ADAPTATION OF GROUNDWATER MANAGEMENT

OBJECTIVE

Improve the conservation of groundwater reservoirs, limiting water use and optimizing water reuse.

DESCRIPTION

Groundwater is an essential source of freshwater, accounting for about one third of the total world's available water. However, groundwater resources have been increasingly used up at an alarming and unsustainable rate. Local solutions aiming to aquifer recharge can be therefore implemented to help coping with challenging problems associated with drought and water scarcity. During times of plentiful water (i.e. rainy periods), extra water can be withdrawn from a river (or other source) and then injected and stored within an aquifer in a designated area. In this way, water can be used to restore groundwater balance and later for water supply.

EXPECTED RESULTS

Restore and increase the natural infiltration capacity of freshwater into the aquifer.

RESULT INDICATORS

Volume of water injected into groundwater reservoirs [m^3]

INVOLVED ACTORS

Farmers, landowners, local government.

EXPECTED TIMELINE FOR ACTION

- Long term (> 10 years)

BEST PRACTICES

- Austria
- Italy
- Friuli-Venezia Giulia Autonomous Region – Italy

CRITICALITIES

The technologies implemented may decrease their performance under specific local hydro, geochemical and hydrogeological conditions Other barriers include resistance within society and regulatory constraints.

SCOPE OF THE ACTION

- Adaptation

TYPE OF PROPOSED ACTIONS

- Grey
- Green

SECTOR OF ACTION

- Agriculture / Forests / Land use
- Biodiversity / Conservation of ecosystems
- Coastal management

CLIMATE IMPACTS

- Drought
- Other

IMPLEMENTATION SCALE

- Municipality
- Province
- Region / Country

SOURCE

https://climate-adapt.eea.europa.eu/metadata/adaptation-options/adaptation-of-groundwater-management