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Resum/Objectius

The objective of this research is to analyze the impact of climate change on coastal erosion. We aim to identify the key factors contributing to erosion and develop a model to predict future changes. This study will help in formulating effective coastal management strategies to mitigate the adverse effects of climate change.

Introducció

Climate change is significantly affecting coastal regions worldwide. Rising sea levels and increased storm frequency are exacerbating coastal erosion, leading to the loss of valuable land and habitats (Pérez Cueva et al., 2006, p. 123).

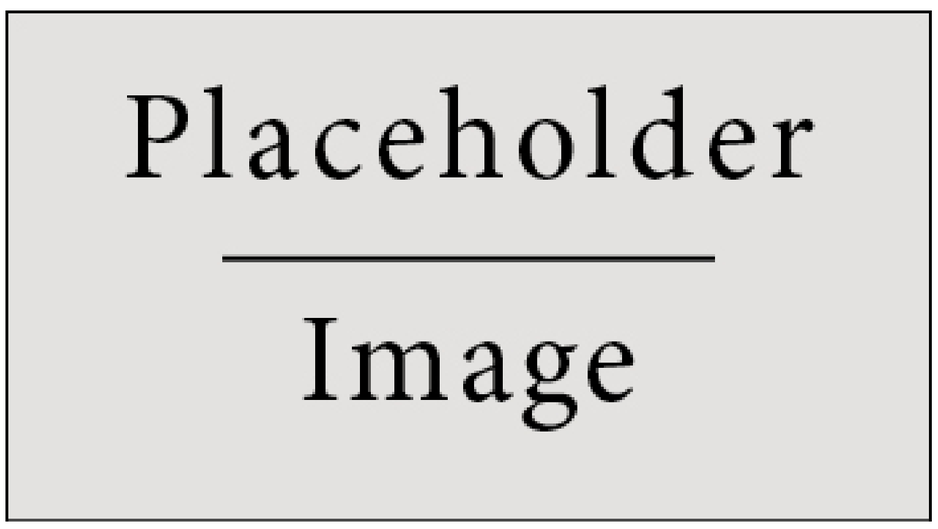

Figura 1: Coastal erosion impact

Understanding the dynamics of coastal erosion is crucial for developing adaptive strategies. Previous studies have highlighted the importance of sediment transport and wave action in shaping coastal landscapes (Fernández García et al., 2016, p. 45).

Metodologia

Our methodology involves a combination of field observations, satellite imagery analysis, and numerical modeling. We will collect data on wave patterns, sediment transport, and shoreline changes.

$$X \to r(X) = \arg\max_{c} \left\{ \max_{n} \left\{ \sum_{x_i \in X} \delta(x_i, Y_{n,c}) \right\} \right\}$$

The collected data will be used to calibrate our predictive model. Cras faucibus scelerisque cursus. Proin ut vestibulum augue. $\delta(x_i, Y_{n,c})$.

