

## Optimization of the Rain Harvest Using Multi-Purpose Valley Tanks

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**Abstract :** Valley tanks are a kind of rain harvest which is used as ground water storage to overcome drought seasons in some countries. This research displays the rain harvest evolution and introduces some ideas to develop the valley tanks to be more than water storage. These ideas developed the current valley tanks design to become an integrated renaissance project. The suggested design has some changes making it different than the traditional design of valley tanks. These changes allow for the new design to be more flexible for adding additional capacity, water purification units and water pumping units. The suggested valley tanks project will be designed based on studying the rainfall and evaporation rates, as well as land topography and designed agricultural map linked to seasons of rain and drought.

**Keywords :** valley tanks, rain harvest, volatile nature, integrated renaissance project

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