

# GLOBAL MAR INVENTORY WORKSHOP

Mexico City, Monday, June 20, 2016 (09:00 – 13:00)

## OBJECTIVES

- To introduce the global MAR inventory: importance of such database and reasons for collecting MAR data, historical context, preliminary results, statistical analysis, possible uses of the inventory etc.;
- To identify gaps of information: sites missing, key information missing, insufficient data quality, inaccurate/outdated information, further updates (timeframe and content);
- To generate national MAR networks: initiate compilation of national MAR inventories, seek volunteers (native languages), facilitate contact to national authorities and databases, organize surveys for data collection, extract from inventory information of national/regional interest, etc.;
- To validate the web-based MAR portal: test and discuss the existing functionalities, learn existing features and suggest new ones, data import/export and visualization, database updates and corrections.

## EXECUTIVE SUMMARY

A global inventory of MAR schemes was recently compiled and first outcomes are published on a web-based GIS portal. The workshop is divided in two parts: In the first part, the presenters will introduce the inventory to the attendees by describing the motivation, the methodology used for data collection, key information collected, statistical data analysis, data accuracy, etc. Under presenters' guidance, the attendees will test the functionalities and interact with the web-based MAR portal. In the second part, group discussions will be encouraged to address various aspects related to: quality of the data (identify flaws in database structure, identify missing sites), improvements to the inventory (redefine terminology, extend/simplify database structure, add more MAR types or information, identify key topics for further research), dissemination of results (initiation of joint publications, identification of main objectives and target groups, agreement on deadlines), encouragement of national MAR networks (volunteers for database updating, coordinators of national surveys and data harvesting) etc.

# GLOBAL MAR INVENTORY WORKSHOP

Mexico City, Mexico, June 20, 2016



## PROGRAM

### 09:00 – 09:20 Motivation for the development of a global MAR inventory

*Peter Dillon (IAH, Australia)*

Despite its obvious economic and ecological benefits, MAR is often regarded by the decision makers as a costly and potentially risky solution. Main reasons for the low acceptability rates are the poor awareness on MAR in general and the lack of access to information (demonstration projects). Under these circumstances, it is safe to consider that a better dissemination of results from successful projects could help stakeholders to understand the benefits of MAR and adopt the methodology on a larger scale.

### 09:20 – 09:40 Development of the European MAR inventory

*Christopher Sprenger (KWB, Germany)*

Many different MAR types are widely distributed and applied on various scales and for various purposes in the European countries. This talk outlines the methodology developed for the inventory of MAR sites in Europe including MAR classification, MAR profiling and plausibility control. Some results from the European inventory are also shown very briefly, showing the importance of MAR derived water for the European drinking water supply.

### 09:40 – 10:00 Global patterns and characteristics of MAR schemes

*Catalin Stefan (TUD, Germany)*

The data collected for the MAR inventory was analyzed in respect to MAR historical development, geographical distribution, hydrogeological site characterization, technical description of the operational scheme, objectives and MAR technologies used, modeling approach, or quantitative and qualitative characterization of both infiltration and abstraction water. The preliminary data analysis revealed interesting patterns in MAR utilization in different countries and continents as well as correlations between technical and site-specific parameters.

### 10:00 – 10:20 Introduction to webGIS MAR portal

*Nienke Ansems (IGRAC, The Netherlands)*

To increase the availability and facilitate continuous update of the MAR inventory, a MAR web-GIS portal was developed: <http://marportal.un-igrac.org>. The MAR portal consists of a data layer catalog, a map viewer to visualize the selected data on a geographic location and a features panel to provide tabular output of the selected data. The portal allows to generate new pieces of information by creating overlays of map layers (mar suitability maps, or other overlays) and to build queries on the data.

### 10:20 – 10:30 Short break



# GLOBAL MAR INVENTORY WORKSHOP

Mexico City, Mexico, June 20, 2016



- 10:30 – 11:10 Exercise 1: Validation of the webGIS MAR portal (individual / group work)**  
Participants are guided through various options offered by the portal. They are requested to search for an existing project. If the project is identified, the project ID and its location is pinpointed on a large world map. If the project is not found in the portal, a simple template will be used for adding a new entry to the database.
- 11:00 – 11:50 Exercise 2: Identification of gaps and data utilization (work in sub-groups)**  
Participants will be divided in two sub-groups and will sketch a draft action plan for potential utilization of the global MAR inventory. Key issues are: what should be the best utilization of the inventory and of the portal? Is this information already available? If not, how can it be added (volunteers, time frame etc.). How shall the inventory and the portal be further developed (e.g. at national level)? The sub-groups will cover MAR management-related and technical-scientific aspects.
- 11:50 – 12:30 Exercise 3: Using the global MAR inventory for further promotion of MAR (plenary)**  
Discussion-based exercise on how can the inventory be used for increasing the interest in MAR and for further promotion in countries / regions where MAR is not well developed.
- 12:30 – 13:00 Wrapping-up workshop outcomes and conclusions**  
*Peter Dillon (IAH, Australia)*



# GLOBAL MAR INVENTORY WORKSHOP

Mexico City, Mexico, June 20, 2016



## CONTACT

Name	Country	Affiliation	Email
Peter Dillon	Australia	International Association of Hydrogeologists (IAH)	pdillon500@gmail.com
Catalin Stefan	Germany	Technische Universität Dresden (TUD)	catalin.stefan@tu-dresden.de
Nienke Ansems	The Netherlands	International Groundwater Resources Assessment Centre (IGRAC)	nienke.ansems@un-igrac.org
Christopher Sprenger	Germany	Berlin Centre of Competence for Water (KWB)	christoph.sprenger@kompetenz-wasser.de

