

Monday, 11th January 2016

REGISTRATION and INTRODUCTION

8.00 - 9.00	Registration
9.00 - 9.15	Welcome Bavarian State Ministry for Science, Research and the Arts (to be confirmed) Damià Barcelo - Welcome to GLOBAQUA Ralf Ludwig - Welcome to the Conference
9.15 - 10.00	KEYNOTE: Temporal variability of surface water quality: Implications for the management of drinking water Manuel Rodríguez-Pinzon Université Laval, Ville de Québec, Canada
10.00 - 10.30	Introduction to posters
10.30 - 10.45	Coffee break

Session I: STRESSORS

10.45 - 11.15	INVITED SPEAKER: Title to be confirmed Werner Brack UFZ Helmholtz Centre for Environmental Research, Leipzig, Germany
11.15 - 11.35	Modelling integrated scenarios of changes in land use, climate and water management with the CLUE model <u>Verena Huber García</u> , Swen Meyer, David Gampe and Ralf Ludwig Department of Geography, Ludwig-Maximilians-Universität, Munich, Germany
11.35 - 11.55	Recent Trends in the Ebro River Basin: Is It All „Just“ Climate Change? <u>Stefanie R. Lutz</u> and Ralf Merz Department Catchment Hydrology, UFZ Helmholtz Centre for Environmental Research, Halle (Saale), Germany
11.55 - 12.15	Particle related pollutant transport in catchments: Impact of urbanization, fluxes and dynamics <u>Hermann Ruegner</u> , Marc Schwientek and Peter Grathwohl Eberhard Karls University of Tübingen, Tübingen, Germany
12.15 - 13.45	Poster session/Lunch

Session I: STRESSORS

- 13.45 - 14.05 **Variability in snow-depth time series within the Adige catchment: anomalies and changes in the last century.**
Giorgia Marcolini^{1,2}, Alberto Bellin¹, Markus Disse² and Gabriele Chiogna²
¹Dip. di Ingegneria Civile Ambientale e Meccanica, University of Trento, Trento, Italy
²Fac. of Civil Geo and Environ. Engineering, Technical University of Munich, Munich, Germany
- 14.05 - 14.25 **Hydrology and nutrient variations in the Sava River Basin: stable isotope approach**
Nives Ogrinc^{1,2}, Janja Vrzel^{2,3}, David Kocman¹ and Polona Vreča¹
¹Dept. of Environmental Sciences, Jožef Stefan Institute, Ljubljana, Slovenia
²Jožef Stefan International postgraduate school, Ljubljana, Slovenia
³Ecological Engineering Institute, Maribor, Slovenia
- 14.25 - 14.45 **Lagrangian tracer aided sampling approach in assessing the fate of wastewater-related contaminants in rivers**
Gaëlle Guillet, Julia Knapp, Marc Schwienteck, Sylvain Merel, Olaf Cirpka, Christian Zwiener and Peter Grathwohl
Centre for Applied Geoscience, University of Tübingen, Tübingen, Germany
- 14.45 - 15.05 **Ecotoxicological risk assessment and removal of pharmaceutical compounds in 12 WWTPs**
Carmen Fernández-López¹, José Manuel Guillén¹, I.M. Martínez-Alcalá¹ and John R. Parsons²
¹UCAM, Catholic University of Murcia, Murcia, Spain
²IBED, University of Amsterdam, Amsterdam, The Netherlands
- 15.05 - 15.30 | Coffee break

Session II: RECEPTORS

- 15.30 - 16.00 **INVITED SPEAKER: Fish responses to multiple stressors: combined effects of water scarcity and oxygen depletion**
M. Teresa Ferreira¹, Paulo Branco¹, José Santos¹, Susana Amaral¹, Rafaela Schinegger² and Stefan Schmutz²
¹Department of Natural Resources, Environment and Landscape, University of Lisbon, Lisbon, Portugal
²Institute of Hydrobiology and Aquatic Ecosystem Management, University of Natural Resources and Life Sciences, Vienna, Austria
- 16.00 - 16.20 **Accounting for the effects of combined gradients of stressors on Mediterranean streams**
Sergi Sabater^{1,2}, Vicenç Acuña¹, Carles Borrego^{1,2}, Arturo Elosegi³, Ladislav Mandarić¹, Jordi-René Mor^{1,4}, Isabel Muñoz⁴, Olatz Pereda³, Mira Petrović¹, Jessica Subirats¹, Daniel von Schiller³
¹Catalan Institute for Water Research, Girona, Spain
²Institute of Aquatic Ecology, University of Girona, Girona, Spain
³University of the Basque Country, Leioa, Spain
⁴Department of Ecology, University of Barcelona, Barcelona, Spain

