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ΠΕΡΙΒΑΛΛΟΝΤΟΣ
& ΕΝΕΡΓΕΙΑΣ



SPECIAL
SECRETARIAT
FOR WATER



MINISTRY OF
ENVIRONMENT
& ENERGY



SPECIAL SECRETARIAT FOR WATER : SSW

NEW TECHNOLOGIES IN SMART CITIES

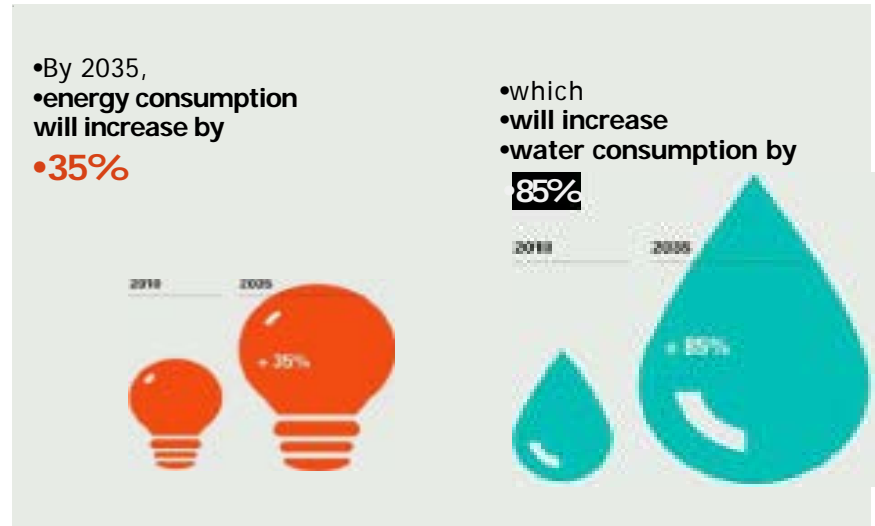
www.ypeka.gr

J. Ganoulis, Special Secretary of Water
