmar	216
Pakistan	150
Syria	144
Democratic Republic of the Congo	142
Somalia	125

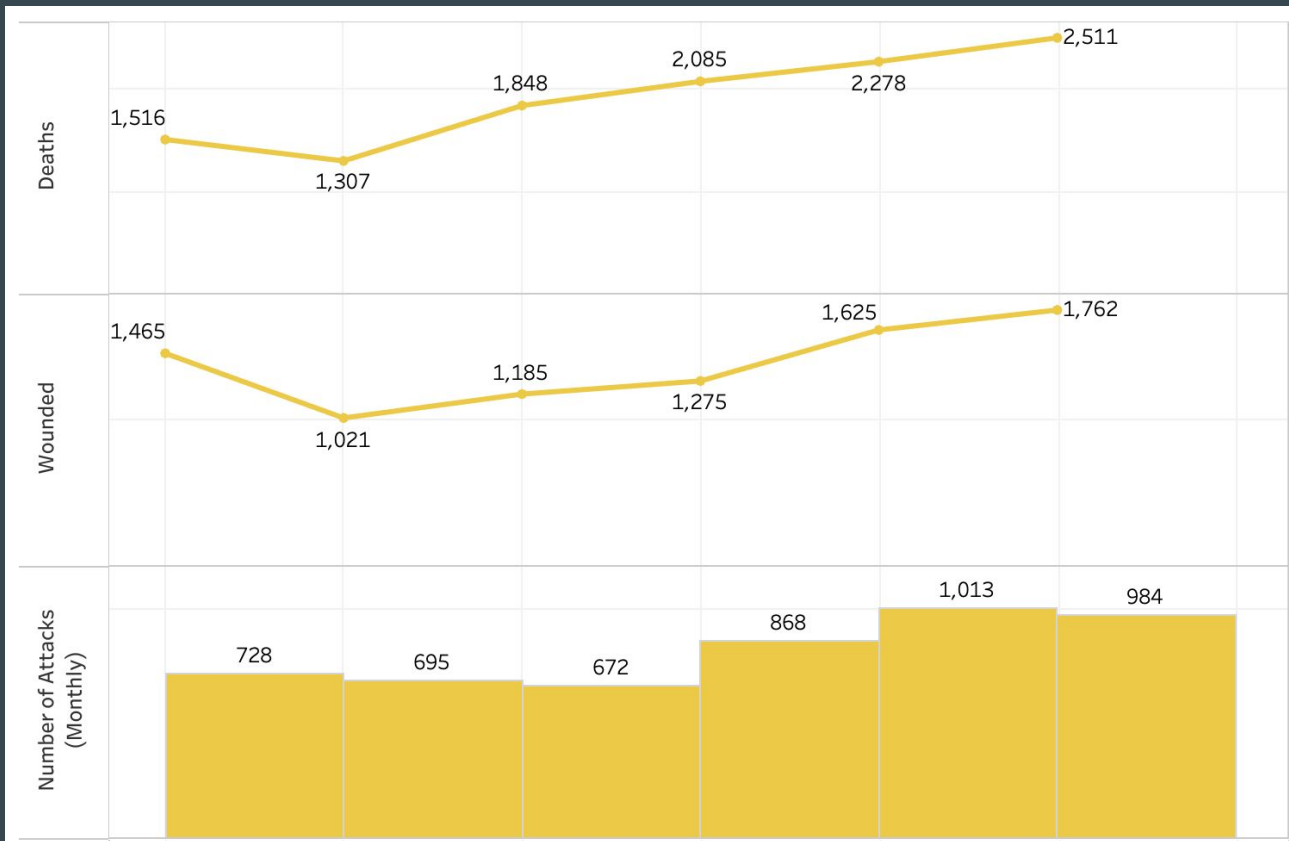# Attack Frequency/Severity by Region

Significant Findings

- **The United States experienced 26 known terrorist incidents in the first half of 2021.**

- **The 3 countries with the most known incidents were Afghanistan, Iraq, & Nigeria.**

- **Similarly, the 3 regions with the most known incidents were South Asia, Middle East/North Africa, & Sub-Saharan Africa.**

- **On the contrast, the 3 regions with the least known incidents were Australasia/Oceania, Central America, & East Asia.**

Temporal Analysis

- Given that the dataset covers 6 months of entries, it is ideal to create time-series visuals to analyze trends over time.

- Creating time-series visualizations is useful in observing and identifying peak periods of terrorist activity in the data.

