

WORLD WATER DAY – 2022

GROUNDWATER - MAKING THE INVISIBLE VISIBLE



The accessibility to clean and fresh water is one of the most important problems of humanity today, and will be a critical issue of the future, in the context of constantly increasing demand against available fresh water resources.

Situated at various depth, groundwaters is often the source of freshwater for drinking water supply systems, farming, different industries. Groundwater budget is also responsible for the health functioning of wet ecosystems, such as wetlands and rivers. Uncontrolled and aggressive exploitation of groundwater can create mass movement and subsidence.

Each year on March 22 we celebrate the World Water Day, as a global event that is try to raise awareness on the importance of water resources and their role in our life.

Groundwater resources are involved in water supply systems that provides half of all drinking water in the world, satisfying with more than 40 percent the irrigation water needs and around one third of the global industrial sector. Around the world, more than 2.5 billion people are dependent on it in order to satisfy their daily uses. Large scale irrigation systems based on groundwater are extracting large volumes of water, that have led to a general decrease of water table. To put this on an even more sensitive scenario, ever-deeper boreholes and tube-wells, connected to more powerful pumps, put a modern pressure to the groundwater budget that is not able to replenish or rejuvenated for years or decades.

Our shared groundwater resources are highly dispersed across continents, and where they are heavily over-exploited, their renewable is lesser. One of the 17 goals of the 2030 Agenda for Sustainable Development is focused on Clean Water and Sanitation. As, groundwaters are one of the main sources used for water needs, it is compulsory that we are acting towards a proper sustainable management of this resource. The replenishment of the groundwater budget resources is strictly related besides the natural factors involved with the complex activities associated with land use and land cover characteristics. The long-term changing patterns on climate will impact beside natural ecosystems, large communities or many economies, also the groundwaters budget. As presented by Intergovernmental Panel on Climate Change (IPCC) groundwater use will record a continuous ascending trend as a result of the declining availability of clean surface water and increased global water consumption due to population growth.

As our main concern is to satisfy the needs of clean water, the main negative impacts to groundwater quality are caused frequently by saline intrusion, the chemicals infiltration by diffuse sources (fertilizers in agriculture), by point sources

(leaking of sewage or industrial pipelines) or by inefficient waste management practices originated in landfills.

To meet the needs of our generation, but also to ensure access to sufficient and good quality groundwater reserves for the future ones, we need to be more responsible on managing the resource.

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