Title: Sustainable Park For Carbon Capture (Ma Waraa - ما وراء)

Research Idea:

A sustainable park desing that offers :

- Combine urban greening with carbon capture.
- Enhance biodiversity through the use of indigenous Omani plant species.
- Increase carbon sequestration using high CO_2-capturing trees.

Objective:

- Design and develop the pilot sustainable park Ma Waraa (ما وراء).
- Integrate carbon sequestration, biodiversity conservation, and water-efficient landscaping.
- Create a practical model for sustainable public spaces and environmental education.

Insights:

- Modular park design with dedicated environmental functions.
- Carbon Capture Module using native, drought-tolerant Omani tree species.
- Demonstrates how landscape architecture can contribute to climate change mitigation.
- moving to phase two for the sustainable park pilot project implementation.

Fig. AI-generated conceptual design of the park.

Impact:

- Supports **Oman Vision 2040** and **Net Zero** ambitions.
- Promotes carbon reduction and biodiversity conservation.
- Encourages sustainable water management.
- Enhances public environmental awareness.
- Serves as a scalable model for sustainable urban parks across Oman.
- Strengthens academia–industry collaboration in ESG initiatives.

- Dr. Ercan Agirbas