- Visuals were made to show the number of deaths, wounded, and attacks per month.
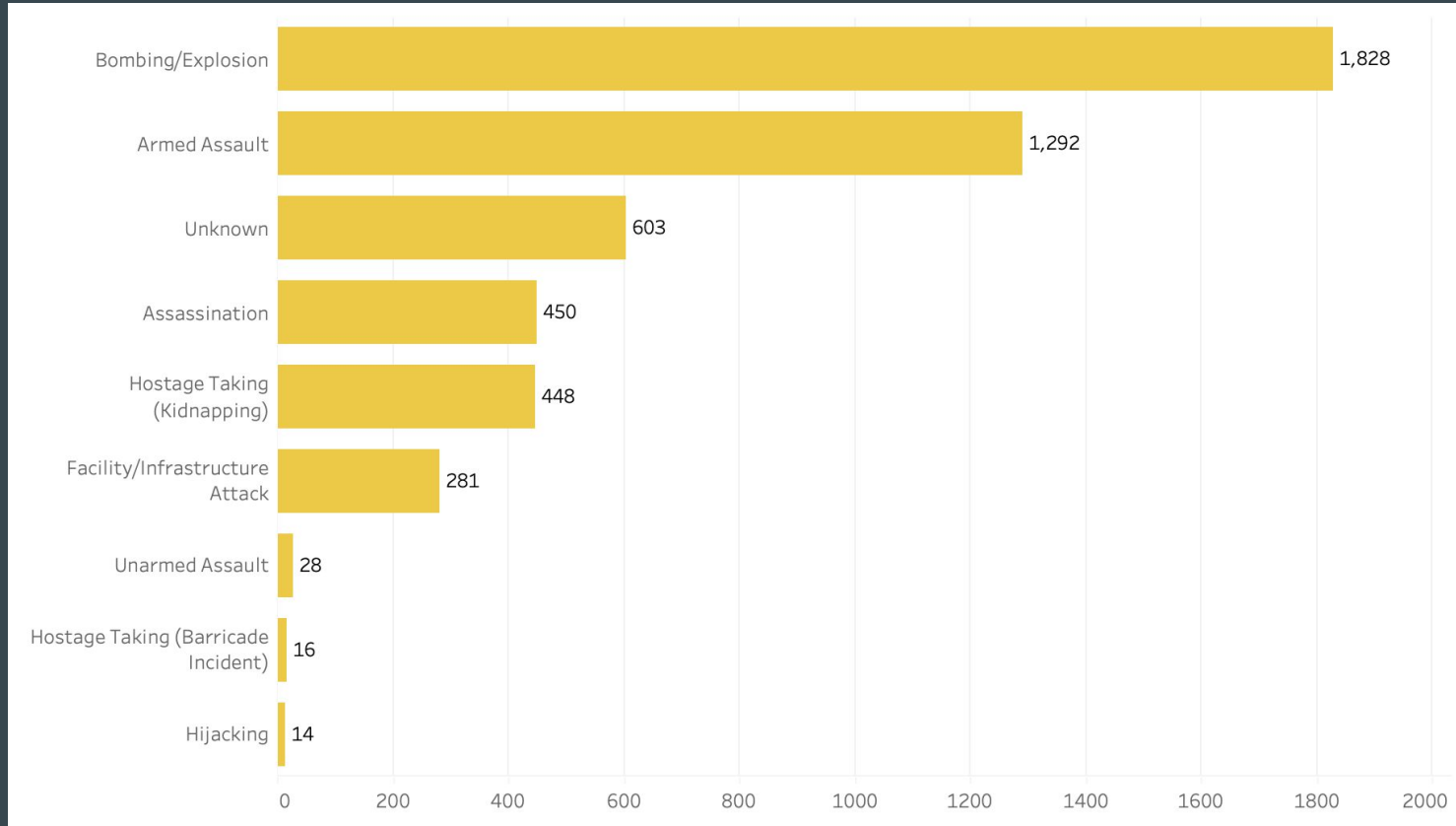
Visuals for Temporal Analysis

Significant Findings

- From the visuals, it can be noted that deaths were most frequent in the months of April, May, & June.

- Similarly, attacks were most frequent in these months as well, with the most incidents occurring in the month of May.

- Surprisingly, more people were wounded in the month of January compared to April.

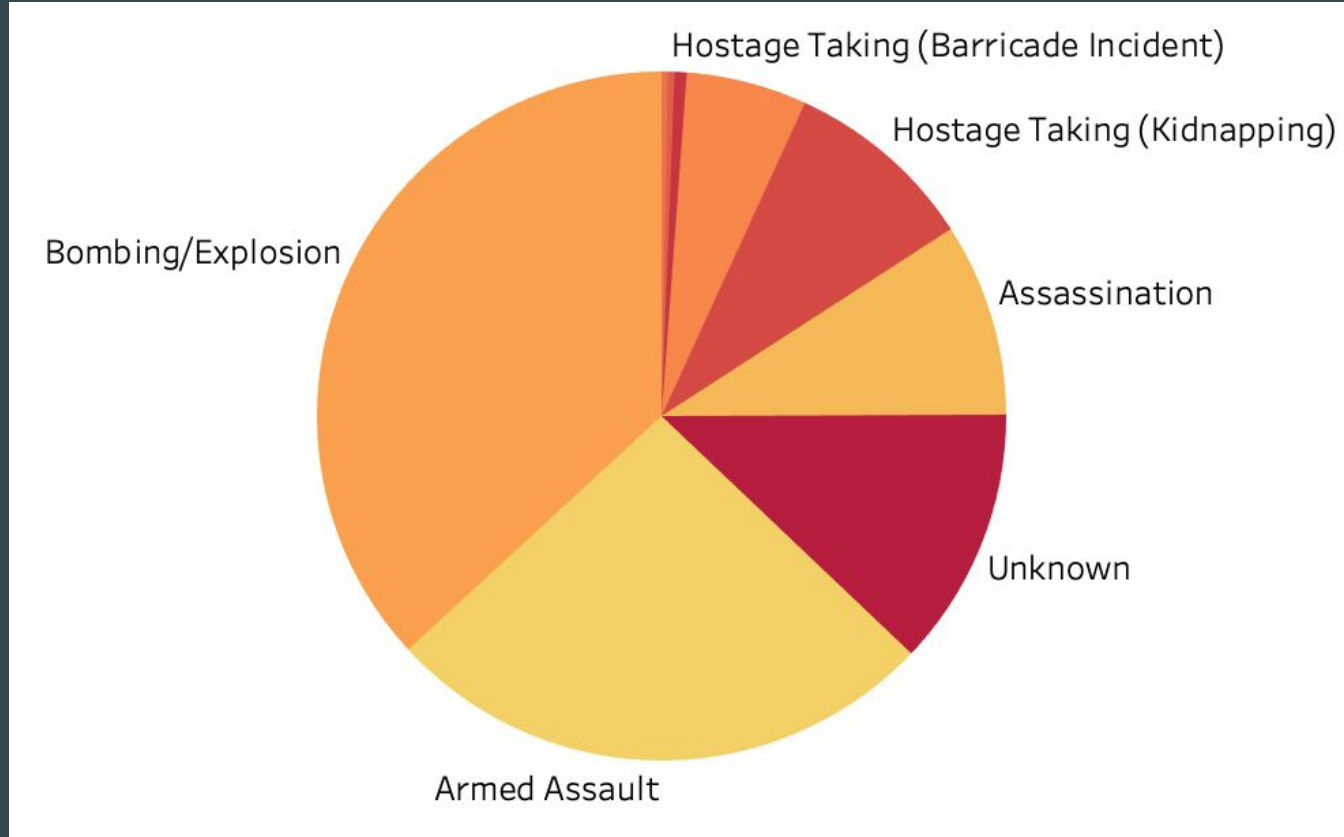- The most amount of casualties occurred in June, while the least amount occurred in February.

