

PROJECT REPORT

TEAM ID: LTVIP2025TMID48417

PROJECT NAME: Heritage Treasures: An In-Depth Analysis of UNESCO World Heritage Sites in Tableau

1.INTRODUCTION

1.1 Project Overview

Heritage Treasures: An In-Depth Analysis of UNESCO World Heritage Sites is a data visualization project that explores the global distribution, classification, and significance of UNESCO World Heritage Sites. Using Tableau, this project provides interactive dashboards and insightful analytics to highlight geographical, cultural, and historical patterns across these globally recognized sites.

1.2 Purpose

The purpose of this project is to create an interactive and informative platform to understand the richness of UNESCO World Heritage Sites. It aims to identify trends in the types, locations, and conservation status of these sites while promoting awareness about cultural and natural preservation across the world.

1.3 Executive Summary

UNESCO World Heritage Sites are landmarks of cultural, natural, and historical significance recognized for their outstanding value to humanity. This project analyzes the UNESCO World Heritage dataset to deliver key insights through Tableau dashboards. Users can explore sites by country, year of inscription, type (cultural/natural/mixed), and region. The analysis helps identify the nations with the most heritage sites, the growth in inscriptions over the years, and the regional concentration of different site types. Through this project, stakeholders such as researchers, tourists, and cultural conservationists can gain a deeper understanding of the global heritage landscape.

2.project purpose

- To explore and visualize UNESCO World Heritage data effectively.
- To identify geographical and categorical trends in the dataset.
- To create awareness of global cultural and natural preservation efforts.
- To support data-driven storytelling around world heritage.

3. Project objectives

- 🔍 **Data Integration:** Collect and clean the UNESCO World Heritage Sites dataset for analysis.
- 🔍 **Visualization:** Develop interactive Tableau dashboards to present insights.
- 🔍 **Trend Analysis:** Analyze the number of sites over time, by region and type.
- 🔍 **Comparative Study:** Compare countries and continents based on site count and types.
- 🔍 **Public Awareness:** Present findings in a visually compelling manner for educational and awareness purposes.