- 16.20 - 16.40** | **Interaction between flow intermittence and pollution on stream ecosystem functioning**
Olatz Pereda¹, Daniel von Schiller¹, Vicenç Acuña², Jordi René Mor², Sergi Sabater^{2,3} and Arturo Elosegi¹
¹ Faculty of Science and Technology, the University of the Basque Country, Bilbao, Spain
² Catalan Institute for Water Research (ICRA), Girona, Spain
³ Institute of Aquatic Ecology, University of Girona, Girona, Spain
- 16.40 - 17.00** | **Processes controlling aquatic quality during drying and rewetting events in a Mediterranean temporary river**
Nikolaos Th. Skoulikidis, Leonidas Vardakas, Yiorgos Amaxidis and Panagiotis Michalopoulos
Hellenic Centre for Marine Research, Attica, Greece
- 17.00 - 17.15** | Tea time

Session II: RECEPTORS

- 17.15 - 17.35** | **Nutrients and Sediments - two of the major pollutants of freshwater stream ecosystems - impact upon epilithic algae**
Bassam Al-Yaseen
University of Leicester, Leicester, UK
- 17.35 - 17.55** | **Evaluating the stressor effects on macroinvertebrate diversity in Adige headwaters**
Isabel Muñoz¹, A. Esnaola¹, Nicola Ballerini², Andrea Butturini¹, Karina Cano Paoli³, Gabriele Chiogna⁴, Elena Diamantini³, Bruno Majone³, Stefano Mallucci³, Ladislav Mandarić⁵, Angela Sacchi², Mira Petrovic⁵, Elisa Stella³ and Alberto Bellin³
¹ Universitat de Barcelona, Barcelona, Spain
² Aeiforia, Fidenza, Italy
³ University of Trento, Trento, Italy
⁴ Technische Universität München, München, Germany
⁵ ICRA, Catalan Institute for Water Research, Girona, Spain
- 17.55 - 18.15** | **Aquatic macroinvertebrates assemblages in the Sava River-2014 Case Study**
Bojana Tubić¹, Vanja Marković¹, Marija Ilić¹, Ana Atanacković¹, Jelena Čanak Atlagić¹, Đurađ Mološević², Vladica Simić³ and Momir Paunović¹
¹ Institute for Biological Research "Siniša Stanković", University of Belgrade, Belgrade, Serbia
² Faculty of Science and Mathematics, University of Niš, Niš, Serbia
³ Institute of Biology and Ecology, University of Kragujevac, Kragujevac, Serbia
- 18.15 - 18.35** | **HyTEC - first results from an experimental facility to study the effect of hydro- and thermopeaking on fish, macroinvertebrates and microphytobenthos within the MARS project**
Elisabeth Bondar-Kunze¹, Veronica Kasper¹, Lisa Schülting², Wolfram Graf², Stefan Auer², Stefan Schmutz², Bernhard Zeiringer² and Thomas Hein^{1,2}
¹ WasserCluster Lunz, Lunz/See, Austria
² University of Natural Resources and Life Sciences, Vienna, Austria
- 18.45 - 20.00** | Walking Freising - Guided Tour
- 20:00** | Conference Dinner

