World Water Day 2024 in Greece, Dedicated to Peace

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World Water Day (WWD) was established 31 years ago (1993) at the United Nations (UN) Conference on Environment and Development held in Rio de Janeiro. In the same year, the UN General Assembly adopted a resolution declaring March 22nd a WWD, and it has been celebrated as such every year since then. This year, WWD 2024 is dedicated to peace. It is a day acting as a reminder of the importance of water and the urgent need to ensure a sustainable future on our planet for peace.

The global water crisis is a pressing and critical issue, affecting millions of people around the world. According to the United Nations, 3.5 million people die every year from water-related diseases, which is equivalent to a jumbo jet crashing every hour (UN, 2023). About 650 million people, almost 1 in 10 of the world's population, do not have access to safe sources of drinking water, and 1 in 3 lacks sanitary conditions, putting themselves at risk of infectious diseases and premature death. The consequences of this crisis are devastating, affecting everything from health and hygiene to food security and economic growth. The urgency of tackling this crisis should not be underestimated, particularly in light of the forecast according to which the world's population will reach 9.8 billion people by 2050.

Greece has a glorious history regarding the peaceful use of water resources. In prehistoric times, the Minoans (ca. 3200-1100 BC) lived in harmony with the environment and sought peace. Their settlements flourished in drier areas. Life in a dry climate was safer, healthier, and more comfortable and protected. Also, the Minoans, the first European civilization, were a surprising paradox: A great power without a military aristocracy. A "palace" that was not a royal residence and neither was the King glorified. A religion without grandeur, while women were equal to men and free (Angelakis et al., 2024).

The Minoans had deified the natural world and had found in it a logical order, which allowed man to live in harmony with the natural environment. When Arthur Evans, an archaeologist, discovered Knossos, due to the lack of fortifications, he

considered the Minoans to be a peaceful people and, therefore, coined the term "Minoan Peace" (Pax Minoica) (Evans, 1921-1935). Contacts with Aegean islands and the mainland were dense during the Protopalatial period and intensified even more in the Neopalatial period. They dominated in the Mediterranean Sea and mainly, in the SE Aegean, where, apart from the islands, they reached ancient Ionia, where they founded Miletus city (Angelakis et al., 2024).

According to Thucydides, the mighty king Minos was the one who founded the first Maritime Empire or the Maritime Commercial Empire; he was called "lord of the Seas" and freed said seas from ancient pirates (Angelakis et al., 2024). The Minoans not only did not participate in hostilities, such as those of the Sumerians against the Uruk, Larsa, Aksak, and others, those of the Babylonians against the Sumerians and Elamites, those of the Assyrians and Hittites against the Babylonians and others, and those of the Egyptians against the Libyans, Persians, Phoenicians, and others, but they mediated conflicts between peoples, seeking their reconciliation. In general, they were a world-wide exemplary civilization.

The later ancient Greeks imitated the Minoans in choosing dry sites for their settlements. Tyranny in the archaic period (ca 750-480 BC), such as, for example, the one during the reign of Peisistratos and his descendants, also created problems in the use of water resources. But, Solon (639-559 BC), once he came to power, formed, in 594 BC, a legal system of water resources, known as the law of Solon, and ensured the most rational and non-judgmental use of water. This is described by Plutarch (47-195 AD) and generally worked as follows: (a) Residents located within a 710-meter radius were granted water rights from a well. (b) Each citizen was entitled to 39 L of water each day in dry seasons, obtained from a neighboring well. (c) Wells in an area were to be no closer than 22 m and up to 18 m deep. (d) Finally, there was a civil servant responsible for managing water sources and imposing fines in cases of source pollution or other illegalities. Also, the ancient Athenians preferred running water from springs or wells or the collection of rainwater, because they believed that water from surface sources, e.g., from lakes, was unhealthy. In addition, they used underground cisterns, in which rainwater was collected through sand filters to be used for public use.

The first settlers of the basin chose to settle around the rocks of the Acropolis, in Athens, because it hid water in various underground karst springs, such as the most famous one, Klepsydra. Also, like the Minoans, they used non-conventional water resources, such as the following: (a) treated sewage effluents (e.g., south of the Acropolis, in agricultural lands), (b) desalinated sea water (mainly sailors), and (c) harvested and stored rainwater (Angelakis, 2024).

In Crete and, especially, in its eastern regions, there was a problem of water resources, which, in some way, was dealt with by wells, as taught by the Minoans. At the end of the Venetian period, in 1628, the water supply aqueduct of the Venetian Moat (of the Great Castle) was inaugurated, built by the Venetian General Prefect Francesco Morosini. Also, during the period of the Egyptian occupation (1830-1840), Mustafa Pasha carried out a second major project for the water supply of Iraklion. He built the bridge of Agia Irini and reinforced the Morosini dam with water from the "Foutana" spring, improving the existing water supply. Unfortunately, during the Ottoman occupation (1456-1898), most of the aqueducts were destroyed in the country. After this period, the inhabitants of the island forgot about their existence and only used wells, such as those in Ampelokipi and Patisia. Also, where there were micro-springs, they built fountains. In Crete alone, there are still hundreds of such scattered fountains.

Today, as it has been the case throughout history, water resources' management is being improved by considering and using non-conventional water resources. Also, cross-border problems of water resources, such as the river Evros between Greece, Turkey, and Bulgaria, the Strymona, Nestos, and Arda tributaries of the Evros between Greece and Bulgaria, and the Axios between Greece and North Macedonia, are due to differences between these four countries in terms of their political, economic, and cultural situations and the peculiarities of the natural environment. Finally, the fragmentation of the responsibilities for water resources into several ministries and their bodies and chronic bureaucracy burden their proper management. It is also time to establish a single concept for water and, mainly, the merging of liquid waste with the rest of water resources.

This year, as almost every year within the framework of WWD, the international scientific journal Water is organizing a Global Online Webinar to take place on the morning of 3/22/2024, at Greek time 11.00-13.00. The program is posted on the following website: https://sciforum.net/event/MWWD24. Anyone interested in the webinar can register and watch it via the following link: https://us02web.zoom.us/webinar/register/3117102093857/WN_AstQSdMjQH-CVEbqYmNG9Q.

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References

Angelakis, A. N., Taroudakis, M., and Tchobanoglous. G. (2024). Thalassocracy in the Bronze Age and Its Relationship to Sustainability. Annals of Archaeology 6 (1): 2639-3662 https://doi.org/10.22259/2639-3662.0601001

Angelakis, A. N. (2024). Η ορθή διαχείριση των υδατικών πόρων της Κρήτης Οφείλει να περιλαμβάνει και μη συμβατικούς υδατικούς πόρους. Χανιώτικα Νέα, Χανιά Κρήτης, 09/02/2024, https://www.haniotika-nea.gr/i-orthi-diacheirisi-ton-ydatikon-poron-tis-kritis/ (in Greek)

OHE (2023). World Water Day Reminds Us of the Value of a Precious Resource. United Nations, Academic Impacts, https://www.un.org/en/academic-impact/world-water-day-reminds-us-value-precious-resource