

Is water use efficiency improving?

It is possible to improve efficiency in all the major sectors of water use (agriculture, industry and domestic water). The Mediterranean Strategy for Sustainable Development stresses the need to reduce the amount of water currently being lost or wastage (representing sources for saving) and to increase the added value created per cubic metre of water used.

It is a matter of responding either to national overall physical efficiency objectives where they exist, or reaching the physical efficiency levels proposed by the Blue Plan's alternative scenario for 2025 (compared with 1995) :

For drinking water in municipalities: reduce losses rates stemming from distribution to 15% and leakages from users to 10%;

For irrigation: reduce losses rates stemming from transport and distribution to 10% and raise irrigation efficiency by plot to 80% ;

For industry: extend recycling to 50%.

Total water use efficiency in 2005 lies between 50 and 85% in the majority of Mediterranean countries.

Situations vary. In some countries (Algeria, Egypt, Israel, Italy and Morocco), water efficiency in irrigation is well below that for drinking water. Water efficiency for both irrigation and drinking water is basically the same in Croatia, France, Greece, Libya, Lebanon, Spain and the Palestinian Territories. In Albania, Bosnia-Herzegovina, Cyprus and Malta, efficiency performance is better for irrigation than for drinking water.

Total water use efficiency for Israel and Cyprus is close to 81 % and 84 % respectively. Between 1995 and 2005, almost all countries achieved encouraging progress in terms of their efficiency in the various water use sectors.

Definition

This index allows the monitoring of progress in terms of the water saved as a result of demand management by reducing loss and wastage during both the transport and use of water. It is subdivided into total and sectoral efficiency (drinking water, agriculture and industry).

Precautions / Notes

The economic efficiency of drinking water depends on invoicing mode (flat rate or metering) and may be distorted by metering malfunctions.

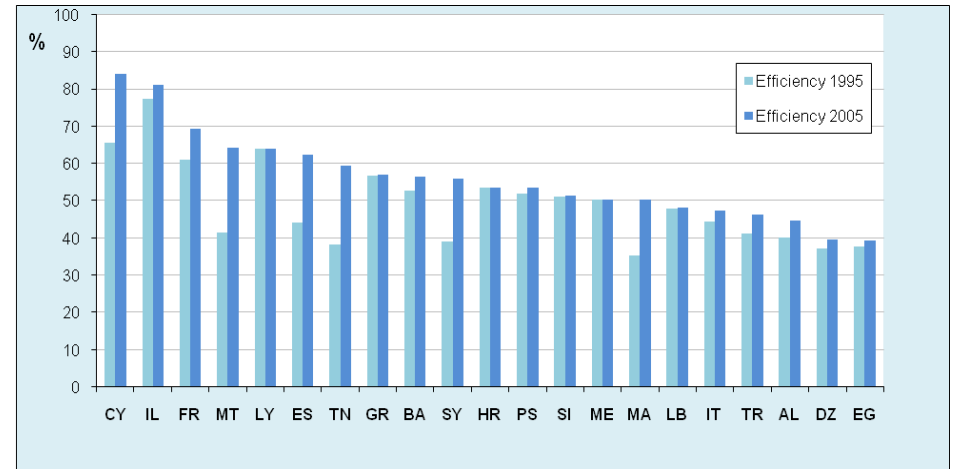
Real plot irrigation efficiency is awkward to measure in the field because of difficulties with evaluating how much water the plants have consumed and the large number of plots. Each country has its own estimates of average efficiency for the various systems, based on experimental pilot sites. This efficiency thus tends rather to reflect the distribution of irrigation water according to the main irrigation methods at national level (theoretical average efficiency is estimated at 40% for surface irrigation, 70% for sprinkler and 90% for localised irrigation systems).

Sources / References

FAO-AQUASTAT, Blue Plan and various national sources whose reports were presented at the regional workshop (Zaragoza 2007).

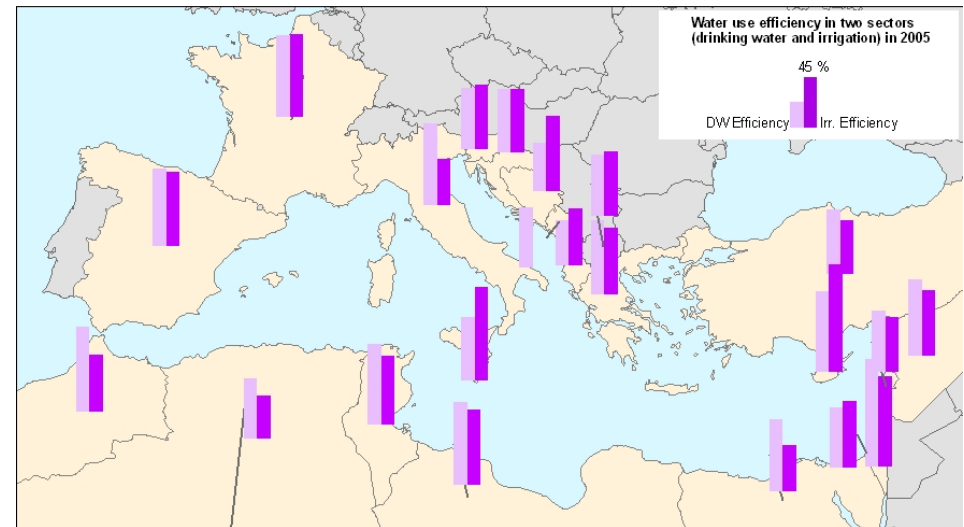
1. Water efficiency index (total and per sector)

Total water use efficiency in Mediterranean countries (1995-2005)



Source : Blue Plan

Water use efficiency in two sectors (drinking water and irrigation) in 2005



Source : Blue Plan