Tuesday, 12th January 2016

Session III: IMPLICATIONS

- 9.00 - 9.30** | **INVITED SPEAKER:**
Jürgen Geist (to be confirmed)
Aquatic Systems Biology, Technische Universität München, Munich, Germany
- 9.30 - 9.50** | **A methodological approach for evaluating ecological flows using ecological indicators: A case study in River Pinios, Greece**
Konstantinos Stefanidis, Yiannis Panagopoulos, Alexandros Psomas and Maria Mimikou
Laboratory of Hydrology and Water Resources Management, National Technical University of Athens, Athens, Greece
- 9.50 - 10.10** | **Impact of multiple pressures on the ecological status of European rivers**
Bruna Grizzetti, Alberto Pistocchi, Camino Liqueste, Ángel Udias, Faycal Bouraoui and Wouter van de Bund
European Commission Joint Research Centre (JRC), Water Resources Unit, Ispra, Italy
- 10.10 - 10.30** | **Dynamics and stability of River Ecosystems under variable environmental conditions: Iberian rivers as case study**
Laia Sabater-Liesa¹, Antoni Ginebreda¹, Isabel Muñoz², Rafael Marcé and Damià Barceló^{1,3}
¹ IDAEA-CSIC, Institute of Environmental Assessment and Water Research, Barcelona, Spain
² University of Barcelona, Department of Ecology, Barcelona, Spain
³ ICRA, Catalan Institute for Water Research, Scientific and Technologic Park of the UdG, Girona, Spain
- 10.30 - 10.45** | Coffee break

Session III: IMPLICATIONS

- 10.45 - 11.05** | **Constraints to the reuse of reclaimed wastewater for irrigation in Morocco: A case study of a golf course in Agadir**
Hajar Benlouali¹, Moulay Cherif Harrouni¹ and Redouane Choukr-Allah^{1,2}
¹ Hassan II Institute of Agronomy and Veterinary Medicine, Agadir, Morocco
² International Centre for Biosaline Agriculture, Dubai, UAE
- 11.05 - 11.25** | **Change in terrestrial and aquatic habitat quality in 4 European river basins under future irrigation scenarios**
Marta Terrado¹, Sergi Sabater^{1,2}, Laura Vergoñós¹, Leonidas Vardakas³, Momir Paunović⁴ and Vicenç Acuña¹
¹ Catalan Institute for Water Research, Girona, Spain
² Institute of Aquatic Ecology, University of Girona, Girona, Spain
³ Hellenic Center for Marine Research, Attica, Greece
⁴ University of Belgrade, Institute for Biological Research Siniša Stanković, Belgrade, Serbia

- 11.25 - 11.45** | **Participative valuation of ecosystem services of aquatic ecosystems: Evrotas river basin Greece**
Philippe Ker Rault and Joke Luttik
Alterra Wageningen Univeristy and Research, Wageningen, Netherlands
- 11.45 - 12.05** | **The Economic Value of Restoration based on the Ecosystem Services Approach**
Phoebe Koundouri^{1,2,3} and Iannis Souliotis^{1,3}
¹ Athens University of Economics and Business, Athens, Greece
² London School of Economics, London, UK
³ International Centre for Researcher on the Environment and the Economy (ICRE8), Athens, Greece
- 12.05 - 13.45** | **Poster session/Lunch**

Session IV: MANAGEMENT and POLICY

- 13.45 - 14.15** | **INVITED SPEAKER: The MARS project - status quo on the European scale analyses and the multiple stressor tools' development**
Sebastian Birk, Daniel Hering and Christian Feld
Aquatic Ecology, University of Duisburg-Essen, Essen, Germany
- 14.15 - 14.35** | **The ESSEMENT project: setting the scene for the ecological management of a multiple-stressed region.**
Yaron Hershkovitz^{1,2}, Daniel Hering¹ and Gideon Gal³
¹ Aquatic Ecology, University of Duisburg-Essen, Essen, Germany
² The Steinhardt Museum of Natural History and National Research Center, Tel Aviv University, Tel Aviv, Israel
³ Y. Allon Kinneret Limnological Laboratory, Israel Oceanographic and Limnological Research, Haifa, Israel
- 14.35 - 14.55** | **A European scale integrated modelling framework to analyse multiple water stressors in support to river basin management**
Alberto Pistocchi and coworkers
European Commission, DG Joint Research Centre, Institute for Environment and Sustainability, Ispra, Italy
- 14.55 - 15.15** | **Decision support system for monitoring strategies for surface water quality based on a participative approach**
Sonja Behmel¹, Mathieu Damour², Ralf Ludwig³ and Manuel Rodriguez-Pinzon¹
¹ Université Laval, Québec, Canada
² DATAEA, Le Bouscat, France
³ Ludwig Maximilian Universitaet, Munich, Germany
- 15.15 - 15.30** | **Coffee break**

