

Meeting water demand in Greek islands: Do desalination units operate efficiently?

Audit Report 5/2021

EXECUTIVE SUMMARY

This audit examined a series of issues that affect the efficiency of desalination units installed in certain Aegean islands.

Its key findings are presented below:

I. Several local authorities failed to acquire the necessary data related to the desalination process, such as the quantities of water produced by their respective desalination units.

II. Energy supply problems were identified mostly during the summer months and notably on islands where electrical interconnection with the mainland transmission system is not yet completed.

III. Further reduction of the environmental cost of desalination plants can be achieved through potential use of renewable energy sources, as well as with the implementation of a suitable method for the dispersal of the by-product of the desalination process, also known as brine.

IV. The necessary expertise for the operation and maintenance of desalination units was demonstrated mainly by local water supply and sewerage companies and not by the local authorities involved.

V. Water losses in the water distribution systems remain significant and, as a result, a considerable quantity of desalinated water is lost along the way to its customers.

VI. While desalinated water is regularly tested for its compliance with certain quality standards at the end of the desalination process, monitoring requirements for determining the quality of water intended for human consumption are not generally fulfilled at the moment of its distribution.

VII. Desalinated water increased water supply in water - scarce islands during the years 2019-2020, which indicates that desalination is a viable solution for addressing water scarcity in certain regions.