

Desert Plantation Research Center (PERFECT CELL)

Location: Baharyia oasis, Egypt

Area: 5200 m²

Graduation Project 2017

(Baharyia Oasis Base Map)

(Design Process)

Concept Analysis:

Main concept: Depends on Triple interaction axes, (Human – Sustainability – Vision) Interconnected with The Well (Perfect Cell), by converting the research center to an effective area (On the environmental, economic, prospective, research and social level) for Baharyia oasis and this regional area.

1- Interaction between researchers and (labs, greenhouse and green areas) to. Establish the ecological Community, and another interaction between visitors and (Entertainment areas and urban design) to achieve loyal to visitors.

2- Environment interaction between the research center and the desert to achieve sustainability.

3- Interaction between the research center and baharyia oasis to achieve the future agricultural development (Perfect Cell Vision) of baharyia Oasis.

- The design connects a strategic approach for the establishment of a community with the organic urban farming operation, cultivating agriculture and productive landscape value to serve as a community resource and economic development opportunities in a dry land.

- Vision:

The Eco-community will be a combination of a family consumption farming, a recreational community productive foods for local grocery stores and markets. It investigated the productive and learning potential of work across Disciplines, and interact over issues such as site design, site Ecology, hydrology and their relationships. The design is to propose a strategy for the establishment of a community including the wells and the water mitigation catchment, cultivating agriculture and productive landscape value in a dry land based on the relationships, cultural form and practice, historic and cultural landscapes, conservation and Sustainable development

A- Create a neighborhood farming and Recreational micro-moisture Park from grey water system and

Center Pivot irrigation system.

B- Foods production from agriculture.

C- Establishment the ecological community.

Baharya Oasis plants: *Hyphaene thebaica* – Citrus – Olive – Apricots - Aromatic plants - Phoenix
dactylifera (Date Palm) – *Tamarix nilotica* (dust trap) – Acacia – *Cyperus mundtii* – *Phragmites australis* –
Cladium mariscus – *Cyperus laevigatus* – *Suaeda frutescens* – *Juncus rigidus* – *Desmostachya bipinnata*
– *Alhagi graecorum* *Sporobolus spicatus* – *Opuntia* *Ficus-indica*.