Session IV: MANAGEMENT and POLICY

- 15.30 - 15.50** **Unsolved conflicts between water users in Huelva (Andalusia, Spain): a case study about the slow implementation of the Water Framework Directive in the Guadalquivir River Basin**
Manpriet Singh and Ettore Capri
Università Cattolica del Sacro Cuore, Piacenza, Italy
- 15.50 - 16.10** **Environmetric methods to investigate natural and anthropogenic controls on seasonal and spatial variations in water quality**
Hülya Boyacıoğlu¹ and Hayal Boyacıoğlu²
¹ Department of Environmental Engineering, Dokuz Eylül University, Izmir, Turkey
² Department of Statistics Bornova, Ege University, Izmir, Turkey
- 16.10 - 16.30** **A participatory approach to identifying appropriate WFD measures, based on the interdependencies between human activities and ecosystem services at the catchment level**
Karl Arpon, Theodoros Giakoukis, Katerina Pylarinou and Nick Voulvoulis
Centre for Environmental Policy, Imperial College London, UK
- 16.30 - 16.50** **The art and science of integrating scientific knowledge for dealing with multiple pressures on river basins**
Adriaan Slob and Tara Geerdink
TNO, Strategy and Policy, Delft, Netherlands

CLOSING DISCUSSION

- 16.50 - 17.15** **Final remarks and closure of the meeting**
- 17.15 **End of meeting**

Posters

STRESSORS

- 1.- Climate change impact assessment under data scarcity – Comparing physically based hydrological modeling results and soil input information in an ungauged Mediterranean catchment**
Swen Meyer¹, Michael Blaschek², Rainer Duttmann² and Ralf Ludwig¹
¹ Department of Geography, University of Munich, Munich, Germany
² Department of Geography, University of Kiel, Kiel, Germany
- 2.- Analysing RCM outputs as benchmark for climate change impacts on the hydrology of selected river basins under conditions of water scarcity**
David Gampe¹, Swen Meyer¹, Grigory Nikulin² and Ralf Ludwig¹
¹ Department of Geography, Ludwig-Maximilians-Universität, Munich, Germany
² Rosby Centre, Swedish Meteorological and Hydrological Institute (SMHI), Norrköping, Sweden
- 3.- Assessment of Climate and Agricultural Stressors Impacts on Groundwater Resources in Chtouka, Southwestern Morocco**
Malki Mouna¹, Ait Brahim Yassine¹, Hirich Abdelaziz^{2,3}, Choukr-Allah Redouane³, Latifa Al Yacoubi¹ and Bouchaou Lhoussaine¹
¹ Applied Geology and Geo-Environment Laboratory, Faculty of Sciences, Ibn Zohr University, Agadir, Morocco
² International Center for Biosaline Agriculture, Dubai, UAE
³ Salinity and plant nutrition lab., Hassan II Institute of Agronomy and Veterinary Medicine, Agadir Morocco
- 4.- Basin-scale and climate influence on sediment yield in Western Mediterranean basins**
Cristina Buendia^{1,2}, Ramon J. Batalla^{1,2}, Sergi Sabater¹
¹ Catalan Institute for Water Research (ICRA), Girona, Spain
² Fluvial Dynamics Research Group-RIUS, University of Lleida, Lleida, Spain
- 5.- Study of groundwater-surface water interactions and its modelling to improve understanding of dynamics in the Ljubljansko polje aquifer system (Slovenia)**
Janja Vrzel^{1,2}, Ralf Ludwig³, Goran Vizintin⁴, Nives Ogrinc^{2,5}
¹ Ecological Engineering Institute d.o.o., Maribor, Slovenia
² Jozef Stefan International Postgraduate School, Ljubljana, Slovenia
³ Department of Geography, University of Munich, Munich, Germany
⁴ Dep. of Mining and Geotechnology, Faculty of Natural Sciences and Engineering, Ljubljana, Slovenia
⁵ Department of Environmental Sciences, Jožef Stefan Institute, Ljubljana, Slovenia
- 6.- Hydrological alterations in the Adige catchment (Italy)**
Stefano Mallucci, Bruno Majone and Alberto Bellin
University of Trento, Department of Civil, Environmental and Mechanical Engineering, Trento, Italy
- 7.- Levels of polar pesticides in water and sediment samples from the Evertotas and Sava River Basins**
Nuria Guillem¹, Mar Olmos¹, Miren López de Alda¹ and Damià Barceló^{1,2}
¹ Institute of Environmental Assessment and Water Research (IDAEA-CSIC), Barcelona, Spain
² Catalan Institute for Water Research (ICRA), Girona, Spain

