

# ECOSISTEMI DIPENDENTI DALLE ACQUE SOTTERRANEE

NUOVI ORIZZONTI DELLA RICERCA E IMPLICAZIONI GESTIONALI

# GROUNDWATER DEPENDENT ECOSYSTEMS

NEW RESEARCH HORIZONS AND MANAGEMENT IMPLICATIONS





The AQUALIFE project, granted by the EU-funded LIFE programme has been developed to involve stakeholders and end-users working on groundwater and dependent ecosystems (GDEs) with the main aim to increase awareness and consciousness on the ecological dimension of groundwater bodies. The project analysed three main groundwater dependent ecosystems: saturated aquifers, the hyporheic zone of streams and rivers and groundwater-fed springs. The project incorporates another important aspect: the intrinsic and extrinsic value of groundwater biodiversity by setting a new index on the conservation priority of the GDEs at the site-scale. In this way, end-users will be able to assess the conservation priority of GDE-sites under their jurisdiction together with the risk to which they are subjected. This approach has been transferred into the AOUALIFE software which makes feasible and user-friendly the Ecological Risk assessment, Hydrological/Hydromorphological Risk assessment (for the hyporheic zone and springs) and the Conservation Priority Index: a new tool-box for the assessment and monitoring of groundwater ecosystem status. The software will assign automatically all the scores to your sites for each indicator, thus allowing to set priorities for PoMs.

Participation is free of charge, poster presentation is planned, and the most eminent scientists at the European scale will attend the Conference! Participation is welcomed from stakeholders, end-users, policy-makers, environmental associations, biologists, hydrogeologists, citizens. representatives of other LIFE projects or other national or international projects dealing with groundwater and dependent ecosystems, by including also Groundwater Associated Aquatic Ecosystems (GWAAEs). Students interested to the topic are invited (1 ECTS will be assigned to them by rule).

#### FINAL PROGRAM OF THE AQUALIFE CONFERENCE

## Wednesday 04.07.2018 - Conference venue

- 15.00–16:00 Registration of participants and set up of posters (70 X 100 cm)
- 16:00-19:00 Open Space Poster Session & Icebreaker

### Thursday 05.07.2018 - Conference venue

- 9:00-9:30 Registration of Participants
- 9:30-10:30 Welcome of the Authorities
- 10:30-10:50 Annette Mertens\* & Diana M.P. Galassi\* (University of L'Aquila, Italy): Introduction to the AQUALIFE PROJECT: Implications for the management of the Groundwater Dependent Ecosystems
- 10:50-11:10 Marco Petitta (University of Rome "La Sapienza", Italy): Positioning groundwater in European Agenda: a new interdisciplinary role for groundwater after the KINDRA project
- 11:10-11:30 Coffee break (poster session)
- 11:30–11:50 Rudy Rossetto, Simone Maria Piacentini\* (Scuola Superiore Sant'Anna, Pisa, Italy): **Managed aquifer recharge in Italy: present and prospects**
- 11:50–12:10 Lucas Fillinger, Katrin Hug, Astrid Meyer, Maria Avramov, Tobias Siemensmeyer, Cornelia Spengler, Hans Jürgen Hahn, Christian Griebler\* (Helmholtz Center Munich, Institute of Groundwater Ecology, Germany): A new tool-box for the assessment and monitoring of groundwater ecosystem status
- 12:10–12:30 Anne Robertson\*, Ignacio Peralta-Maraver, Damiano Weitowitz, Julia Reiss (Roehampton University, U.K.): **Ecosystem functioning in Groundwater Dependent Ecosystems**
- 12:30–12:50 Di Lorenzo Tiziana\*, Cifoni Marco, Fiasca Barbara, Di Cioccio Alessia, Diana Maria Paola Galassi (ISE-CNR, Florence, Italy): **Ecological risk assessment of pesticide mixtures in eleven GDEs of Abruzzo region: toward more realistic scenarios**
- 12:50-13:10 Ana Sofia Reboleira (Natural History Museum of Denmark, University of Copenhagen, Denmark): **The dark side of human contamination hidden impacts in subterranean ecosystems**
- 13.10–14.30 Lunch (poster session)
- 14:30–14:50 Diana M.P. Galassi\*, Barbara Fiasca, Alessia Di Cioccio, Marco Cifoni, Simone Fattorini, Tiziana Di Lorenzo (University of L'Aquila, Italy): **Ecological Risk Assessment in Groundwater Dependent Ecosystems: the AQUALIFE ERA**
- 14:50–15:10 Simone Fattorini\*, Diana M.P. Galassi (University of L'Aquila, Italy): Assessing conservation priorities in groundwater dependent ecosystems using invertebrate vulnerability

15:10–15:30 Giovanni Strona\*, Simone Fattorini, Barbara Fiasca, Walter Lorenzetti, Tiziana Di Lorenzo, Diana M.P. Galassi (European Commission, Joint Research Centre, Directorate D – Sustainable Resources, Bioeconomy Unit): **AQUALIFE software, a new tool for a standardized ecological assessment of groundwater dependent ecosystems** 

15:30–15:50 Anton Brancelj (National Institute of Biology, Slovenia): **From rain drop to spring water – hydroecology within epikarstic cave** 

15:50-16:10 Anna Menció\*, Josep Mas-Pla (University of Girona, Spain): **Challenges** in environmental impact assessment of groundwater ecosystems: combining hydrogeological and biological information

16:10-17:00 Coffee break (poster session)

17:00–18:30 Round table: **Defining the future direction of groundwater** (bio)monitoring

Friday 06.07.2018 - Field trip to the Stiffe Cave