

Modeling the Water Cost : Case Study of Great Man Made River Authority

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Abstract

Libya, like its neighbours, depends on groundwater for the majority of its water supplies. However, most comes in the form of fossilised water from aquifers deep in the desert, through the Great Man-Made River Authority (GMRA).

The world's largest Pre-stressed Concrete Cylinder Pipe (PCCP) project is owned and operated by the Great Man Made River Authority. Since its conception in 1984 the project has grown to include almost 4000 km of large-diameter pre-stressed concrete pipe. Eventually over 6.0 million m³ of water will be conveyed every day from aquifers in the desert to the coast in 4m diameter PCCP.

This paper provides an overview of the project to date and it will conduct the cost analysis study by treating capital costs as sunk value, without interest rates.

Keywords

Water shortage problem, GMRP, PCCP, Groundwater, Sunk value, Modeling.