Attack Type Analysis

- **The dataset provides information regarding different attack types used in terrorist incidents.**

- **Examples of methods include bombing, armed assault, assassination, & hostage taking.**

- **The distribution of these attack types were analyzed to identify the most prevalent methods & their impact.**

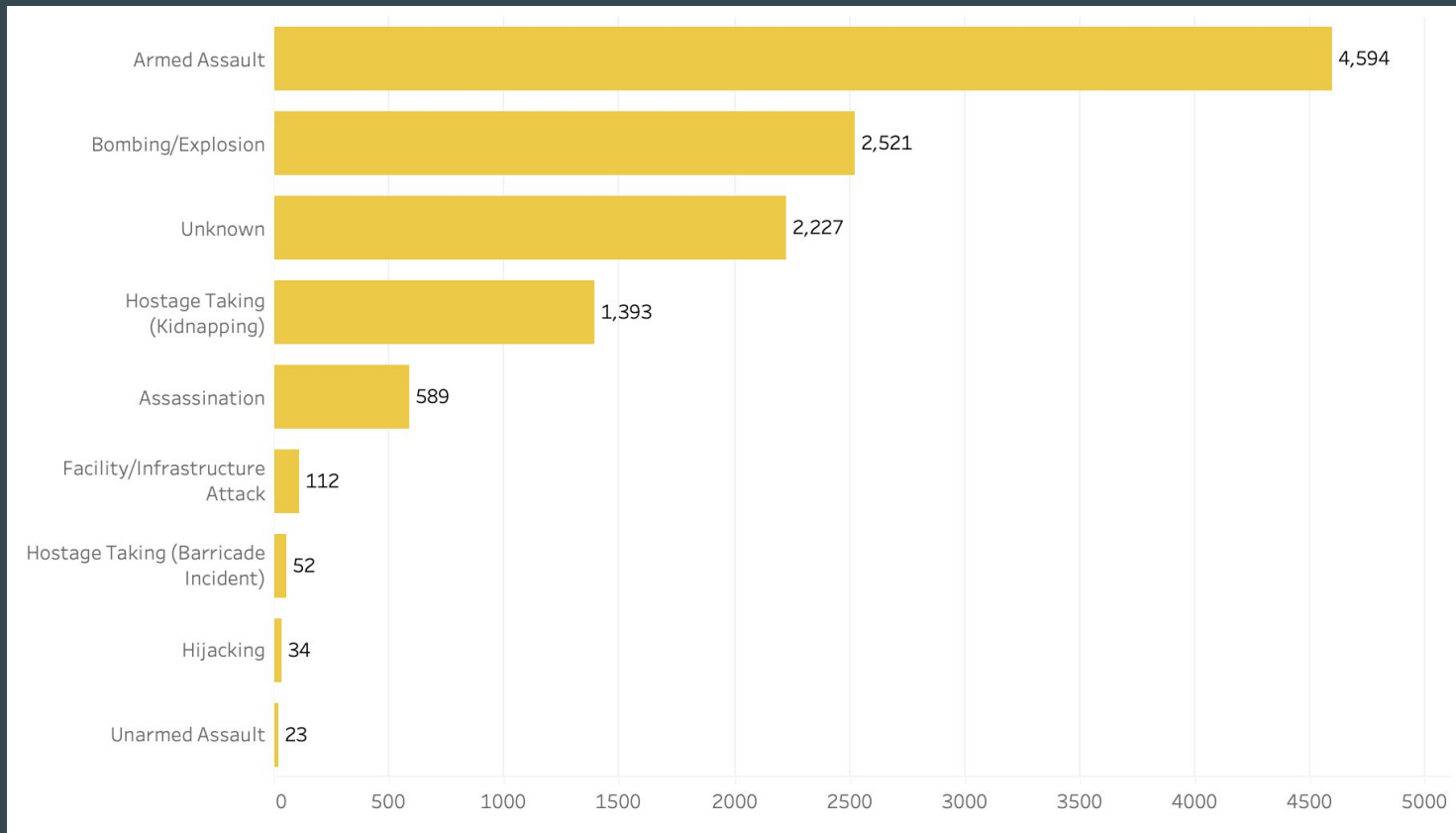- **The following slides provide significant visuals towards the attack methods & their impact.**

