



MAR Hub

Leading Managed Aquifer Recharge Globally

MAR Hub is a smart specialisation cluster composed of South Australian companies, research & training institutions and experts within Government who jointly are already leading the way in Managed Aquifer Recharge (MAR).

South Australia, through the expertise of MAR Hub participants, has earned global recognition in this field for the entire MAR process, from research and conceptualisation to successful implementation of MAR with a range of aquifers, water sources and other constraints. MAR Hub looks to utilise its leading skills and take them to the global market, furthering the opportunity to work internationally and provide expertise across the globe.

Aquifer storage and recovery, a form of MAR, creates an alternative water resource by capturing, treating (often biologically) and storing water in controlled aquifers. This water can then be pumped back out from the aquifer when required. The water that is used can be from a range of sources, but two common sources are treated wastewater or storm-water where the pattern of supply of the water does not fit the pattern of demand and so storage is necessary.

Beyond the resource benefits, there are many benefits of MAR, they include;

- improved environmental health through reduction and management of pollutants
- low cost treatment both in the aquifer and biological methods
- flood risk reduction
- storage with lower space requirements compared to dams
- lower evaporation losses
- potential for transfer using the aquifer

Between the South Australian based universities and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) it has been estimated that approximately 30 percent of the academic papers written on this field, originate from South Australian lead research.

South Australian companies have built expertise and global recognition in this field and have successfully implemented MAR with a range of aquifers, water sources, and other constraints (for example, space). MAR is currently being used in a range of scales for urban and rural irrigation and also industrial purposes in South Australia.