Conference: Innovative Cities
Nice, 6-7 July 2017, France

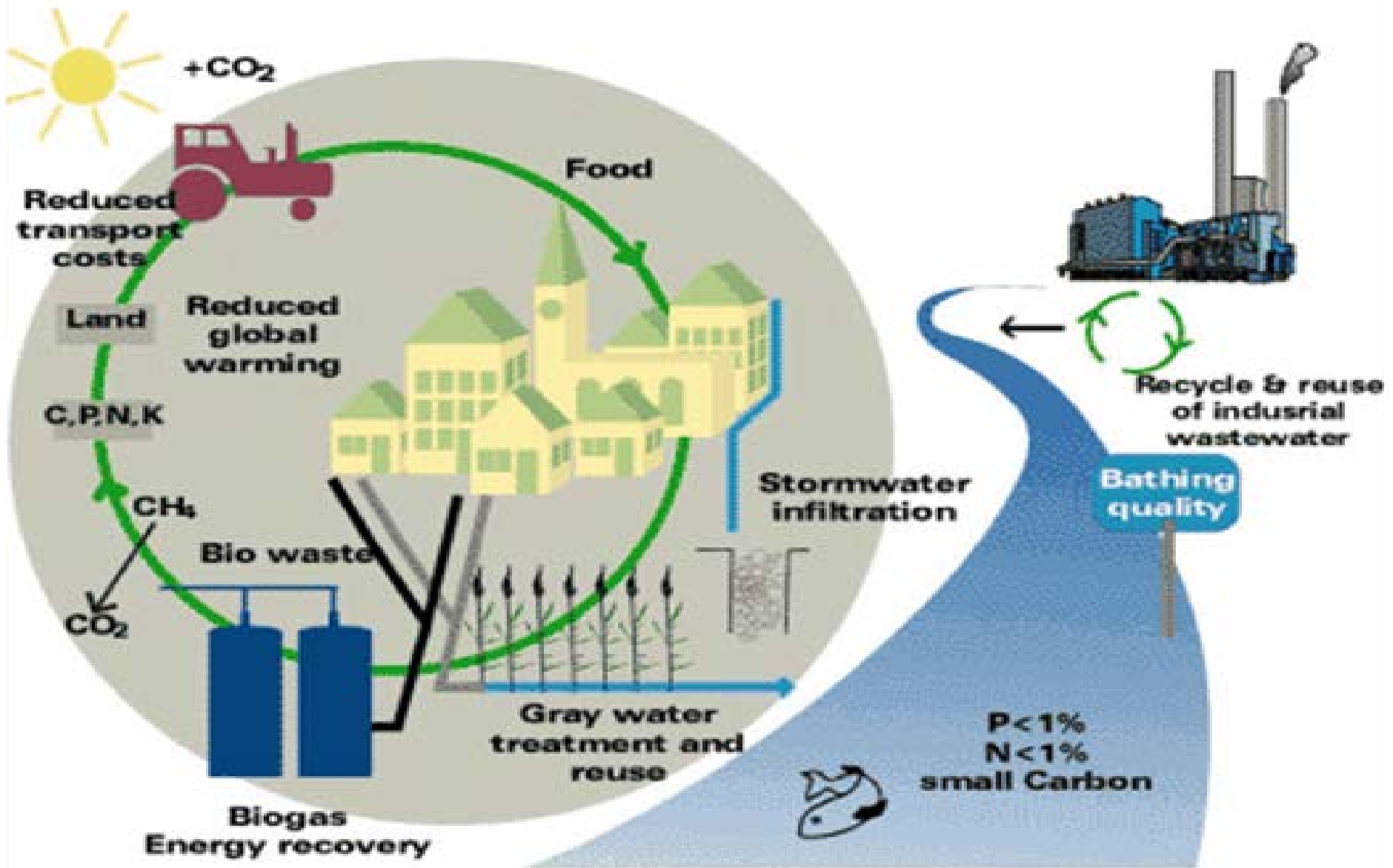


•Water and Energy Systems are Inextricably Linked: the Water-Energy Nexus

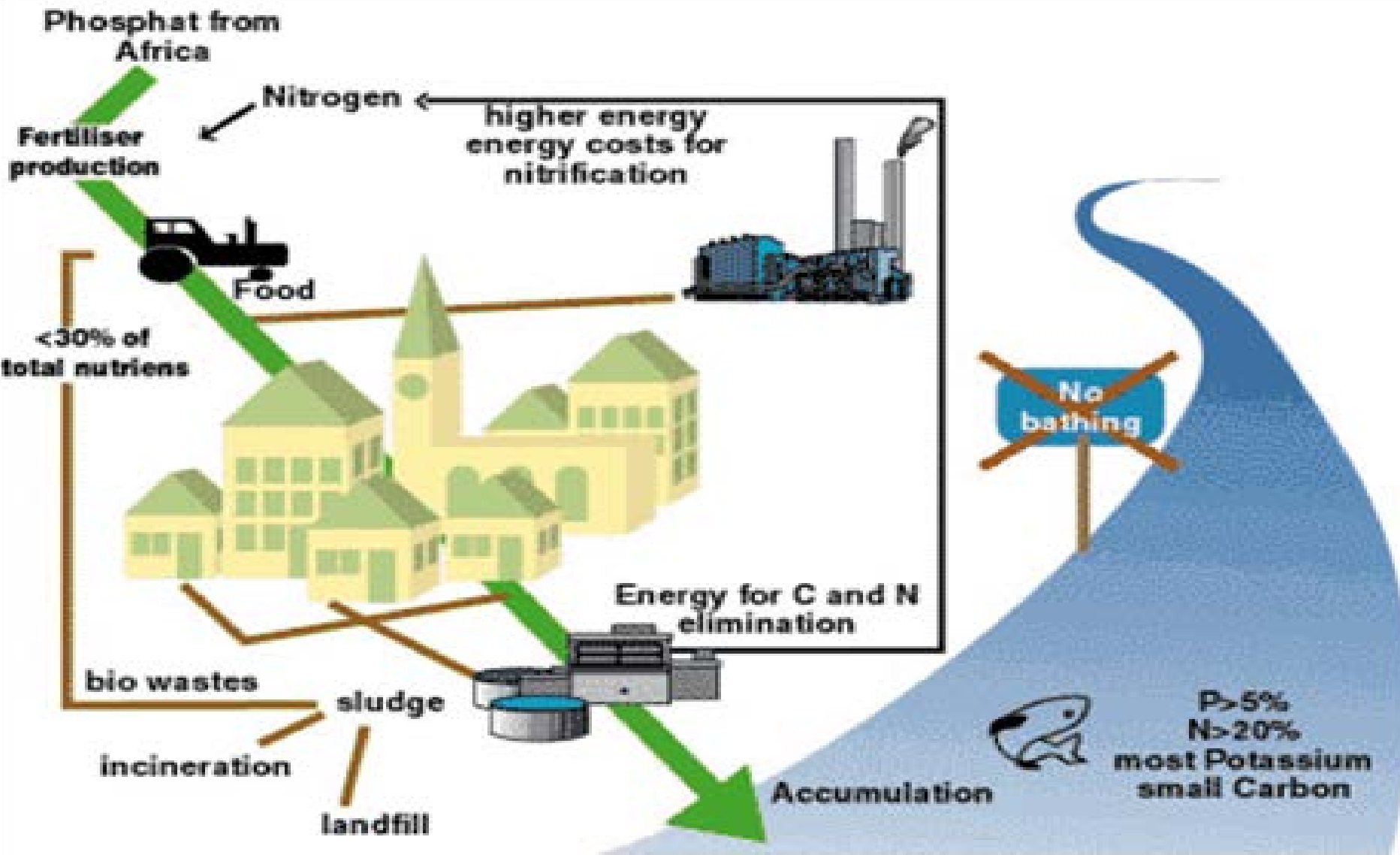
- Of the 7 billion people on Earth today
 - 2.5 billion have unreliable or no access to electricity
 - 2.8 billion live in areas of high water stress
- Increasing pressure on finite water resources
 - Water scarcity is increasing as demand for water intensifies with population and economic growth
- Climate change is exacerbating water and energy challenges
- Developing countries are the
 - most vulnerable