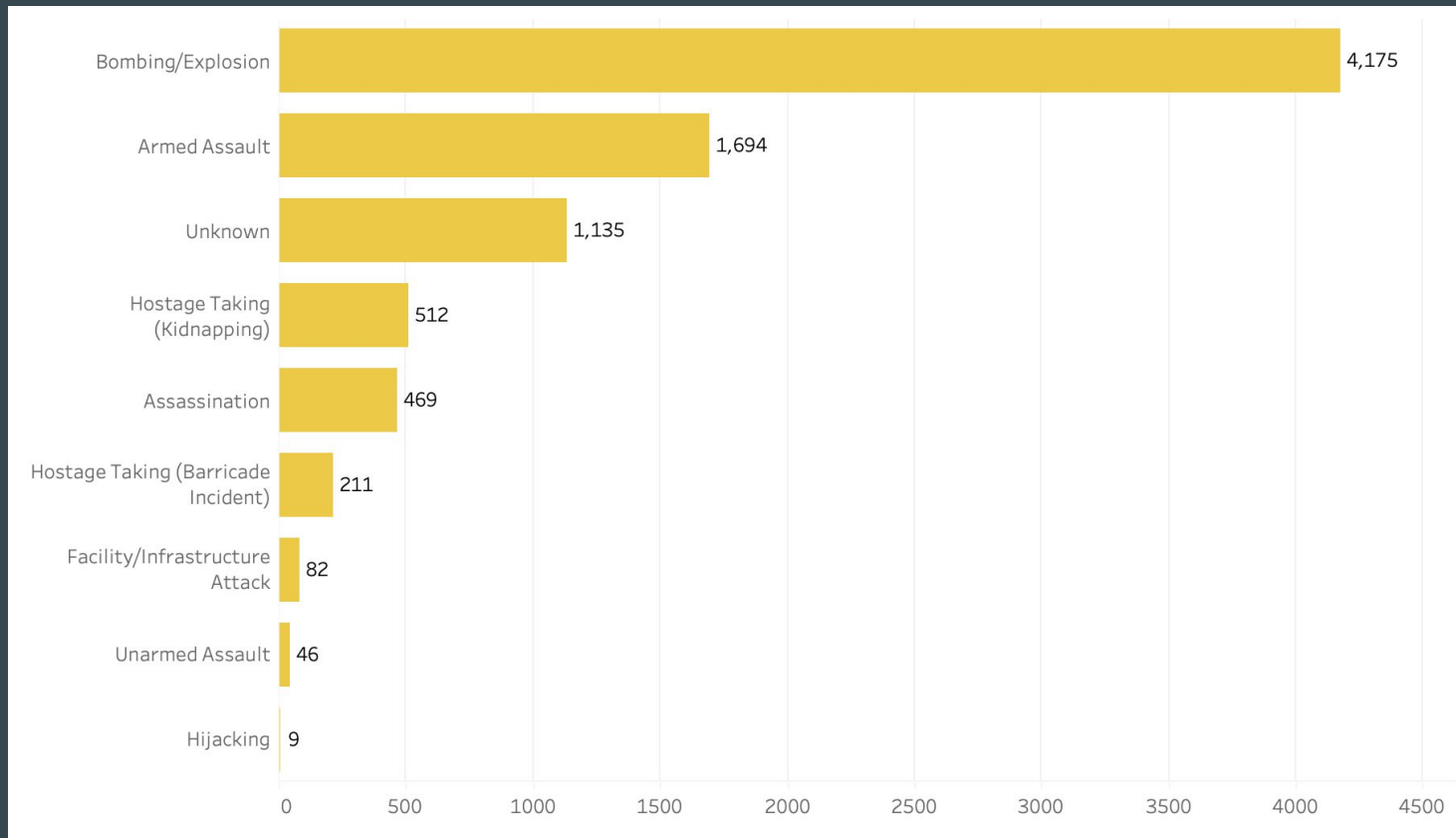# Distribution of Attack Types

Attack Type Distribution (Pie Chart)

