

Welcoming address by the Dean of the School of Civil Engineering at the 13th IWA Specialized Conference on Small Water and Wastewater Systems and the 5th IWA Specialized Conference on Resources-Oriented Sanitation

Mr. Rector, Mr. Secretary, ladies and gentlemen, dear colleagues,

On behalf of the School of Civil Engineering of the NTUA, I welcome you and I thank you for joining us in this event, co-organized by the Sanitary Engineering Laboratory of our School together with the Hellenic Water Association.

Let me begin with a few words about our school, which has now more than 2 000 undergraduate and graduate students with about 50 faculty members. It is the oldest engineering school in the country: it exists as an academic entity from 1887 and awarded its first 13 diplomas in 1890. In this respect, it may be identified as one of the newest monuments in the country, but not by those who need restoration.

In fact, the level of education and the international recognition of the School are higher now than ever, despite the extremely difficult conditions in which we live. This year, for the fourth consecutive time, the QS organization ranked our School in the top 50 among Schools of Civil Engineering worldwide, and one of top 10 in Europe. We are also proud that no other school in Greece has a similar position in international rankings, as no other university of the country has similar classification to that of the NTUA.

Being sited in Athens, we are privileged for our technological and cultural roots and legacies, which have been developed in this city millennia ago and have influenced the entire world. At the same time we feel embarrassed that we have not been able to reach the level that our ancestors had achieved in several essential cultural aspects. I wish to remind you of a few of them.

Episteme (i.e. science) was created to explain nature and history based on reason and in parallel to philosophy. The two had very strong links to each other. In our time, science has spectacularly progressed, but has departed from its foundation, that is, philosophy, while, in many cases, science-based propaganda (else known as sophistry) has prevailed over scientific inquiry.

Athens is also the birth place of the principle of Orthos Logos (Recta Ratio, or Right Reason) in guiding human decisions and actions. Aristotle (384-328 BC) was perhaps the first to formulate this principle: *[It is a common principle which must be accepted that we must act in accord with orthos logos; Nicomachean Ethics 1103b]*. Unfortunately, in our postmodern era, paralogism or irrationality is not uncommon, while doctrines and stereotypes often prevail over orthos logos.

Athenians also created democracy, the system of government in which all people are equally involved in taking decisions and actions. The original definition of democracy was formulated by Pericles in his Epitaph, quoted by Thucydides [The Peloponnesian War, 2.37]:

καὶ ὄνομα μὲν διὰ τὸ μὴ ἐς ὀλίγους ἀλλ' ἐς πλείονας οἰκεῖν δημοκρατία κέκληται· μέτεστι δὲ κατὰ μὲν τοὺς νόμους πρὸς τὰ ἴδια διάφορα πᾶσι τὸ ἴσον, κατὰ δὲ τὴν ἀξίωσιν, ὡς ἕκαστος ἐν τῷ εὐδοκίμῳ, οὐκ ἀπὸ μέρους τὸ πλεόν ἐς τὰ κοινὰ ἢ ἀπ' ἀρετῆς προτιμᾶται

[The Athenian] administration is called democracy because it is the responsibility of the many instead of the few; the laws ensure equal justice to all in their private differences, but with

respect to public interests, each citizen is preferable to public office not by class considerations but by merit.

Many admit that the Athenian democracy has been the best and most radical in history. Others criticized it because it excluded a large part of the population. But it is important to note that the principle of inclusion was simple and clear: the rights arise from the fulfilment of obligations. It is a pity that this principle is forgotten in modern states, including in Greece. It is also a pity that the functioning of the Athenian democracy was unknown during the establishment of modern republics. For, Aristotle's book *Αθηναίων Πολιτεία* (*Constitution of the Athenians*) had been lost until the end of the 19th century. Currently, the synergy of economic powers and high technology lead modern societies to oligarchy and it is a big challenge to re-establish democracy by studying its principles as originally formulated.

To come to the subject of this conference, in many aspects of water management, ancient Athenians may have been more advanced than we are today. As we had the chance to find along with Andreas Angelakis and George Tchobanoglous, when we studied the ancient Greek water management (in a paper we published in the *Journal of Water Resources Planning and Management – ASCE*), Athenians had achieved an admirable balance between small scale, safe and cost efficient management structures, on the one hand, and large scale technological systems on the other hand; between structural measures and institutional arrangements; between interests of the private and the public sectors; and between technological progress and sustainability. All this, in a framework of resilience, particularly in periods of crisis, and durability, as exemplified by the fact that we still have in operation ancient aqueducts.

In closing, I wish to thank Andreas Andreadakis, Daniel Mamais, Simos Malamis and the Sanitary Engineering Laboratory, one of the most active and recognized academic units of our School for this initiative. I am sure this event will be a great success and influence the scientific progress.

I wish all participants to enjoy their stay in Athens.

Demetris Koutsoyiannis

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