



Sudan university of science and technology College of architecture and urban planning Faculty of architecture 5th year bachelors A report submitted in partial fulfillment of the requirements for the degree of bachelors in architecture at Sudan university of science and technology

Report titled: Eden ecological park

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Abstract

Project name: EDEN ecological park

Project Definition: a complex designed to initiate ecological conservation at all levels.

Project goals:

- 1. Raise awareness about the environmental challenges such as global warming, pollution, biodiversity loss.
- 2. Promoting eco-friendly behavior
- 3. Researching and initiating local plant and animal conservation efforts.



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Chapter 1 introduction

Project name: EDEN ecological park **Project definition:** An eco-complex designed to simulate the past, present & future of the environment in Sudan – with all its wildlife, vegetation, geography & climate, while also highlighting the local and global challenges it faces and the solutions available to overcome them.



Why is this project needed?

Sudan's environment is rapidly deteriorating because of desertification, diversity loss (extinction of plants & animals inside Sudan), global warming, pollution and droughts. Lack of awareness in Sudanese people increases the problem and prevents them from participating in international efforts to solve them.

Therefore the project goals are:

- 1. To educate people about ecology & the environment, thus raising awareness and interest in this field that is generally neglected in Sudan.
- 2. To show people –in an interactive & exciting way- how much has changed in the Sudanese environment over the past years & the effect of urbanization.
- 3. To provide a unique entertainment experience to boost ecotourism in Sudan
- 4. To breed plants & animals that have become locally extinct & re-introduce them to the wild, both directly or indirectly by attracting global attention to the area.
- 5. To motivate people to be eco-friendly & save the environment.

These goals form a **storyline**:



what did Sudan look like when it was at its best? (before 1800) what is the current situation? what does the future look like?

What can i do to help?

Diagram 1-1: Project story line

How can the storyline be presented in an interesting way?

1. Visitors need an introduction to prepare them for their Tour while also providing a background to understand it faster as the go through it, a 3d video simulating a journey throughout Sudan would be suitable.

2. Each visitor must be able to touch, smell, see, and feel each environment (animals, plants & weather).



A **CLOSED** bio-dome can simulate that while also provide control.

3. Small models of different areas in Sudan now and in 100 years will help visually compare between the two and show how bad the situation is and make them feel they need to help prevent this from happening.

4. Each group of visitors will be given interactive classes where they are given stuff to work with during the lesson.. including:

- Planting: each visitor will take a seedling, plant it and take it home
- Electricity: products that reduce the electricity consumption are shown and how to use them, some are given free while others sold.
- ✤ Water: plumbing lessons to fix water taps, selling water saving products
- **Reusing**: how to turn plastic bottles into vases, old clothes to bags...etc.
- * **Recycling**: how to sort waste, while also selling color coded trash bins
- **Reducing:** how to reduce consumption of non-renewable resources
- **Energy & pollution**: promoting using bicycles and reducing coal use.
- Animal preservation: collecting donations for endangered animals and raising awareness about how to help organizations specialized in their preservation.
- General behavior: stimulating behaviors that make the community eco-friendly, whether by organizing neighborhood cleaning campaigns, rejecting animal cruelty, encouraging sustainable buildings.. Etc.



Diagram 1-2: design challenges