Distribution of Deaths by Attack Type

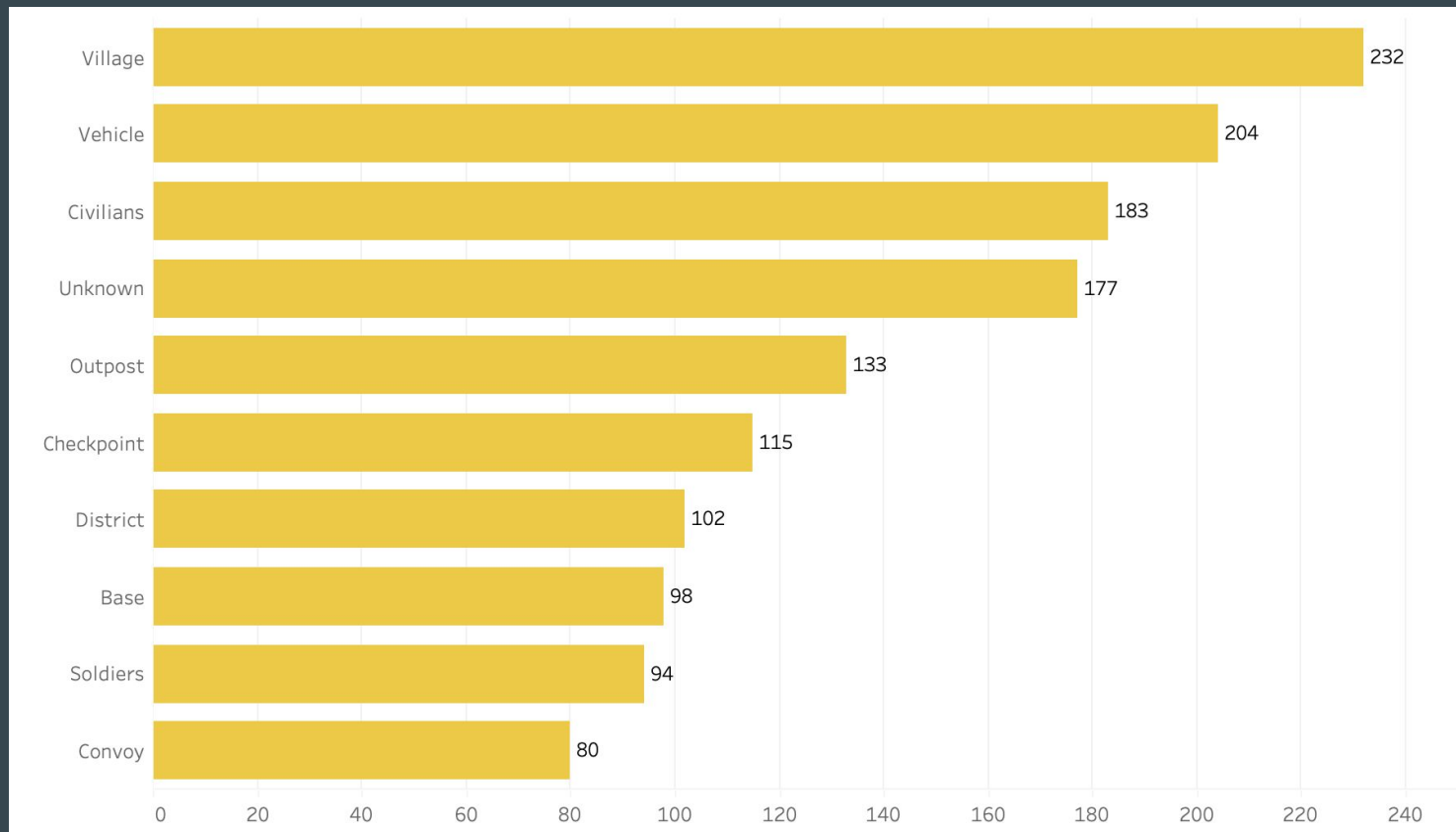# Distribution of Wounded by Attack Type

Significant Findings

- **Excluding unknown, the 3 most common attack methods were bombing/explosion, armed assault, & assassination.**

- **On the other hand, the 3 least common attack methods were hijacking, hostage taking, & unarmed assault.**

- **From the pie chart, it can be observed that bombing & armed assault contribute to over 50% of all attack methods.**

- **Armed assault is the most responsible for death, while bombing is the most responsible for injury.**
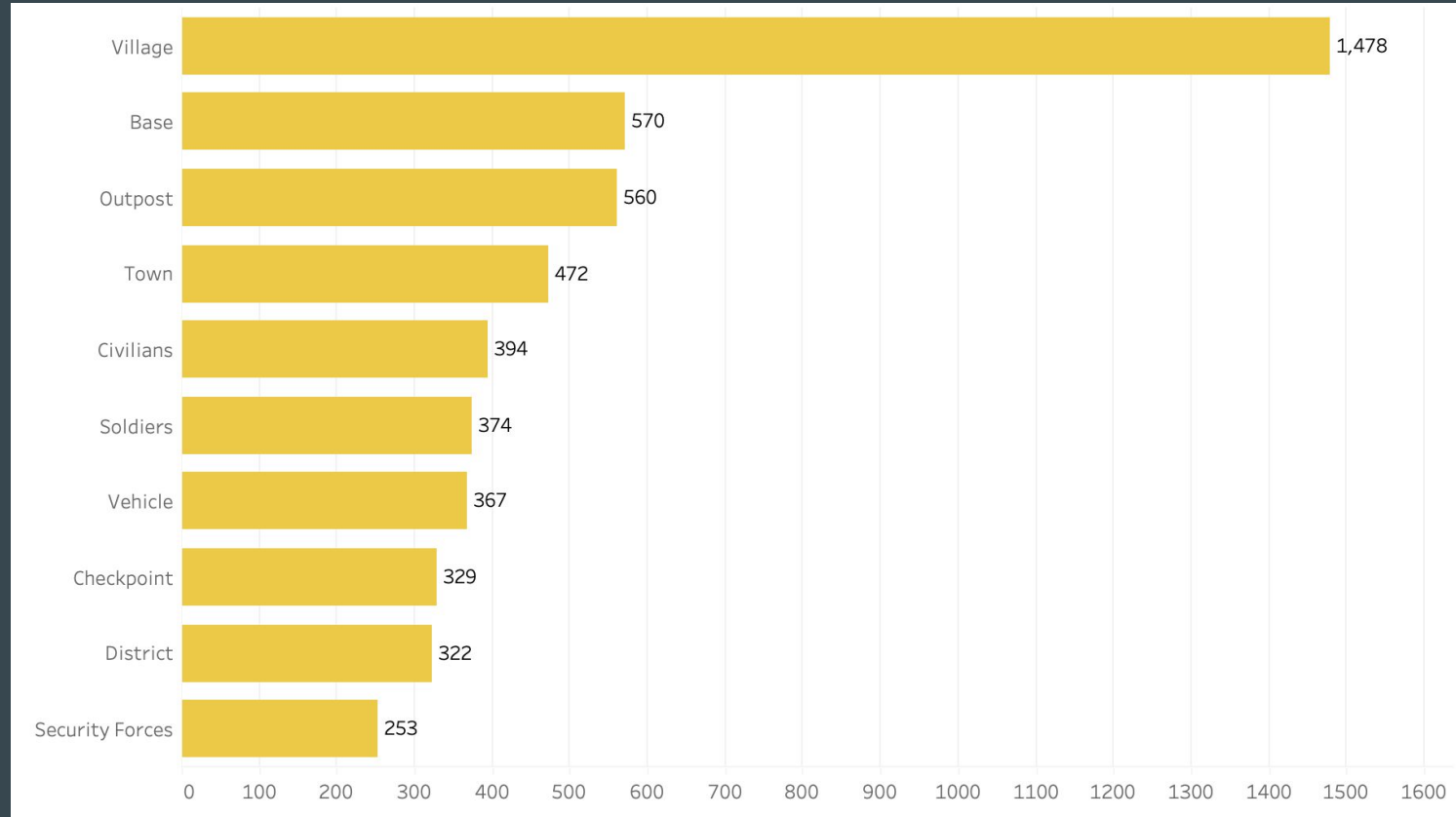
Target Analysis