Source: Interlinkages & trade-offs between water & energy
•Diego J. Rodriguez, Senior Economist, The World Bank, 2014



CYCLICAL SUSTAINABLE RE-USE



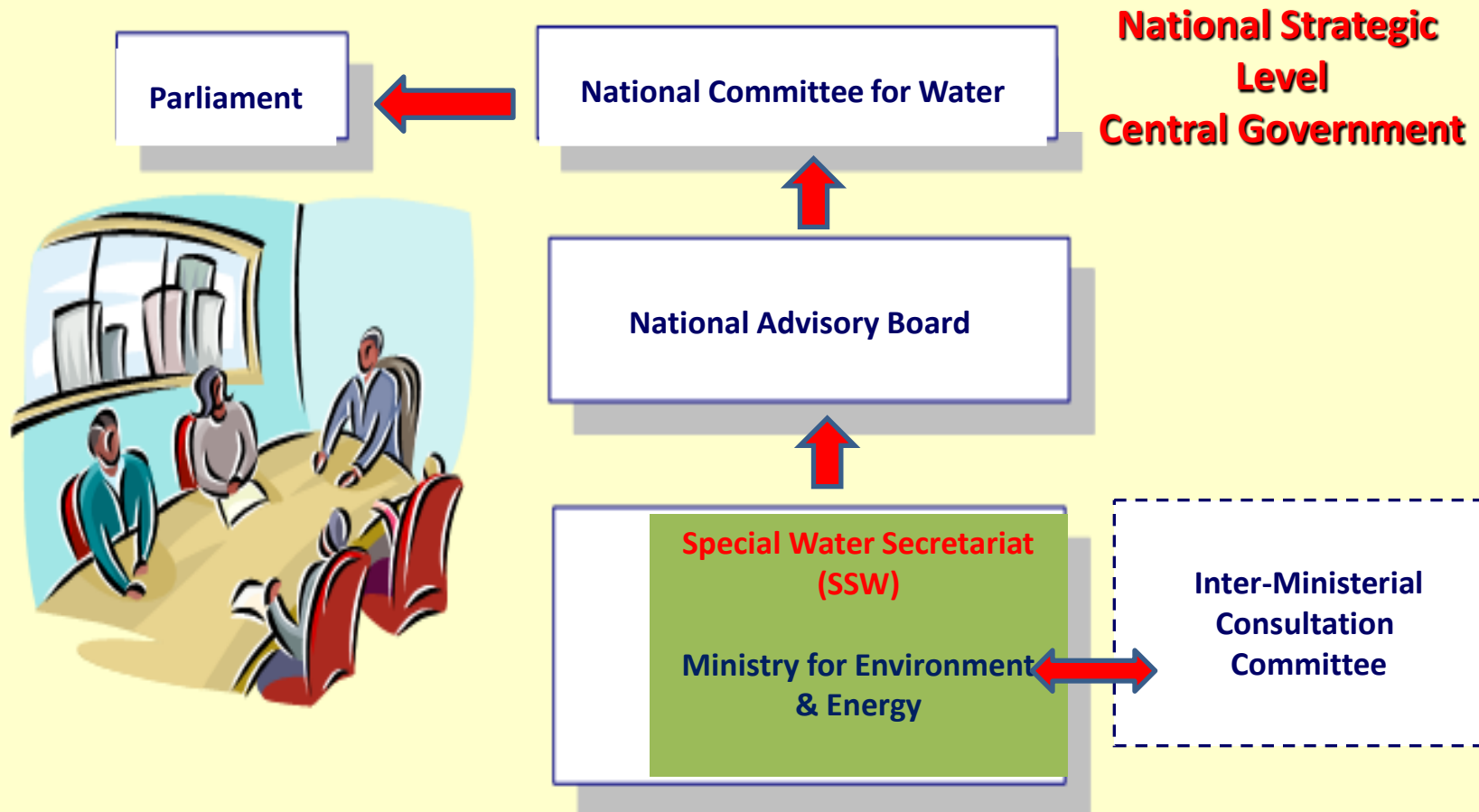
LINEAR NON SUSTAINABLE DISPOSAL



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Water Governance in Greece



International level ▶



National level



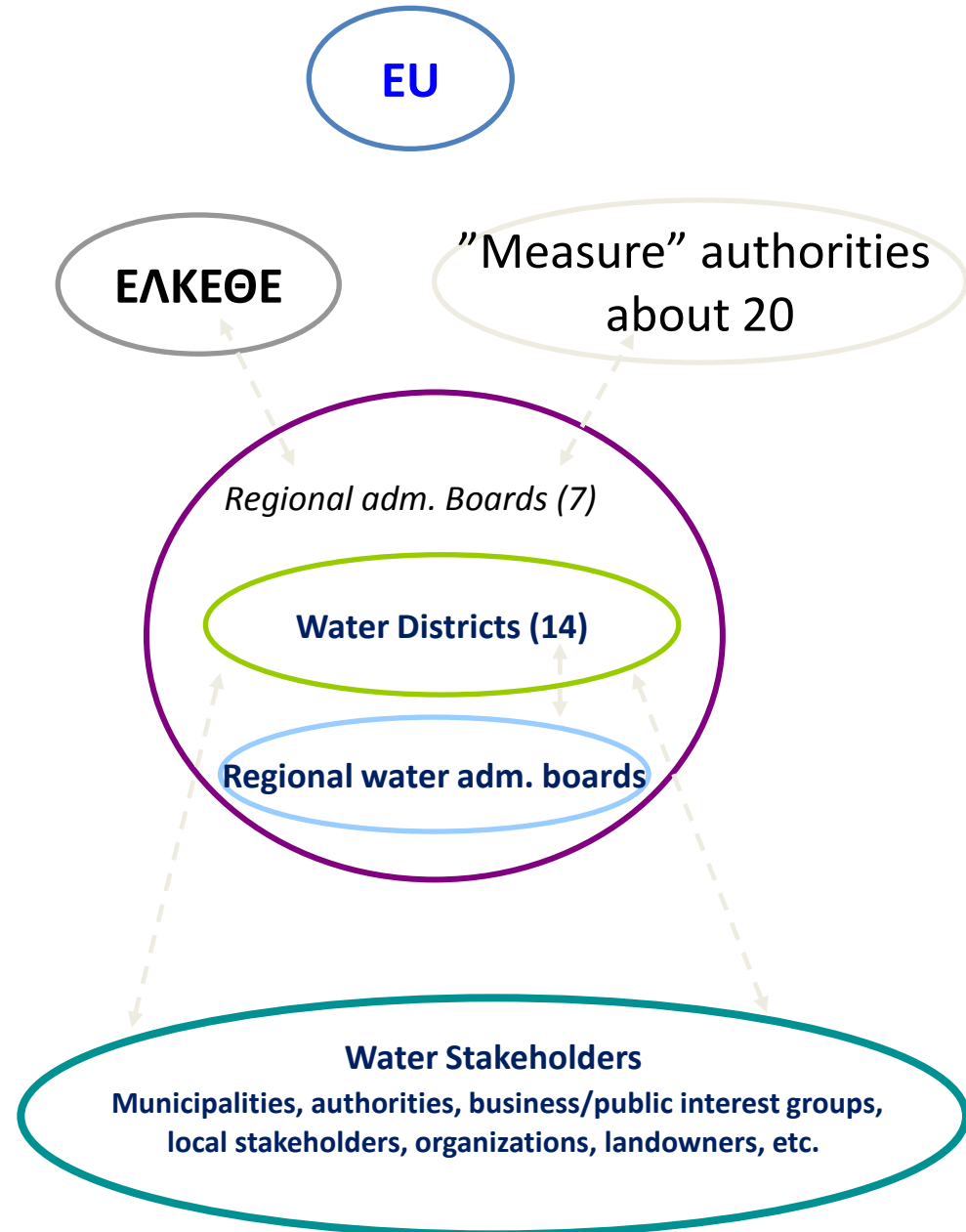
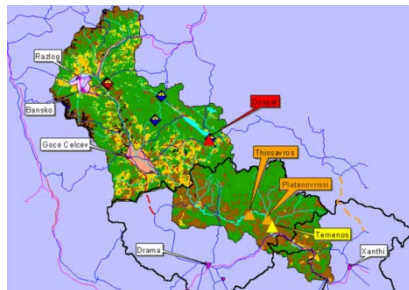
