

# Adapt to Long Term Challenges Linked to Climate Change and to live with Extreme Phenomena

Study of the Archeological Water System  
The Qatraneh site and the Muaqqar Pond  
Jordan

# Background

- Water is an eternal symbol for life, regeneration, purity and hope.
- In the past, Mediterranean civilisations adapted successfully to the water scarcity of the region and developed a technology to capture and utilise water.
- All water sources including rivers, lakes, springs, underground resources and rain were utilised with the help of sophisticated systems, perfectly adjusted and in harmony with the geomorphology, topography, and local climatic conditions.
- Over the centuries, the technology of collection, storage and distribution of water, as well as flooding emergency response techniques, were passed on to neighbouring or succeeding civilisations throughout the Mediterranean.
- A great number of remnants of these works, such as cisterns, wells, canals pipelines, aqueducts etc. are found today scattered around the Mediterranean basin, forming a unique, interlinked puzzle.
- Their cultural value has lead UNESCO to declare some of these works as monuments of world heritage.

# Goal & objectives of the project

- The overall objective of the Archaeological water system is to unfold and present a small part of the diverse, yet common tangible and intangible Mediterranean Cultural Heritage using as vehicle selected cases of the most representative ancient water management works, concepts and techniques.
- The project, on one hand, aims to demonstrate the wisdom of our ancestors, through their wise and respectful water management techniques and to educate youth on the valuable water-related Mediterranean cultural heritage and present ways to protect it.
- On the other hand, the project aims also to highlight youth's role today, as water consumers and help them adjust their behaviour concerning the use of water to more sustainable patterns, in view of the pressure generated on water resources by climate change and the water scarcity of the region.
- The project is especially aiming to support the educational community of the developing countries of the Mediterranean region, transferring experience and promoting a North-South synergy and cooperation in the field of culture.



# The Qatraneh Site



# The Water System:

- The Roman and Byzantine era people often brought water over considerable distance to cities, towns, villages and buildings.
- The Archeological water system in Qatraneh revealed the presence of aqueducts, which link the area of Wadi el-Hasa with the nearby Wadis and the main pool.
- The need for more water to be used for daily life and other cultic purposes was the reason for constructing the water system. The channels, which is partly preserved, reaches the site near the strainers, where a medium size settling tank or settling tanks are in place, and then is directed to the pool,
- The water system was designed to carry the water to the pool and the nearby areas. Consequently, the stone channels carry the water through the settling tanks to the pool.



To the south of the site is located Wadi Hanifa which flows East South into West. Another Wadi by the Name Hafayer meets Wadi Hanifa. Both were behind the idea of constructing water harvesting system and furnish the site with water. The following aerial map shows the site location and two Wades' or Valleys.

**Qatrana station on the strategic Hijaz Railway in southern Jordan, photographed by the German Air Service in 1918 (Royal Geographical Centre, Amman).**