- **The typical motive for most terrorist incidents is to achieve political or ideological aims.**

- **The dataset will be used to analyze the types of targets most common in the first half of 2021.**

- **Additionally, the vulnerability of these targets will be assessed using the total number of deaths per target.**

The 10 Most Common Targets in 2021

The 10 Most Vulnerable Targets (Based on Total Deaths)

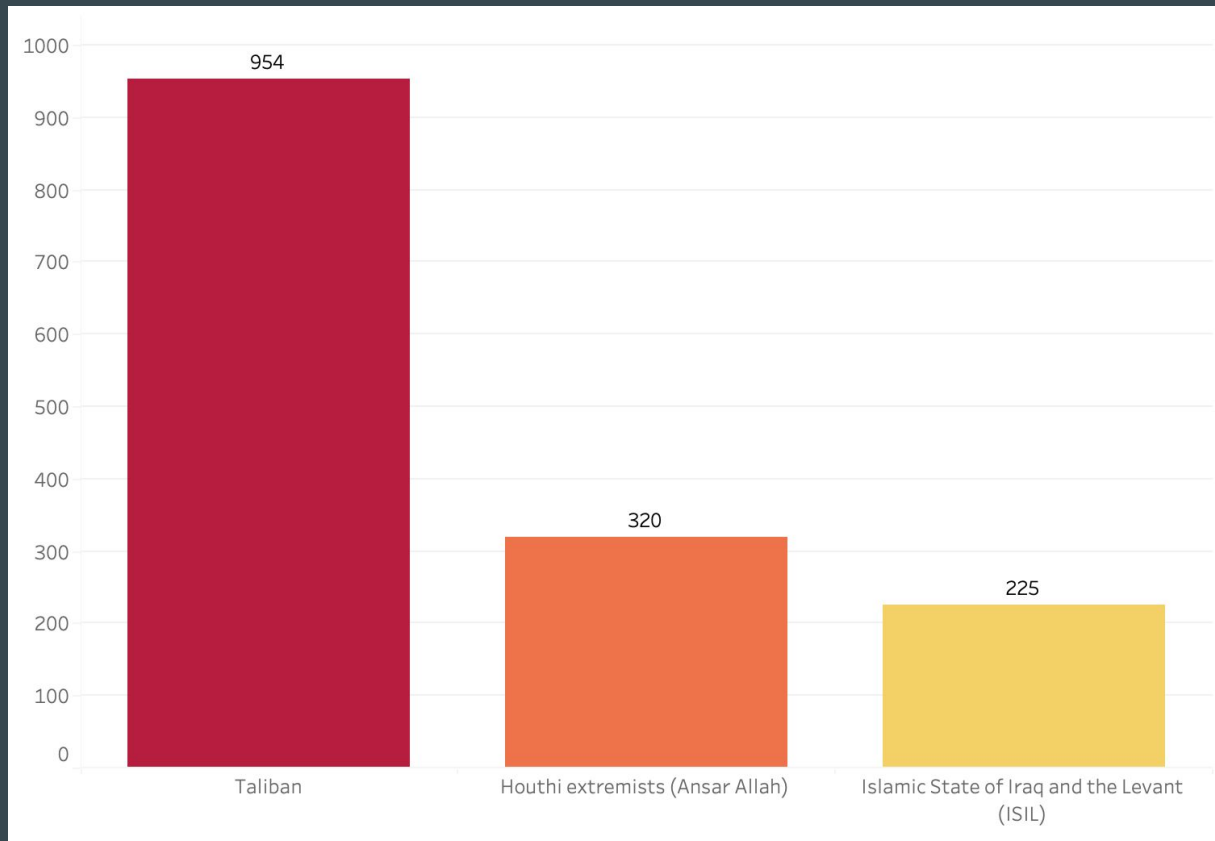| Target	Total Deaths
Village	1,478
Base	570
Outpost	560
Town	472
Civilians	394
Soldiers	374
Vehicle	367
Checkpoint	329
District	322
Security Forces	253

Significant Findings

- **The most common targets for terrorist incidents in early 2021 were villages, vehicles, & civilians.**

- **According to the data, the most vulnerable targets were villages, military bases & outposts.**

- **The number of deaths that occurred in villages are more than the deaths from military bases & outposts combined.**