Water districts ▶

Regional water administrations ▶



Local level

River Basins ▶



Greek Islands Case

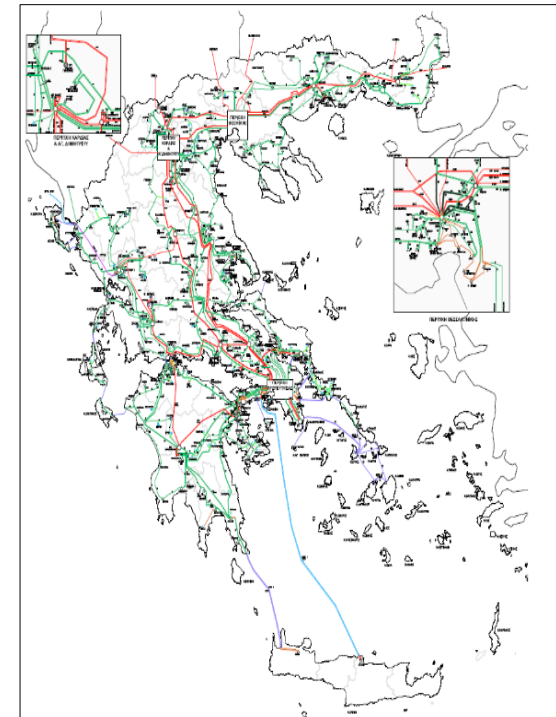
Current Scenario

- Water and power cost and availability are an issue for the Greek islands.
- Climate change and population/economic growth presses existing water resources.



Old water boat used to supply water to the island of Hydra until 2014.