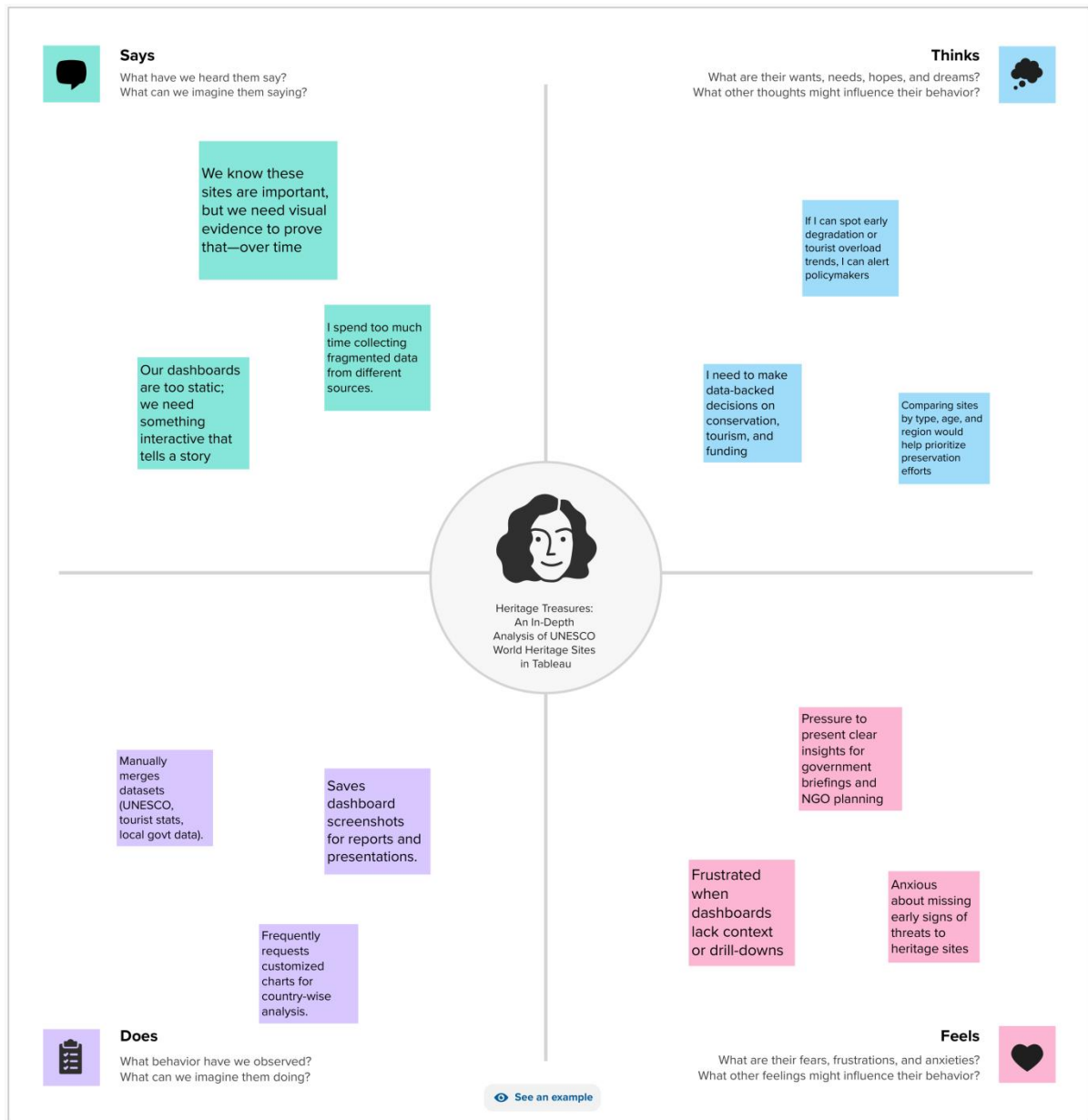
4. Methodology

1. **Data Collection:** Source data from the UNESCO official database or CSV-formatted open datasets.
2. **Data Cleaning:** Preprocess the data using Microsoft Excel or Python (Pandas) to remove null values, duplicates, and inconsistencies.
3. **Data Analysis:** Perform exploratory data analysis to uncover trends and patterns.
4. **Visualization:** Create multiple dashboards in Tableau, including:
 - Site Distribution by Region and Country
 - Site Types (Cultural, Natural, Mixed)
 - Year-wise Inscription Trends
 - Threatened Sites Overview
5. **Evaluation:** Test dashboards for usability, clarity, and data accuracy.

5. Technologies used

- **Tableau Desktop & Tableau Server**
- **Alteryx for ETL processes**
- **UNESCO World Heritage Sites Data (CSV/API)**

EMPATHY MAP CANVAS:



Brainstorm, Idea Listing and Grouping

2

Brainstorm
Write down any ideas that come to mind that address your problem statement.

🕒 10 minutes

Build story dashboards explaining yearly additions to the World Heritage List.

Add toggle to view endangered heritage sites only.

Use Tableau parameters to simulate conservation funding needs under different scenarios.

Create an interactive world map showing all UNESCO sites by continent and country.

Include comparison between countries with most listed sites (India vs. Italy vs. China).

Visualize the distribution of cultural vs. natural vs. mixed sites globally.

Create time-lapse charts to show growth in World Heritage Sites over decades.

3

Group ideas
Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

🕒 20 minutes

Geographical Insights

Country-wise UNESCO site distribution

Regional density map (Asia, Europe, etc.)

Continent-wise comparison of site types

Time-Based Trends

Decade-wise growth in site listings

Policy milestones vs. site count impact

Story dashboard of India's heritage evolution

Stakeholder Reporting & Insights

KPI-based summary dashboard for UNESCO planners

Country-wise funding vs. site count visual

Executive story view for tourism authorities

Advanced & Interactive Features

Toggle filters for themes (religious, natural wonders, etc.)

