

Summary Report: Global Shark Attack Analysis (1900-2017)

Overview

This analysis examines 4,223 recorded shark attacks worldwide, identifying key trends in fatalities, victim demographics, geographical hotspots, and species behaviour. The dashboard reveals critical insights for marine safety programs, tourism operators, and conservation efforts, with a 21.45% fatality rate (906 deaths) and significant regional/species-specific risks.

Data Cleaning

- Removed nulls
- Convert some nulls to “No data”
- Normalized column formats (Date, Year, Sex, Fatal)
- Created new column such as Age group, Day, Species and Body part
- Handled inconsistent species names and ambiguous injury descriptions

Key Findings

1. Risk Profile

- 72.8% of attacks were unprovoked, while 9.9% involved human provocation.
- Peak months: July–August (929 attacks combined).
- Time of day: 48% occurred during daylight hours.

2. Victim Demographics

- 80.37% male victims (10.82% female)
- Children (0–10 years) most vulnerable (1,647 incidents; 39% of total).
- Average victim age: 17.6 years.

3. Geographical Hotspots

- Top 3 countries: USA (1,676 attacks), Australia (953), South Africa (438).
- USA breakdown: Florida alone accounted for 808 attacks (48% of U.S. total).

4. Species Analysis

- Great White Sharks were the most lethal (356 attacks).
- Tiger Sharks (176) and Bull Sharks (154) followed in frequency.

5. Injury Patterns

- Most targeted body parts: Legs (497), Feet (461), and Arms (276).
- 503 cases resulted in no injury, suggesting near-misses or minor encounters.

Recommendations

1. Targeted Safety Measures: Focus on Florida, Australia, and South Africa during peak seasons.
2. Child Protection: Implement supervised swimming zones and education for young beachgoers.
3. Species Monitoring: Increase tracking of Great White Sharks near high-traffic beaches.
4. Data Improvement: Standardize reporting for provocation status and species identification.

Limitations

Incomplete data: 17.29% of gender records and 10.82% of fatality outcomes are unknown.

Conclusion

This analysis underscores the importance of context-aware marine safety strategies, particularly for young males in high-risk regions. While shark attacks remain rare, understanding these patterns can save lives and improve public awareness. Future work should integrate environmental data (e.g., water temperature) to refine risk predictions.

Tools Used: Power BI, DAX, Power Query