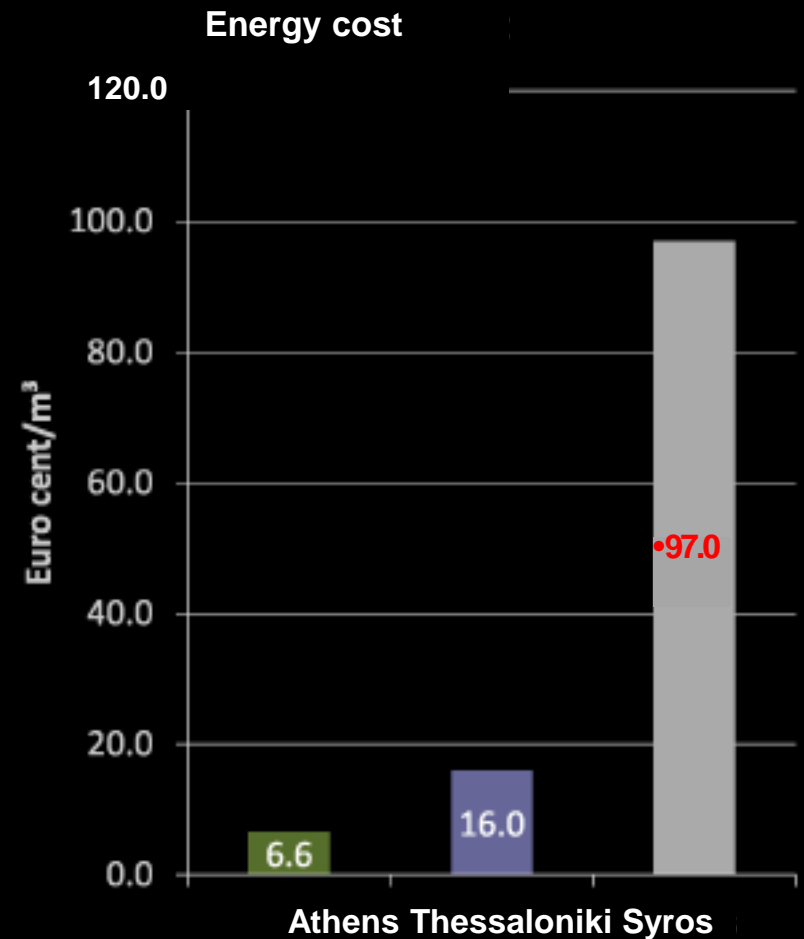
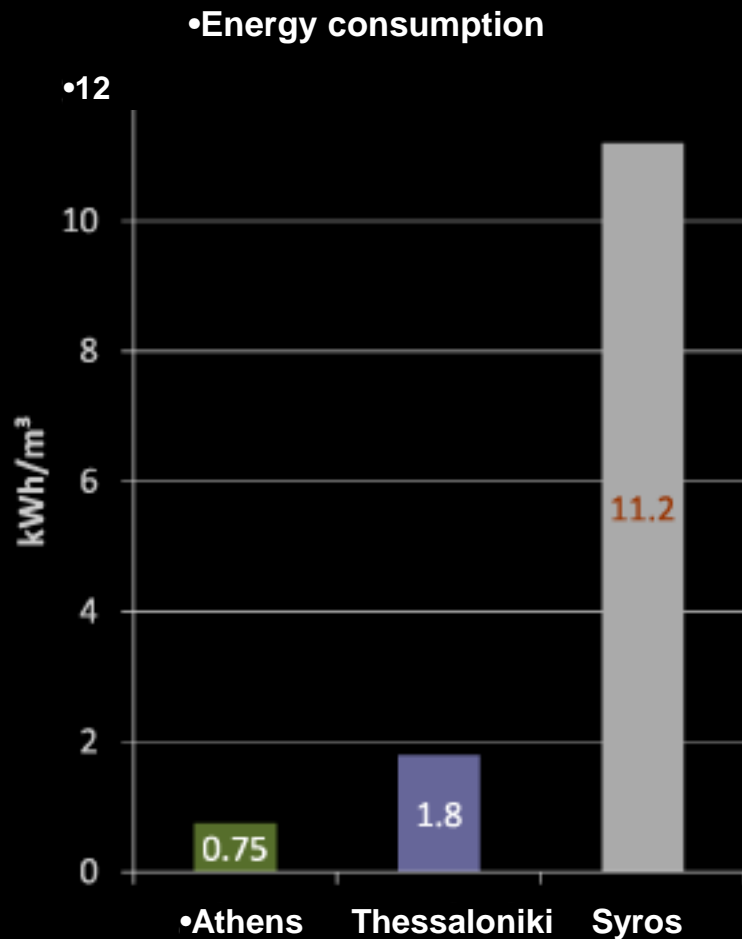
Source: <http://www.hydradirect.com/about-hydra/services-utilities/water-supply/>



