

Technology Fact Sheet

Managed aquifer recharge (MAR)ⁱ

1) Technology description

- Types of MAR such as absorption through the walls, absorption through the dunes, the lake, seepage tank, rainwater collection tank, sand dams, underground dams; replenishment, aquifer storage recovery (ASR) , aquifer storage transfer and recovery (ASTR) have been studied in Vietnam.
- Has been effectively deployed in many countries around, the world especially developed countries like USA, Japan, Germany and some developing countries like Mexico...

2) Socio-economic benefits

Storing water to secure water demand of household uses and production.

3) Environmental benefits

- Storing water in the aquifer for future use.
- Balancing water demand and water use.
- Reducing water loss due to evaporation and surface runoff.
- Preventing runoff flows from rain and soil erosion.
- Improving water quality, maintaining flows in rivers and streams.
- Management of seawater intrusion.
- Transporting water; aquifers acting as plumbing systems.
- Maintaining a stable water table, reducing the risk of land subsidence.

4) Status of technology

- The technology has been being researched in Vietnam.

5) Application potential

There are potential applications in areas where groundwater is being exploited, or there are such occurrences as subsidence, water table lowering in Hanoi and Ho Chi Minh City and the central coastal strip.

6) Barriers

- Must be implemented in parallel with other technical and management solutions.
- Only feasible in some areas with suitable conditions.
- Profit and distribution of economic benefits is unclear.
- Awareness of the people.

7) Costs

Implementation and technology application costs

- The cost of application deployment technology depends on the technological options are selected, the conditions of the deployment area, the cost of equipment, technology transfer, training...

Incremental costs to adapt to climate change (compared to conventional technology)

- Up to now, there is not enough information to evaluate.

ⁱ **This fact sheet has been extracted from TNA Report - Adaptation for Vietnam. You can access the complete report from the TNA project website <http://tech-action.org/>**