Use parameters to simulate different preservation budgets

Mobile-friendly dashboard with map-based drill-downs

Customer Journey Map:

Stage	Need	Action	Touchpoint	Pain point	oppurtunity
Discover	Wants overview the global heritage site distribution	Searches UNESCO lists,open data	UNESCO site,Excel,PDF's	Data is scattered&in consistent	Unified dashboard entity point
Explore	Need insights by region,site,type ,or criteria	Browses raw data,maps manually	Government sites,GIS tools	Time-consuming &lacks filtering	Interactive,filterable

Engage	Wants to Compare sites by Country or preservation risk	Tries custom Visualizations	Excel maps,reports	Lacks visual storytelling	Pre-built comparative dashboard
Decide	Prepares reports for policy or funding decisions	Creates graphs,screenshots	Presentations, word docs	Static content,lacks interactivity	Use tabl&exports eau stort points with captions

Technology Stack:

S.No	Component	Tool/Technology	Purpose
1.	Data Source	CSV, JSON files	UN cat
2.	Visualization	Tableau Desktop	Cr stor
3.	Storage	Google Drive / Local	Sto
4.	Collaboration	Google Docs, Slack	Tea doc
5.	Deployment	Tableau Public / Server	Sha sta

Project Planning:

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story
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Sprint-1	Data collection	USN-1	As a user, I can collect the data into the processing environment	3
Sprint-2	Data processing	USN-2	As a user, I can filter missing values in the dataset	2
Sprint-3	Data processing	USN-3	As a user, I can merge data into a single categorized dataset	2
Sprint-4	Making(Visualization & interpretation)	USN-4	As a user, I can view the dataset in a interactive visualized form	5
Sprint-5	Testing & deployment	USN-5	As a user, I can test the dataset with my hosted color palette	6

Project Tracker, Velocity & Burndown Chart: (4 Marks)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (at Planned End Date)
Sprint-1	5	5Days	27 May2025	31 May2025	5
Sprint-2	2	2 Days	1 June 2025	2 June 2025	2
Sprint-3	5	5 Days	3 June 2025	7 June 2025	5
Sprint-4	6	6 Days	8 June 2025	13 June 2025	6
Sprint-5	7	7Days	14 June 2025	20 June 2025	7

Functional and performance Testing:

S.No	Parameter	Screenshot / Values
1.	Data Rendered	Rendered from cleaned CSV file with UNESCO World Heritage Sites data, including site names, locations, categories, and years of inscription. Loaded 500+ records.
2.	Data Preprocessing	Null values handled, feature engineering applied for site categorization, data grouping, and year-wise classification.
3.	Utilization of Filters	Tableau filters for Region, Category, and Year of Inscription. Drop-down filters for easy navigation
4.	Calculation fields Used	Average number of sites per region, total sites by category, and year-wise trend analysis.
5.	Dashboard design	4 dashboards: Overview, Regional Analysis, Category-wise Distribution, and Year-wise Trends.
6	Story Design	2 stories with 6 story points each: Story 1 - Evolution of UNESCO World Heritage Sites, Story 2 -Regional and Categorical Insights

Results:

Visualizations:

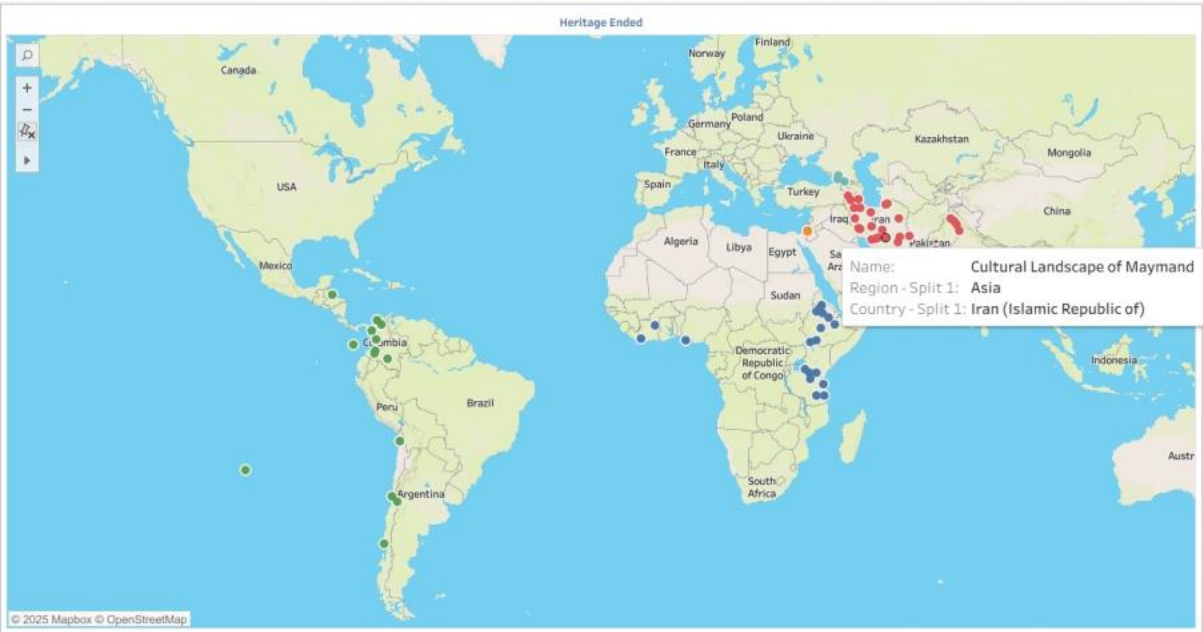
1: Countries per Region



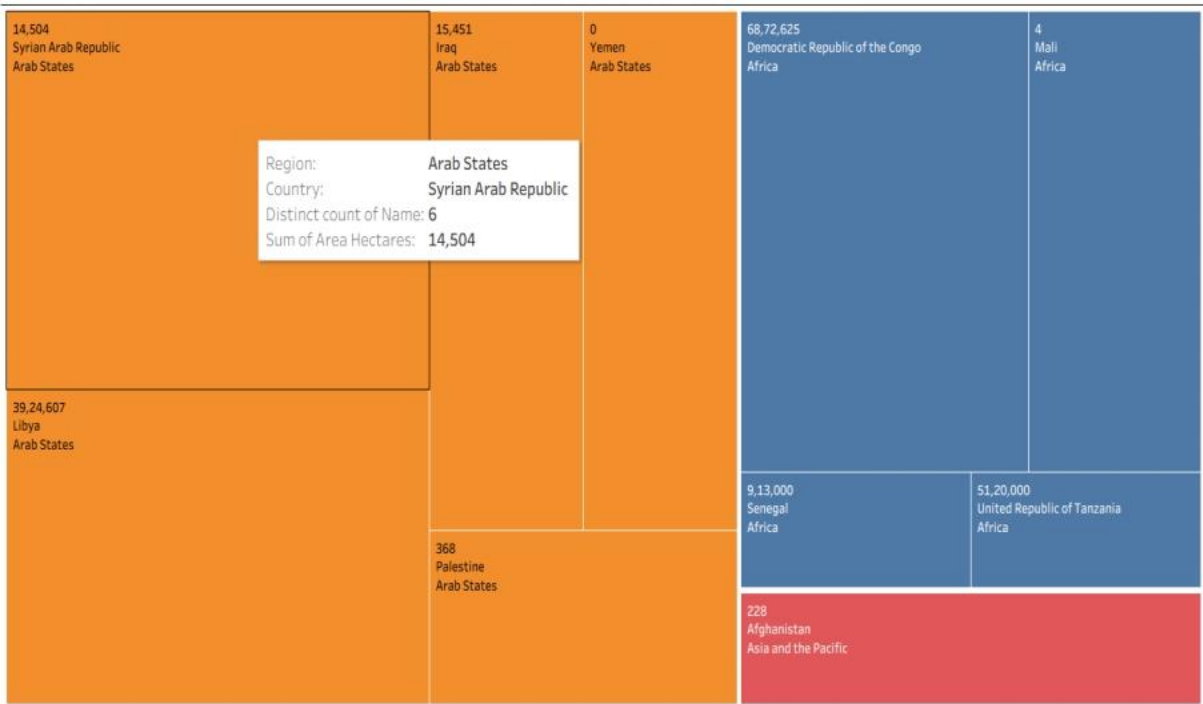
2: Top 10 regions by area