Preliminary plan for Greek Aegean islands electric interconnection system.

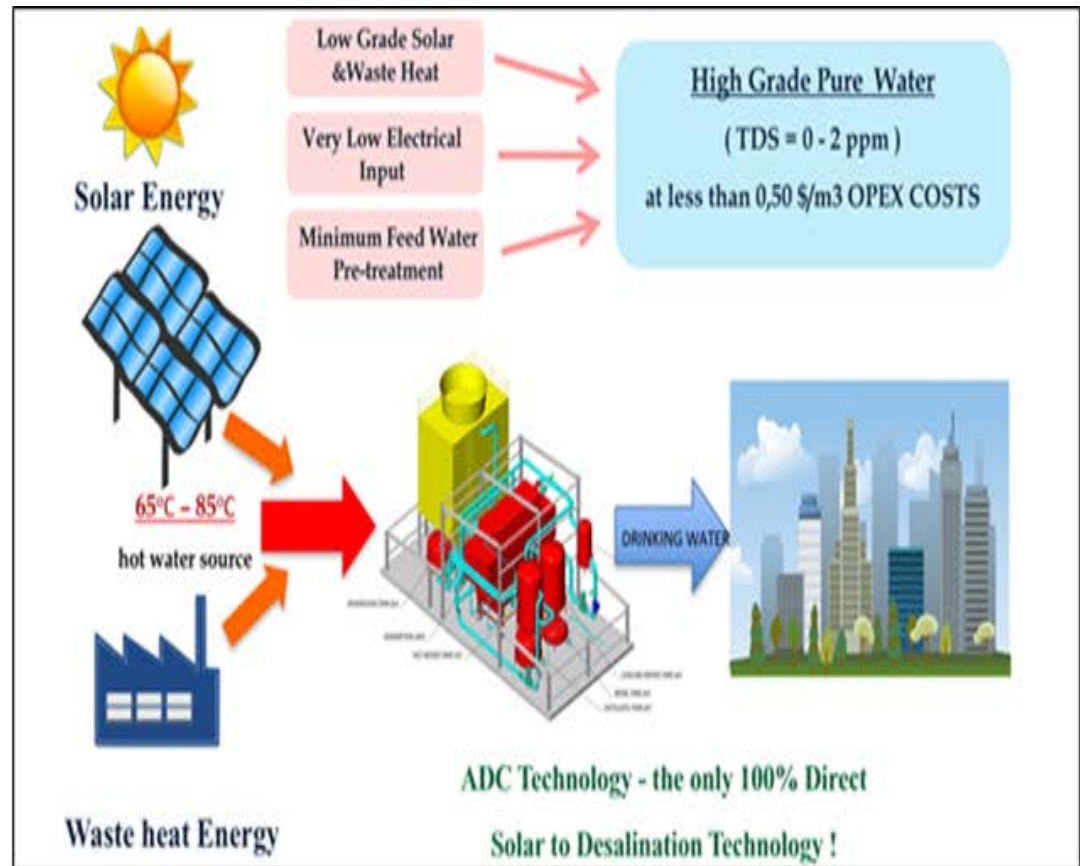
Source: N. Chatziargyriou and I. Margaris, "Renewable Energy Developments in the Greek Islands," Friedrich-Ebert-Stiftung, Athens, 2016.

•Energy Consumption & Cost •for water supply & sanitation in Greece



New Adsorption Desalination and Cooling MEDAD

- Largest and world's first pilot and research **Adsorption Desalination** project (100 m³/day)





**thank you
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