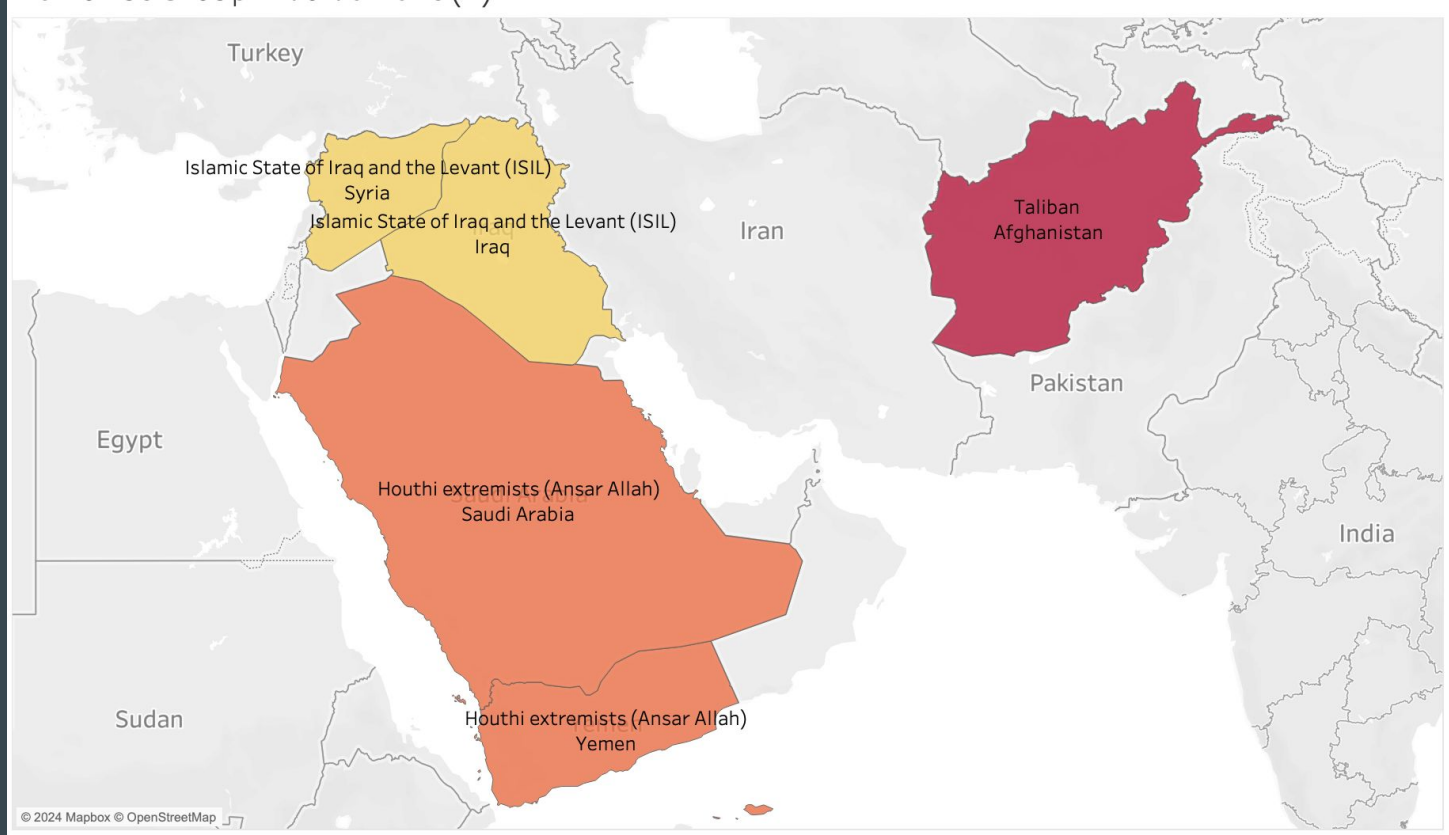- **Using this knowledge, it can be inferred that villages are underdeveloped in defense.**

Perpetrator Analysis

- **The dataset provides over 100 terrorist group names involved in terrorist incidents in early 2021.**

- **For simplicity, the data will be narrowed down to the three most involved terrorist groups.**

- **Afterwards, analysis will be conducted regarding observable characteristics of the groups.**
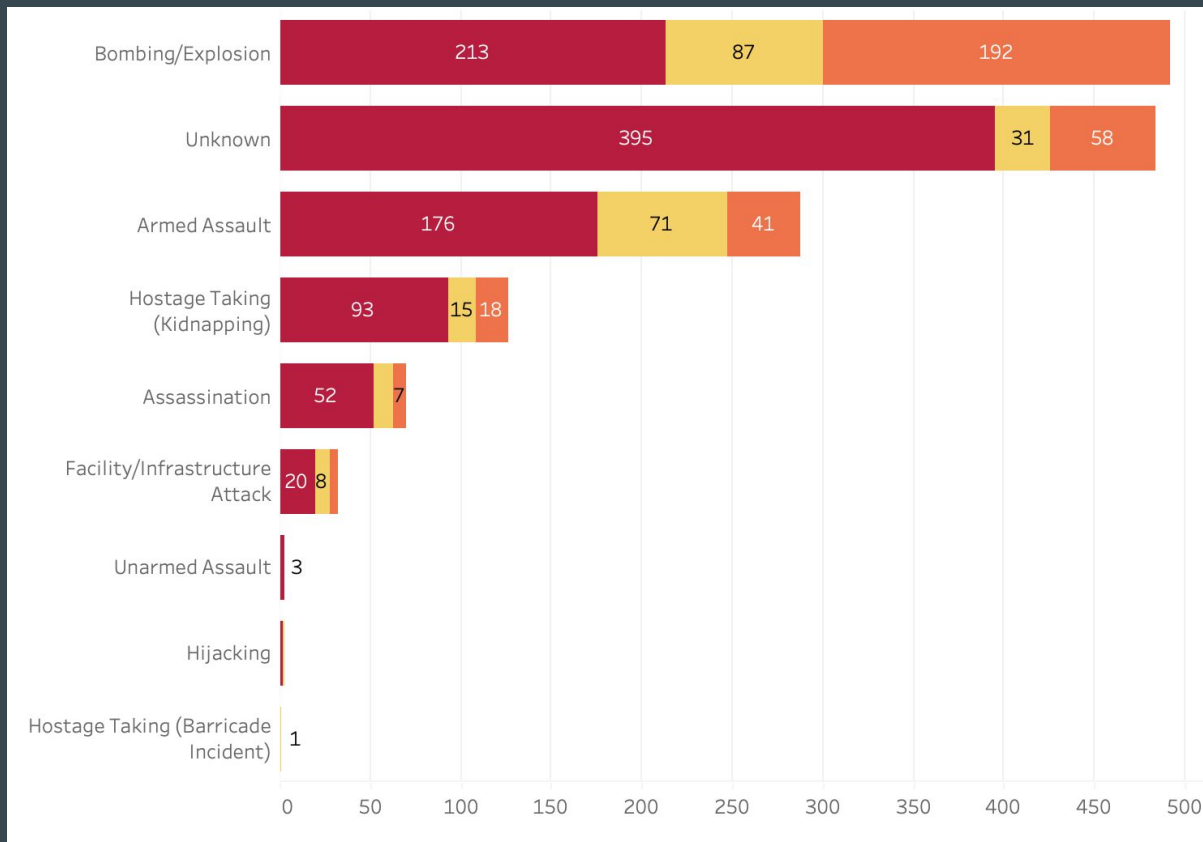
The 3 Most Involved Terrorist Groups