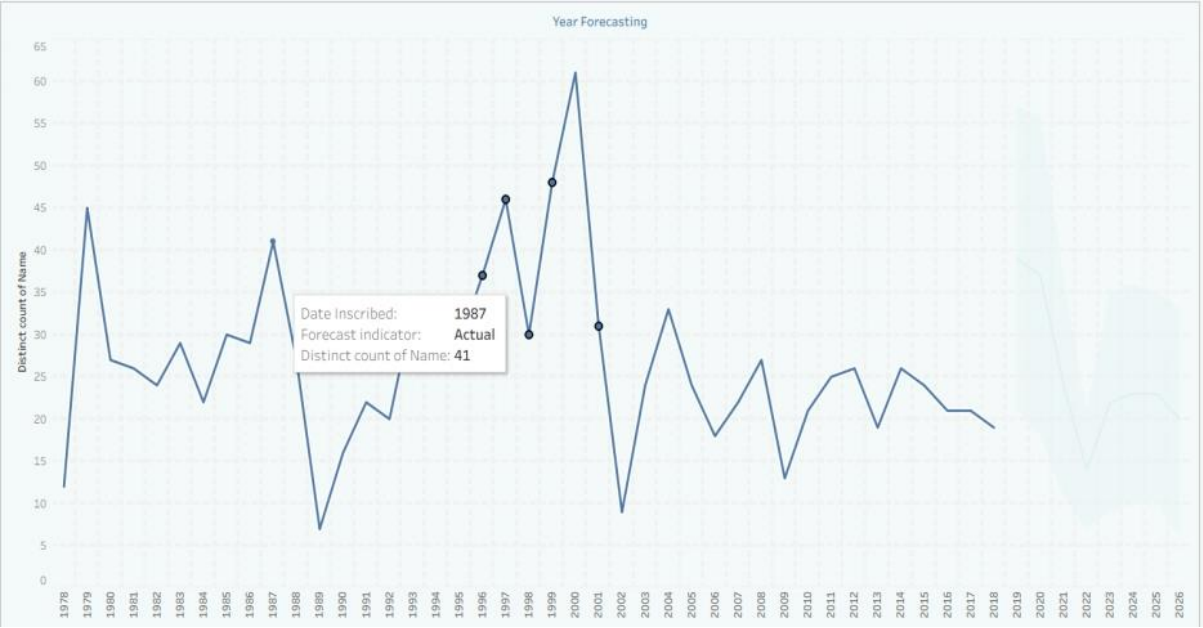
3: Regions by Heritage ended



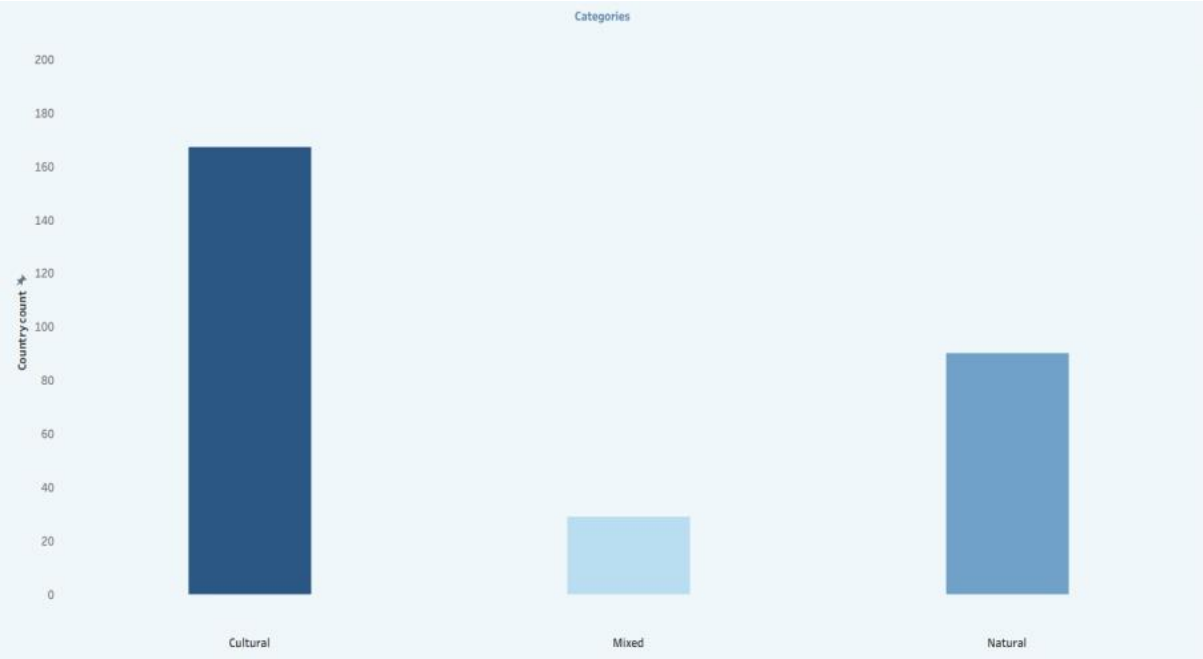
