

# High Dam selection Project

## The steps:

### 1. Collect basic data

#### **a. Hydrology data**

Water flow speed: This data can be obtained from the Ministry of Water Resources and Irrigation.

Water Rise: Track water levels throughout the year to see how high they are in the proposed areas.

#### **B. Demographic data**

Population Density: Get the latest data from the Central Agency for Public Mobilization and Statistics. This data is important to assess the impact of the dam on local communities.

#### **C. Environmental data**

Environmental Studies: Includes the impacts of dam construction on the local environment and river ecosystem.

### 2. Analyze data using ArchMab software

#### **a. Data Entry**

Enter all collected data into ArchMab software.

#### **B. Perform analysis.**

Evaluate:

The storage capacity of the dam: based on the height and speed of water flow.

Environmental Impact: Assess the potential impact on the environment and ecosystem.

Socio-economic impact: Analyze the impact of the dam on local communities in terms of potential displacement and economic benefits.

### 3. Feasibility assessment

#### **a. technical feasibility**

Ensure that the proposed location can support the required infrastructure for the dam.

#### **B. Financial feasibility**

Calculate construction and maintenance costs and compare them with the expected return from electricity generation and water storage.

### **C. Environmental and social feasibility**

Final assessment of the environmental and social impact and providing solutions to reduce potential negative impacts.

## **4. Providing recommendations**

### **Based on the analysis:**

I recommend building the high dam in Luxor because:

- It will distribute and regulate the flow of river water to the New Valley area.
- The New Valley area has a wide desert, and when the dam is built, it will lead to several benefits, such as:
- Water storage: Dams can be used to store water useful for irrigation, industrial and civil uses.
- Electrical power generation: Water flow from the dam can be used to generate electrical power, which contributes to meeting the energy needs of the region.
- Economic development: Building dams can contribute to enhancing economic development in the region by supporting agriculture and industry and creating job opportunities.
- Improving the environment: Dams can be used to regulate water flow and improve the environment surrounding an area, such as creating new water spaces for wildlife and improving water availability for local communities.