Attack Locations by Group
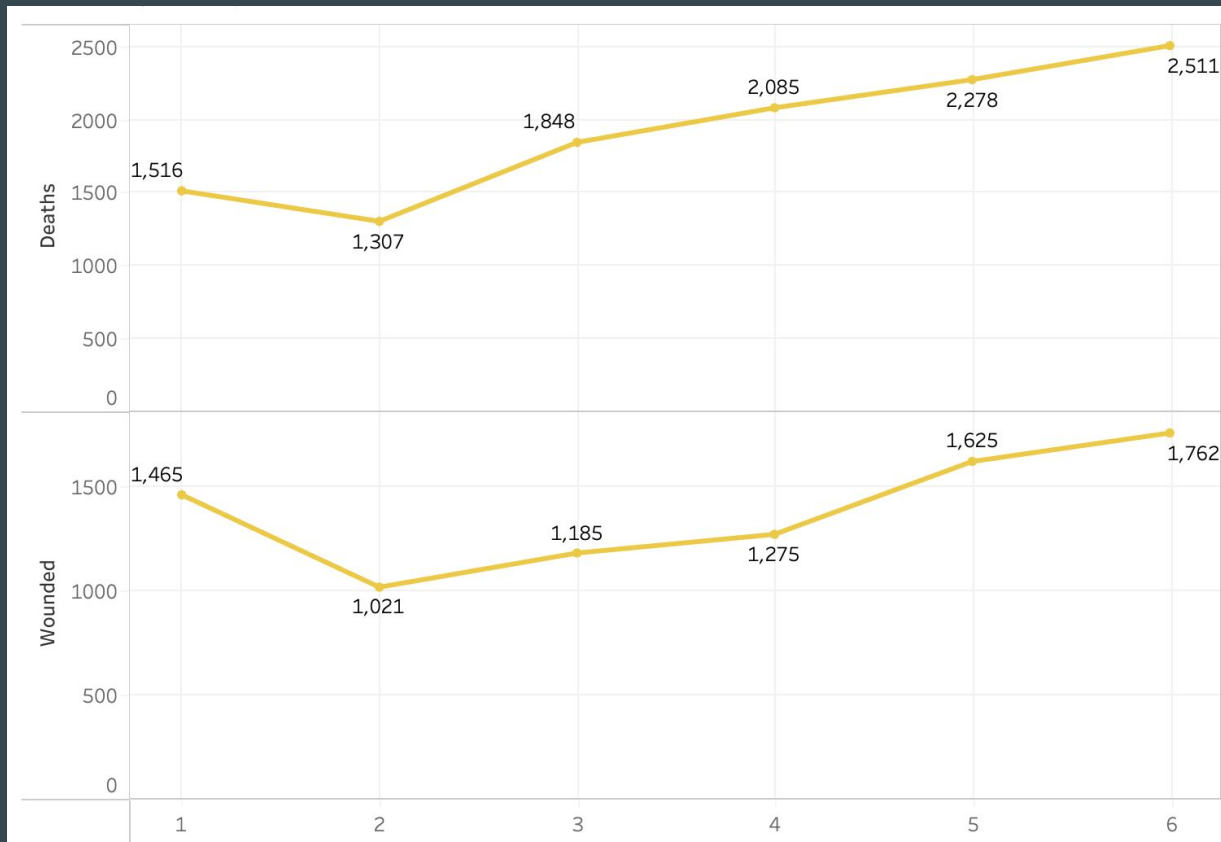
Attack Methods by Groups

Significant Findings

- **Taliban has been involved in more attacks than the Houthi extremists & ISIL combined.**

- **Despite being involved in more attacks, Taliban's actions are solely located in Afghanistan.**

- **All 3 groups are especially known to use bombing and armed assault as attack methods.**

Casualty Analysis

- As seen previously, the total casualties as deaths always surpassed the total casualties as wounded each month.

- Looking closely at the line graphs, it is evident that both graphs share characteristics as well.

- For example, deaths/wounds were most common in June and least common in February,

- The total number of deaths/wounded are almost identical in the month of January.

Deaths/Wounded per Month

Conclusion

- From the analysis, one can conclude that a terrorism incident is most likely to occur in Afghanistan in the months of May & June.

- Considering that common targets are villages & citizens, it is recommended for countries to strengthen inner defenses to protect civilians from these attacks.

- Of course, continuous efforts should also be made to reduce the number of terrorist incidents that especially occur in South Asia & parts of Africa.