4 : Top 10 Danger Sites prone to Extinction.



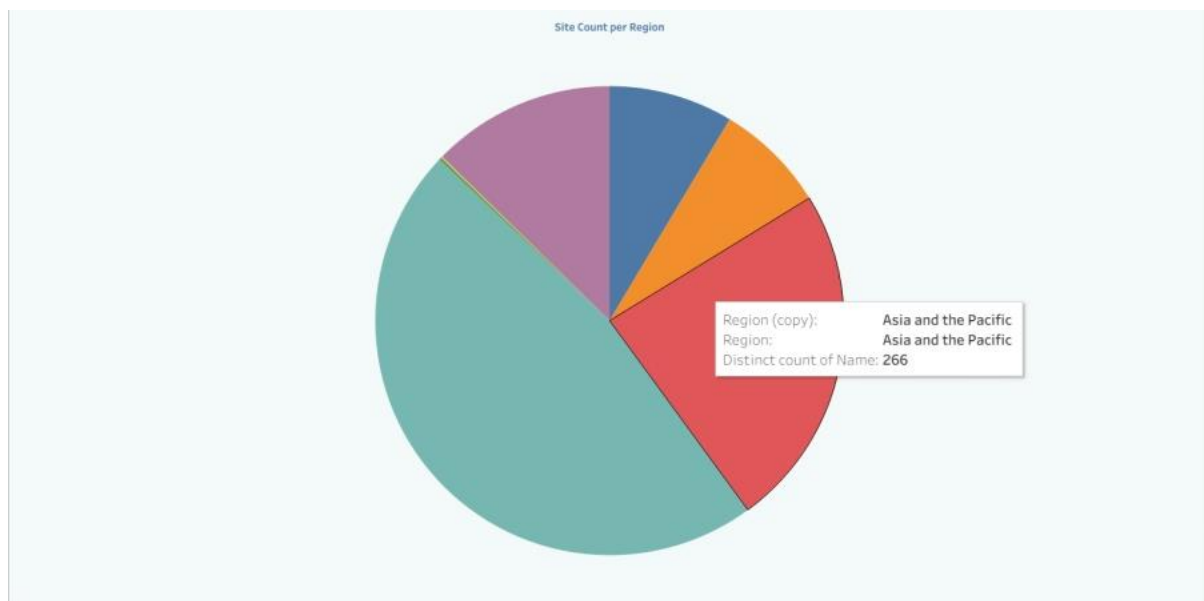
5 : Year Forecasting of Heritages.



