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MALTA'S UNDERGROUND WATER WORLD



ON THE MALTESE ISLANDS, IN SHORT MALTA, SITUATED AS THEY ARE IN THE MIDDLE OF THE MEDITERRANEAN WITH PLENTY OF SUNSHINE BUT LITTLE RAIN, AND NO MOUNTAINS, LAKES OR RIVERS, WATER SUPPLY HAS ALWAYS BEEN A PROBLEM FOR THEIR INHABITANTS.

Today, Malta obtains more than half of its water by desalinating sea water. First tried at the beginning of the twentieth century with limited success, it was resorted to on a large scale in the 1960s with distillation and later in the 1980s with Reverse Osmosis, a technology still in use today.

Therefore, it is not surprising that harvesting rain water and its storage has played an important role in the history

of water on the Maltese Islands. In fact, water cisterns cut into the rock have been found dating back to the Neolithic age, making them as old as Malta's pre-historic temples. Such cisterns have also been found in the remains of Roman buildings.

On the 1st November 2022, Water Services Corporation, the entity that is responsible for water supply to these islands, launched a book titled "8000 Years of Water, A

Maltese Story of Sustainability". Covering various water-related topics, fifteen experts contributed to this comprehensive 500 page book, illustrated by some great photographic pieces.

When the Knights of Malta decided to build Valletta, following the Great Siege of 1565, one of the urban planning regulations stipulated that every building had to have a cistern under the building.

The regulation was eventually extended to cover every building in Malta, not just Valletta. However, since the middle of the twentieth century, this regulation has no longer been enforced.

The traditional cistern in a townhouse, which in Malta is referred to as a well, would be dug out in a bell shape such that only a small hole at the top allowed for the extraction of water, the passage of a man for digging the well, and the occasional cleaning. The well would be filled by rainwater collected from the house's flat roof. Fortunately for the construction of these wells, Malta's rock is soft and easy to cut. In many cases, the stone used in the construction of these buildings was quarried from the very site on which the building was to be erected. The cavity formed from quarrying was transformed into the underground water reservoir for the building to come on top. The reservoir's roofing would consist of stone slabs supported by stone arches, or else, simply a stone arched roof. Other reservoirs were also excavated for no other purpose than to store water. Some of these reservoirs are now being rediscovered and restored after years of neglect.

Besides those constructed during the time of the Knight, the British built other impressive water reservoirs during their rule of these islands. Some are very large with stone pillars supporting an arched roof in stone, or reinforced concrete. Some date to the end of the nineteenth century, making them some of the earliest buildings to use reinforced concrete in Malta. One in particular, the Naval reservoir at Luqa, built to supply water for fire-fighting to the Naval dockyards is so large that it recently hosted an orchestral concert

as part of its open-day activities. The intention is to start using them again for water storage after restoration.

Another book, also published in the second half of 2022, documents these various methods of storing water. This well-researched book by Steven Mallia is aptly titled "The History of Water Conservation on the Moltese Islands" and contains some stunning photographs of these reservoirs and cisterns.

While we have been talking about water storage, before any water could be stored, it had to be harvested first. One way of doing this was to build underground galleries which collected the rainwater as it percolated through the ground. Some 42km were eventually excavated which is not insignificant given the size of Malta and Gozo.

This underground world of water complements the various other uses of underground spaces in Malta, some of which are still in use today while others are only monuments to past passages of Malta's history. From power stations to fuel storage, from war shelters to the Lascaris war rooms, from tunnels for the passage of electricity cables to the railway, for the collection of storm water or for housing the Dockyard's machine-shop in war-time, from Punic tombs to catacombs, from grain silos of the Knights to the Cold War" flour mills; there is an incredible underground Malta few get to see. However, Heritage Malta has recently introduced a tour of Underground Valletta, which as yet covers only a very small part of what lies under our capital city. *



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