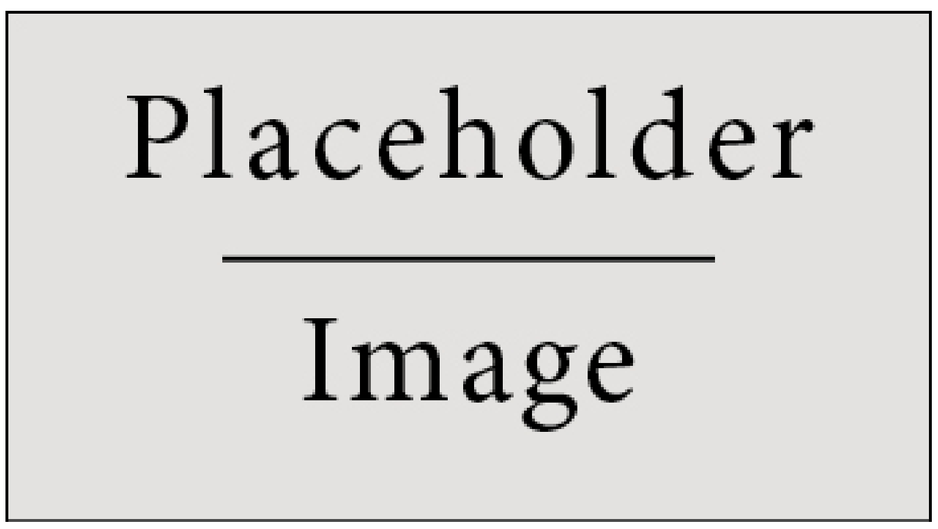

Figura 2: Methodological framework

This model will help in forecasting future shoreline positions and identifying high-risk areas.

Resultats

Preliminary results indicate a significant increase in erosion rates in certain hotspots. The table below summarizes the key findings:

Location	Erosion Rate (m/year)	Risk Level
Site A	0.0003262	High
Site B	0.0015681	Medium
Site C	0.0009271	Low

Taula 1: Erosion rates and risk levels

The analysis shows a correlation between wave energy and erosion intensity.

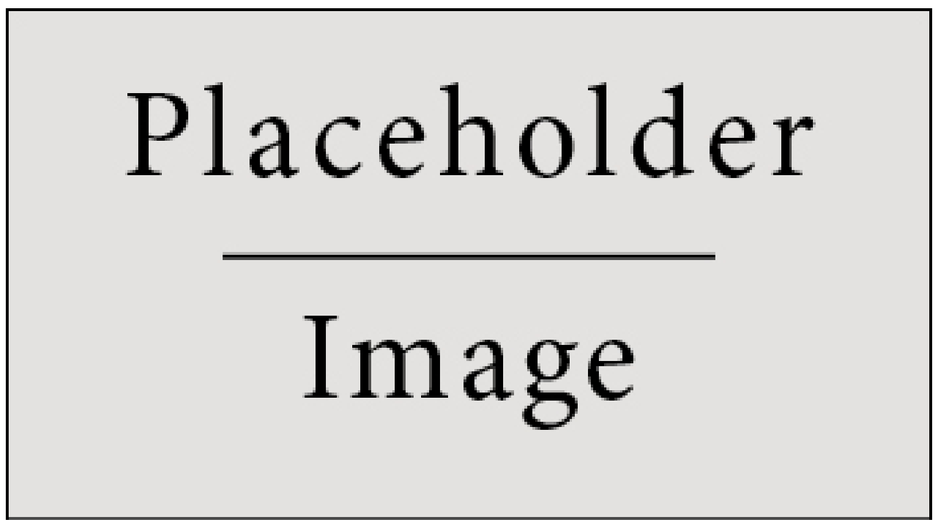

Figura 3: Erosion rates across different sites

Further analysis is needed to refine these findings:

- Increase the resolution of satellite imagery.
- Conduct more field studies.
- Incorporate climate models.
- Validate the predictive model.
- Engage with local stakeholders.

Discussió i conclusions

The findings underscore the urgency of addressing coastal erosion through integrated management strategies. Our study provides a framework for assessing erosion risks and implementing mitigation measures (Pérez Cueva et al., 2006, p. 123).

Future research should focus on improving model accuracy and exploring the socioeconomic impacts of coastal erosion (Pérez Cueva et al., 2006, p. 123).

Referències

Fernández García, F., Allende Álvarez, F., Rasilia Álvarez, D., Martilli, A., & Alcaide Muñoz, J. (2016). *Estudio de Detalle del Clima Urbano de Madrid* (Tech. Rep.). Madrid: Ayuntamiento de Madrid. Retrieved from https://www.madrid.es/UnidadesDescentralizadas/Sostenibilidad/EspeInf/EnergiayCC/04CambioClimatico/4cEstuClimaUrb/Ficheros/EstuClimaUrbaMadWeb2016.pdf

Pérez Cueva, A., Gómez Lopera, F., & Tornero, J. (2006). Ciudad y confort ambiental: estado de la cuestión y aportaciones recientes. *Cuadernos de geografía*(80), 147–182.