P73.
Water-Energy-Food Nexus as key for the sustainable development

Dimitra Rapti – Università di Ferrara
Francesco Sdao – Università della Basilicata

Potenza 2023
The Geoscience paradigm: resources, risks and future perspectives
Potenza 19-21 Settembre 2023

https://www.geoscienze.org/N185/p73-water-energy-food-nexus-as-key-for-the-sustainable-development.html

It has become increasingly important to understand the interconnection between sustainability development and management of water, energy, and food resources. The interactions among the three resources are highly complex and dynamic and need to be analyzed based on a holistic approach. Also, their entanglement will become more strong in the coming decades, due to the increasing urbanization, including population and economic growth will produce a progressively increasing pressure on these natural resources. It should be also noted that these resources will be impacted as the effects of climate change become more significant. The "nexus" approach represents a smart strategy for the efficient use and management of natural resources and could significantly contribute to achieving the Global Sustainable Development Goals. Accordingly, we welcome contributions to this section on:

a) the exploration of the aquifer systems and their relationship with superficial water resources; **b**) the evaluation of the vulnerability of the underground water resources due to overexploitation, salt intrusion phenomena or human activities **c)** water management strategies; **d)** the interactions with shallow geothermal systems for heating and cooling of buildings, greenhouses, district heating systems, etc.; **e)** the sustainable development of the agriculture and the impact on the superficial and underground water resources.

Key word: *Aquifer, water resources management, shallow geothermal and hydrothermal energy, agricultural water management, sustainable development*