Coastal Protection: A Tale of Two Approaches

Comparing Soft (Nature-Based) and Hard (Engineered) Strategies

Soft (Green / Nature-Based) Structures

Built with and for Nature

Uses natural materials like sand, vegetation, and living reefs to protect coastlines.

Absorbs and Adapts

Discipates wave energy across gentle slopes and is flexible enough to evoive with the coast.

Creates Ecological Co-Benefits

Enhances habitats for wildlife, improves water quality, and supports recreation.

Hard (Gray / Engineered) Structures

Engineered for Resistance

Constructed from materials like concrete, rock, and steel to form rigid barriers.

Reflects and Resists

Blocks wave energy with static, strong walls, which can increase erosion elsewhere.

Offers Limited Ecological Value

Provides immediate protection but disrupts natural processes and offers minimal habitat benefits.