- 8.- Elements in water, suspended particulate matter and sediments of the Sava River**
Radmila Milačič^{1,2}, Tea Zuliani¹, Janja Vidmar^{1,2}, Vesna Fajon^{1,2}, Milena Horvat^{1,2} and Janez Ščančar^{1,2}
¹ Department of Environmental Sciences, Jožef Stefan Institute, Jamova 39, 1000 Ljubljana, Slovenia
² Jožef Stefan International Postgraduate School, Jamova 39, 1000 Ljubljana, Slovenia
- 9.- Assessment of trace element pollution of Evrotas and Sava Rivers**
Tea Zuliani¹, Janja Vidmar^{1,2}, Eleni Kalogianni³, Nikolaos Skoulidakis³, Radmila Milačič^{1,2} and Janez Ščančar^{1,2}
¹ Department of Environmental Sciences, Jožef Stefan Institute, Ljubljana, Slovenia
² Jožef Stefan International Postgraduate School, Ljubljana, Slovenia
³ Hellenic Centre for Marine Research, Anavissos, Greece
- 10.- Natural attenuation of organic contaminants in rivers. Case of pharmaceutical compounds**
Ladislav Mandarić¹, Radmila Milačič², Alberto Bellin³, Nikolaos Skoulidakis⁴, Sergi Sabater^{1,5} and Mira Petrović^{1,6}
¹ Catalan Institute for Water Research (ICRA), Girona, Spain
² Department of Environmental Sciences, Jožef Stefan Institute (JSI), Ljubljana, Slovenia
³ Department of Civil, Environmental and Mechanical Engineering, University of Trento, Trento, Italy
⁴ Hellenic Centre for Marine Research (HCMR), Athens, Greece
⁵ Institute of Aquatic Ecology, University of Girona, Girona, Spain
⁶ Catalan Institution for Research and Advance Studies (ICREA), Barcelona, Spain
- 11.- Spatial and temporal variability in the occurrence of drugs of abuse in surface water from four Spanish River basins**
Nicola Mastroianni¹, Maria Jose Bleda², Miren López de Alda¹, Damià Barceló^{1,3}
¹ Department of Environmental Chemistry, IDAEA-CSIC, Barcelona, Spain
² Institute of Advanced Chemistry of Catalonia, IQAC-CSIC, Barcelona, Spain
³ Catalan Institute for Water Research (ICRA), Girona, Spain
- 12.- Quantifying the effects of chemical stressor on water quality in the Adige catchment: fate and transport of pollutants in the environment**
Elena Diamantini¹, Nicola Ballerini⁵, Alberto Bellin¹, Andrea Butturini², Karina Cano Paoli¹, Gabriele Chiogna³, Sílvia Diaz-Cruz⁶, Marinel.la Farré⁶, Bruno Majone¹, Stefano Mallucci¹, Mira Petrović⁴, Angela Sacchi⁵ and Elisa Stella¹
¹ University of Trento, Trento, Italy
² Universitat de Barcelona, Barcelona, Spain
³ Technische Universität München, München, Germany
⁴ ICRA, Catalan Institute for Water Research, Girona, Spain
⁵ AEI FORIA Srl, Fidenza, Italy
⁶ Institute of Environmental Assessment and Water Research (IDAEA-CSIC), Barcelona, Spain
- 13.- Determination of strontium isotope ratio in water from the Sava River**
Tea Zuliani¹, Radmila Milačič^{1,2} and Janez Ščančar^{1,2}
¹ Department of Environmental Sciences, Jožef Stefan Institute, Ljubljana, Slovenia
² Jožef Stefan International Postgraduate School, Ljubljana, Slovenia
- 14.- Enhancing the steady-state performance of diafiltration reverse osmosis treatment for final salinity rejection of olive mill wastewater**
Javier M. Ochando-Pulido, María D. Victor-Ortega and Antonio Martínez-Férez
Chemical Engineering Department, University of Granada, Granada, Spain

RECEPTORS

15.- Identification of species traits in the biological communities affected by single or multiple stressors

