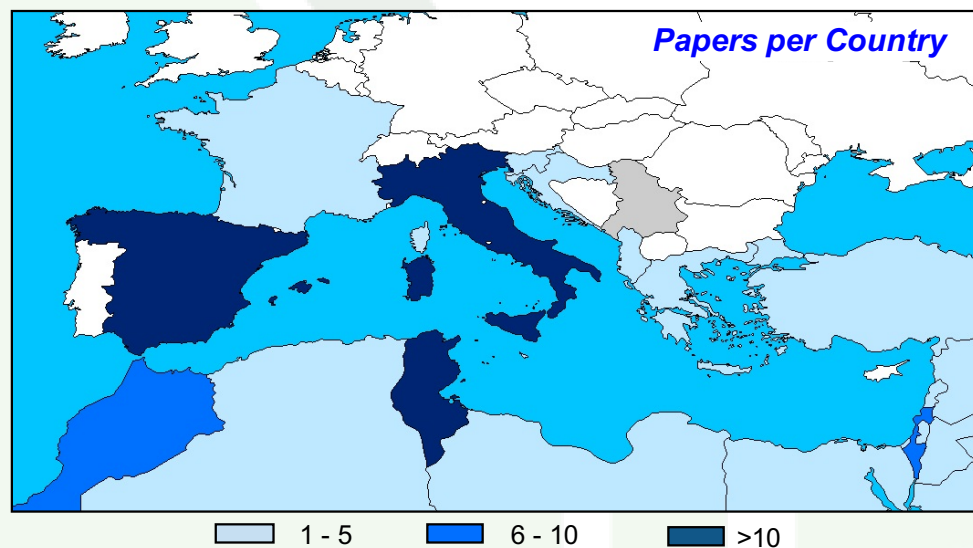


GROUNDWATER AND SALINISATION RISK: TAPPING WORKS AND MANAGEMENT EXPERIENCE IN THE MEDITERRANEAN AREA

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Three different approaches for managing groundwater when the natural resource is exposed to salinisation risk

Engineering approach

Submarine spring tapping
Well design optimization
Horizontal tapping, tunnels, and shafts
Physical barriers
Hydraulic barriers (injection or extraction)
Salt water preventive well
Aquifer storage and recovery well

Discharge management approach

Aquifer hydrological balance and demand assessment
Managed aquifer recharge
Groundwater overexploitation reduction
Pumping pattern changes
Assesment of salinization vulnerability
Numerical modelling
Monitoring of groundwater quality and quantity trends

Water and land management approach

Improve recharge
Reduce groundwater use to satisfy water demand
Improve water re-use
Pursue water demand adaptation
Modify land use and production processes
Reduce anthropogenic source of water salinity

LOCAL

AQUIFER

REGION

COMPLEXITY