PREVENT SEAWATER INTRUSION

OBJECTIVE

Recharge the aquifer and increase groundwater resources.

DESCRIPTION

Coastal aquifer can be characterized by overexploitation, seawater intrusion and hence deteriorating water quality. Reasons can be a steadily growing water demand due to population growth and urbanization, a shrinking of the natural groundwater recharge in the watershed area and an increase in surface runoff. The latter two phenomena can be attributed to rapid urban sprawl at the expense of natural landscapes and agricultural land and to climate change, causing temperature increase, decline in precipitation, reduction of snow cover, etc.
The expected outputs are: evaluation of studies and data related to managed aquifer recharge; assessment of the impact of sea water intrusion on groundwater quality in the study area; definition of a remediation process for improving groundwater quality in regard to salinity; suggestion of implementable measures and techniques for improving groundwater quality in the study area.

EXPECTED RESULTS

Increased knowledge on climate change impacts and strengthened awareness of the local government and industry.

RESULT INDICATORS

Water salinity [‰]

INVOLVED ACTORS

Local government, population.

EXPECTED TIMELINE FOR ACTION

- Medium term (5-10 years)

BEST PRACTICES

- Hazmieh – Lebanon
- Syrian Arab Republic
- British Columbia – Canada
- Padova and Venice – Veneto Region – Italy
- Liguria Region – Italy

CRITICALITIES

High costs.

SCOPE OF THE ACTION

- Adaptation
- Mitigation

TYPE OF PROPOSED ACTIONS

- Grey
- Soft

SECTOR OF ACTION

- Agriculture / Forests / Land use
- Public health
- Urban settlement

CLIMATE IMPACTS

- Drought
- Salinization and acidification of water

IMPLEMENTATION SCALE

- Province
- Region / Country

SOURCE

https://www.giz.de/en/worldwide/15893.html