Cédric Mondy¹ and Sylvain Dolédec²

¹ CNRS - LEHNA - UMR 5023, Villeurbanne, France

² Université Lyon 1 - LEHNA - UMR 5023, Villeurbanne, France

16.- Evaluation of genotoxic potential throughout the upper stretch of the Adige River basin

Margareta Kračun-Kolarević¹, Stoimir Kolarević², Momir Paunović¹, Predrag Simonović², Vladica Simić³, Vanja Marković¹, Marija Ilić¹, Zoran Gačić⁴, Bruno Majone⁵, Alberto Bellin⁵ and Branka Vuković-Gačić²

¹ University of Belgrade, Institute for Biological Research "Siniša Stanković", Belgrade, Serbia

² University of Belgrade, Faculty of Biology, Belgrade, Serbia

³ University of Kragujevac, Faculty of Science, Kragujevac, Serbia

⁴ University of Belgrade, Institute for Multidisciplinary Research, Belgrade, Serbia

⁵ University of Trento, Department of Civil, Environmental and Mechanical Engineering, Trento, Italy

17.- The GLOBAQUA tool-box to assess river ecosystem functioning

Daniel von Schiller¹, Olatz Pereda¹, Aitor Larrañaga¹, Maite Arroita¹, Jesús Pozo¹, Libe Solagaistua¹, Vicenc Acuña², Sergi Sabater^{2,3}, Isabel Muñoz⁴, Francesc Sabater⁴, Andrea Butturini⁴, Antoni Ginebreda⁵, Daniel Rivas⁵, Alberto Bellin⁶, Bruno Majone⁶, Angela Sacchi⁷, Momir Paunović⁸, Nikolaos Skoulidakis⁹, Eleni Kalogianni⁹, Leonidas Vardakas⁹ and Arturo Elosegi¹

¹ University of the Basque Country (UPV/EHU), Leioa, Spain

² Catalan Institute for Water Research (ICRA), Girona, Spain

³ University of Girona, Girona, Spain

⁴ University of Barcelona, Barcelona, Spain

⁵ Institute of Environmental Assessment and Water Research (IDEAEA-CSIC), Barcelona, Spain

⁶ University of Trento, Trento, Italy

⁷ AEI FORIA, Piacenza, Italy

⁸ Institute for Biological Research "Siniša Stanković", University of Belgrade, Belgrade, Serbia

⁹ Hellenic Centre for Marine Research, Athens, Greece

18.- Prevalence and distribution of antibiotic resistance genes between streambed compartments in two rivers impacted by different contamination sources

Jessica Subirats¹, Alexandre Sánchez-Melsio¹, Ladislav Mandarić¹, Mira Petrović¹, Vicenc Acuña¹, Angela Sacchi², Alberto Bellin³, Sergi Sabater¹ and Carles M. Borrego^{1,4}

¹ Catalan Institute for Water Research (ICRA), Girona, Spain

² Aeiforia Srl, Fidenza, Italy

³ Civil, Environmental and Mechanical Engineering, University of Trento, Trento, Italy

⁴ Group of Molecular Microbial Ecology, Institute of Aquatic Ecology, University of Girona, Girona, Spain

19.- Diatom based assessment of the ecological status of the Sava River-2014 case study

Božica Vasiljević¹, Snežana Simić², Momir Paunović¹, Nikola Marinković¹, Vesna Đikanović¹, Margareta Kračun-Kolarević¹ and Stefan Andus¹

¹ Institute for Biological Research "Siniša Stanković", University of Belgrade, Belgrade, Serbia

² Faculty of Science, Department of Biology and Ecology, University of Kragujevac, Kragujevac, Serbia

20.- Preliminary research into the presence of aquatic macrophytes in the River Sava
Snežana Jarić, Zorana Mataruga, Milica Marković, Olga Kostić, Momir Paunović, Miroslava Mitrović and Payle Pavlović

Institute for Biological Research "Siniša Stanković" University of Belgrade, Belgrade, Serbia