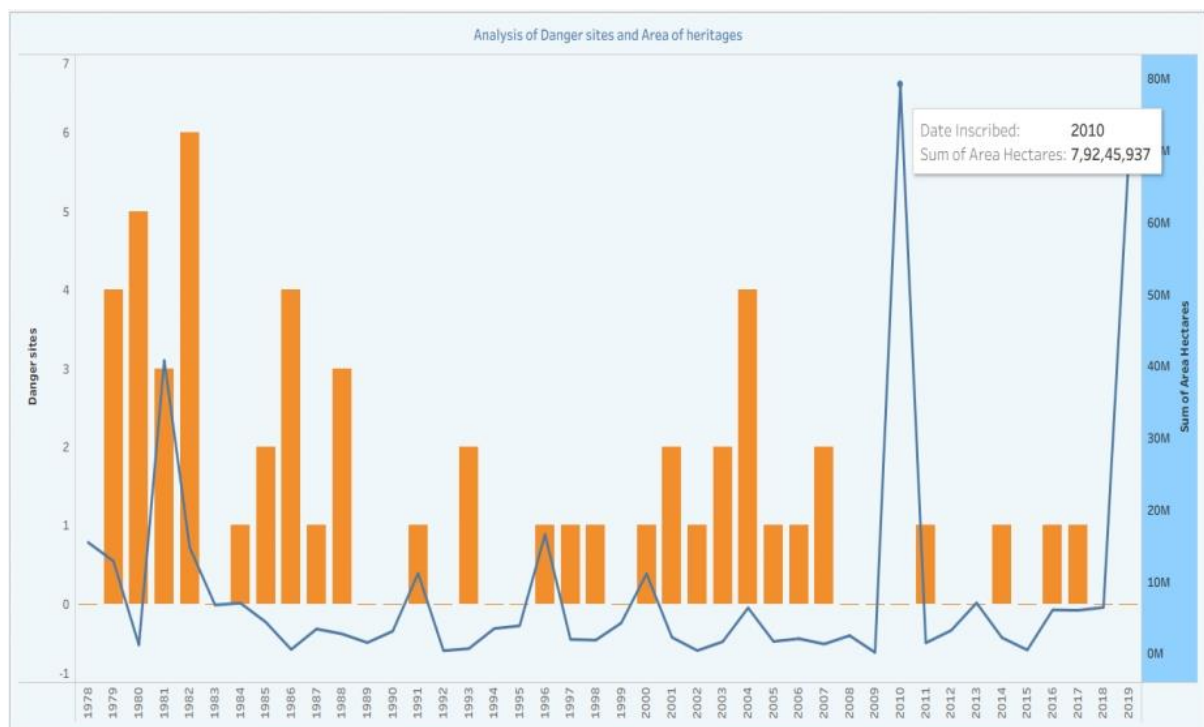
6 : Categories by sites count.



7 : Site Count per Region.



8 : Analysis of Danger sites and Area of heritages.



Conclusion:

The project "**Heritage Treasures: An In-Depth Analysis of UNESCO World Heritage Sites**" successfully demonstrates how data visualization can be used to uncover meaningful insights from global heritage data. By leveraging Tableau, we analyzed and presented key patterns such as the distribution of heritage sites across regions, the growth in site inscriptions over time, and the classification into cultural, natural, and mixed categories.

Through interactive dashboards and visual storytelling, this project brings attention to the importance of preserving world heritage. It not only aids researchers and policymakers but also serves as an engaging educational tool for the general public. Ultimately, the project emphasizes the value of data-driven analysis in cultural preservation and fosters a deeper appreciation of the world's most treasured sites.

Appendix:

DATASET LINK:

https://docs.google.com/spreadsheets/d/1deiz_Vk-CqNA4sAt5MOrH-7UsBkxCjMQ/edit?usp=drivesdk&oid=100677715816203616939&rtpof=true&sd=true

GITHUB LINK:

<https://github.com/Mahitha91/Heritage-Treasures-An-In-Depth-Analysis-of-UNESCO-World-Heritage-Sites-in-Tableau>