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WATER REUSE THROUGH THE MILLENNIA GLOBALLY

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Domestic wastewater was used for irrigation and aquaculture by prehistoric civilizations (e. g. Mesopotamian, Indus valley, Egyptian, Chinese and Minoan) since the Bronze Age (ca. 3200-1100). Thereafter, wastewater was disposed or used for irrigation and fertilization purposes by Greek civilizations and later by the Roman one in areas surrounding cities (e. g. Athens and Rome). Sanitation practices re-emerged in force in the more recent history following the great epidemics in several regions of the world. After the mid of 17th century the need for sanitation led to the development of effluent application practices known as “sewage farms” as a means to protect public health and to control water pollution. Wastewater application to the land for disposal and agricultural use was originally operated in European cities and later on in USA. Today, planning of projects for water reclamation and reuse is significantly increasing in several regions of the world. Also recycled water is used for almost any purpose including portable use. This paper provides a brief overview of the evolution of water reuse over the last 5000 years. It provides a historical context and links to some of the latest developments in sustainable water reclamation and reuse. By understanding the practices and solutions of the past, we are better placed to meet present and future challenges. Finally, the important role that water reuse will play in the future highly urbanized world is highlighted.

BIOGRAPHY

A N Angelakis is a Water Resources Engineer at the National Agriculture Research Foundation, Institute of Crete, Hellas and Technical Consultant of Hellenic Union of Municipal Enterprises for Water Supply and Sewerage. He was graduated from Agricultural University of Athens, Greece and he did his Master's at University of California, USA. He is author/co-author of over 450 publications mostly in the scientific fields of Environmental Engineering. He has over 4,300 SCH citations and an i10-index of 80. Mostly he has participated, as invited speaker in the organizing/scientific committee in more than 120 international symposia and/or conferences in the last 25 years. He is Editor-in-Chief of one journal and Editor of several international journals. He is an active Member of European Academy of Sciences and Arts. Also he is IWA (International Water Association) Distinguished Fellow and Honorary member of IWA and of Hellenic Water Association (HWA) and Member of the IWA Strategic Council. He is President of IWA SG on Water and Wastewater in Ancient Civilizations. In addition, he is Past President of Federation of European Water and Wastewater Services (EurEau) and to the EurEau WG on Water Reuse. He was recently awarded by the Hellenic Committee of the International Association of Hydrogeology.

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