RESEARCH PROJECT LEAD / MAIN EXECUTOR

Predicting Impact of Fires on Water Quality

Funding body: Water Corporation WA / Institution: ECU

2020-2023 Perth, AUS

Developing a research strategy focused on prescribed burns and fires in the forested drinking water catchments of Perth Hills. The tasks included targeted experiments and monitoring scheme, conceptual and numerical modelling as well as a development of user-friendly fit-for-purpose predictive tool.

Nitrogen transformation in the subsurface

Funding body: Brazilian Federal Government / Institution: UFSC

2019 Florianópolis, BRA

Investigation of transformation pathways with a particular emphasis on anaerobic ammonia oxidation (AnAmmOx). The aim was to develop a conceptual model of the relative importance of (1) water flux rate, (2) N form and concentration, and (3) cation exchange capacity of porous media in AnAmmOx.

Carbon immobilisation in the continental scale Guarani aquifer

Founding body: Brazilian Federal Government / Institution: UFSC

2017-2019 Florianópolis, BRA

Aquifers gain little attention as sinks of global CO_2 due to low recharge rates. However, CO_2 in reaction with certain minerals may precipitate as a carbonate. We estimated that the aquifer is capable of immobilising annually up to 35 tones of CO_2

Effect of variable recharge on ethanol-gasoline contamination plumes

Founding body: Petrobras / Institution: UFSC

2017-2019 Florianópolis, BRA

We applied biochemical markers to compare the degradation rates with chemical rates to separate the influence of variable recharge on fate and transport of Light Non-Aqueous Phase Liquids in a shallow coastal aquifer

Conjunctive use of water and energy in aquifers

Founding body: Australian Government / Institution: CSIRO Land and Water

2010-2011 Adelaide, AUS

The thicker the aquifer is, the more suitable for conjunctive storage of water and energy

Metal mobilisation in glacial aquifers

Founding body: Polish Government / Institution: US

2006-2008 Sosnowiec, POL

Relative importance of recharge rate, recharge water quality and discharge rates on mobilisation of Ni and Co to groundwater. The investigation pointed to a necessity to control the water level position at a predetermined depth to avoid negative effects of metal mobilisation

RESEARCH PROJECT MEMBER

Developing an integrated implementation framework for Managed Aquifer Recharge solutions to facilitate the protection of Central European water resources endangered by climate change and user conflict

Funding body: European Union / Institution: University of Silesia

2019-2021 Katowice, POL

Review and support the hydrogeology team in dissipating information on Managed Aquifer Recharge; orientate graduate students; advice on field pilot trials, site prospection, instrumentation and monitoring

1. Bioregional Assessments and 2. National Assessment of Chemicals Associated with Coal Seam Gas Extraction in Australia

Funding body: Australian Government / Institution: CSIRO Land and Water

2012-2014 Adelaide, AUS

Groundwater modelling to inform the impacts of coal mining and coal seam gas extraction on the water resources and the environment

Managed Aquifer Recharge and Recycling Options: Understanding clogging processes and water quality impacts

Funding body: Australian Government / Institution: CSIRO Land and Water

2013-2015 Adelaide, AUS

Interpretation of nutrient fluxes and their influence on clogging rates in Soil Aquifer Treatment site in Alice Springs (NT)

Managed Aquifer Recharge and Stormwater Use Options

Funding body: Australian Government / Institution: Goyder Institute

2011-2013 Adelaide, AUS

Hydrogeology and modelling input for assessment of maximal and residual risk to public health and the environment of twelve different options for harvesting stormwater in the Parafield and neighbouring catchments of Salisbury, South Australia

Broken Hill Managed Aquifer Recharge

Funding body: Australian Government / Institution: CSIRO Land and Water

2010-2012 Adelaide, AUS

Hydrogeology and modelling input for feasibility study into securing Broken Hills water supply during drought; reduce evaporation and improve water efficiency at the Menindee Lakes Storages; protect the local environment and heritage; and return up to 200 gigalitres (GL) to the Murray-Darling Basin

Aquifer Storage Transfer and Recovery at Parafield Airport, SA

Funding body: City of Salisbury, Government of South Australia, Australian Government / Institution: CSIRO Land and Water

2010-2012 Adelaide, AUS

Operational study of multiple well injection, storage and recovery scheme in the City of Salisbury, SA

Stormwater recharge, storage and recovery from the fractured siltstone-sandstone aquifer in Aspendale, Vic

Funding body: Government of Victoria & Rossdale Golf Course / Institution: CSIRO Land and Water

2010-2012 Adelaide, AUS

Hydrogeological and operational study of Aquifer Storage and Recovery in a low permeability aquifer in Aspendale, Victoria