



ASCE AMERICAN SOCIETY OF CIVIL ENGINEERS



ISMAR 10

INTERNATIONAL SYMPOSIUM ON
MANAGED AQUIFER RECHARGE



Madrid (Spain)
2019 May 20-24th



1. MAR AND INTEGRATED WATER RESOURCES MANAGEMENT

MAR & rural. MAR for rural and irrigation water supplies
Potential of MAR in long-term/distance water diversion schemes
Establishing strategic groundwater reserves

2. MAR AS A KEY CLIMATE CHANGE ADAPTATION MEASURE

Innovation in harvesting and storing flood water
Detention and infiltration systems
Mitigation of climate change adverse impacts by means of MAR

3. NEW REGIONAL/LOCAL CASE STUDIES

MAR in developing countries

4. MAR MAPPING

Advanced methodologies for the selection of aquifers/sites
MAR maps methods & new MAR maps

5. MAR AND ECONOMIC ASPECTS

Quantification of benefits and costs of MAR
Circular economy and MAR (from cradle to cradle)
Financing MAR for water and food security
Water footprint from MAR activities. Green and blue waters
Public Procurement of MAR Innovative Solutions

6. MAR to MAR- κ et

MAR to complement groundwater demand management
Industrial applications of MAR, agroindustry and mining
Geothermal injection, MAR to source heat pumps...

7. MAR AND WATER REUSE

Water reclamation technologies for MAR
Reclaimed water reuse via aquifers

8. SUSTAINABLE MAR TECHNICAL SOLUTIONS

Advances in design and construction criteria of MAR systems, BIM
MAR Technical Solutions (SMARTS). Methods and strategies
Alternative and innovative water recharge systems
Operations and maintenance of MAR

9. MAR AND MANAGEMENT OF CLOGGING

10. MAR & LEX

MAR worldwide regulations
Recharge policies, quality standards
Institutional innovation for MAR. Water banks, groundwater user groups...
Governance & Decision Support Systems (DSS)

11. MAR AND MONITORING

Water management and MAR innovative systems
IT applications
Normalization, standardization and interoperability advances

12. MAR AND MODELING

New developments and codes. Practical examples
Water quality interaction codes & hydro-economic modeling

13. MAR AND ECOSYSTEMS

Riparian restoration
Mitigating geological/geotechnical impacts using MAR, land subsidence...

14. MAR IN COASTAL AREAS AND ISLANDS

MAR for mitigating saltwater intrusion
MAR with desalinated water

15. MAR AND ENVIRONMENTAL IMPACTS/RISKS

Risk and impacts assessment. Specific indicator systems for MAR
MAR activities impact evaluation assessment & Benchmarking

16. MAR WATER QUALITY & RELATED HYDROGEOCHEMISTRY ASPECTS

MAR for drinking water quality improvement
Techniques to break/recycle emergent compounds

17. MAR HEALTH ASPECTS

Removal and fate of microorganisms and organic compounds
Fate of pathogens and pollutants of concern in MAR system
Microbial ecology of MAR aquifer storage zones

18. URBAN MAR

Sustainable Urban Drainage systems (SUDS)
Rainwater/stormwater harvesting

19. R&D PROJECTS ON MAR

Innovation and integration in MAR
Recent and ongoing R&D projects (EC perspective)
Research gaps

20. RESEARCH AND EDUCATION ON MAR

Training for MAR operators & future water managers
Dissemination strategies and examples



Madrid (Spain) Venue TBC
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