- 21.- Macroinvertebrate community response to a combination of urban wastewater discharge and flow intermittency on Mediterranean streams**
Jordi-René Mor¹, Isabel Muñoz², Vicenç Acuña¹, Arturo Elosegi³, Ladislav Mandarić¹, Olatz Pereda³, Mira Petrović¹ and Sergi Sabater^{1,4}
¹ Catalan Institute for Water Research (ICRA), Girona, Spain
² Department of Ecology, Faculty of Biology, University of Barcelona (UB), Barcelona, Spain
³ Faculty of Science and Technology, The University of the Basque Country, Bilbao, Spain
⁴ Institute of Aquatic Ecology and Department of Environmental Sciences, University of Girona, Girona, Spain
- 22.- Influence of multiple stressors on benthic macroinvertebrates in Iberian rivers**
Maja Kuzmanovic¹, Nuria DeCastro Catala², Julio Lopez Doval³, Antoni Ginebreda¹ and Isabel Munoz² and Damia Barcelo^{1,4}
¹ Environmental Chemistry Department, IDAEA-CSIC, Barcelona, Spain
² Ecology Department, University of Barcelona, Barcelona, Spain
³ Institute of Biosciences, Department of Ecology, University of São Paulo, São Paulo, Brazil
⁴ Catalan Institute for Water Research (ICRA), Girona, Spain
- 23.- Disentangling the effects of multiple stressors in aquatic ecosystems: multivariate analysis of macroinvertebrate samples in the Danube river**
Andreu Rico¹, Paul J. van den Brink^{1,2} and Andreas Focks¹
¹ Alterra, Wageningen University and Research centre, Wageningen, The Netherlands
² Wageningen University, Wageningen, The Netherlands
- 24.- Additive, synergistic and antagonistic effects of multiple human stressors on fish assemblages in European running waters**
Rafaela Schinegger¹, Martin Palt¹, Pedro Segurado², Maria Teresa Ferreira² and Stefan Schmutz¹
¹ Institute of Hydrobiology and Aquatic Ecosystem Management, University of Natural Resources and Life Sciences, Vienna, Austria
² Forest Research Centre, School of Agriculture, University of Lisbon, Portugal
- 25.- The first evidence of cryptic species *Ferrissia fragilis* (Tryon, 1863) (Pulmonata, Basommatophora) in the Sava River**
Maja Raković¹, Nataša Popović¹, Jelena Tomović¹, Katarina Zorić¹, Jelena Đuknić¹, Jasna Lajtner² and Momir Paunović¹
¹ Institute for Biological Research “Siniša Stanković”, University of Belgrade, Belgrade, Serbia
² Division of Biology, Faculty of Science, University of Zagreb, Zagreb, Croatia
- 26.- Ranking the importance of single stressors and their pairwise interactions on river fish assemblages at the European scale**
Pedro Segurado^{1,2}, Rafaela Schinegger¹, Stefan Schmutz¹ and Teresa Ferreira¹
¹ Forest Research Centre, School of Agriculture, University of Lisbon, Lisbon, Portugal
² Institute of Hydrobiology and Aquatic Ecosystem Management, University of Natural Resources and Life Sciences, Vienna, Austria
- 27.- Heavy metal accumulation and the genotoxicity in European chub (*Squalius cephalus*) as indicators of the river water pollution**
Karolina Sunjog^{1,2}, Stoimir Kolarević², Margareta Kračun-Kolarević³, Zoran Gačić¹, Mirjana Lenhardt^{1,3} and Branka Vuković-Gačić²
¹ Department of Natural Resources and Environmental Sciences, Institute for Multidisciplinary Research, University of Belgrade, Belgrade, Serbia
² Center for Genotoxicology and Ecogenotoxicology, Chair of Microbiology, Faculty of Biology, University of Belgrade, Belgrade, Serbia
³ Institute for Biological Research “Siniša Stanković”, University of Belgrade, Belgrade, Serbia

- 28.- **Effect of floods on DNA damage of two cyprinid fishes in the Sava River**
Jovana Kostić^{1,2}, Stoimir Kolarević¹, Margareta Kračun-Kolarević³, Mustafa Aborgiba¹,
Zoran Gačić², Mirjana Lenhardt² and Branka Vuković-Gačić¹
¹ University of Belgrade, Faculty of Biology, Chair of Microbiology, Center for Genotoxicology and
Ecogenotoxicology, Belgrade, Serbia
² University of Belgrade, Institute for Multidisciplinary Research, Belgrade, Serbia
³ University of Belgrade, Institute for Biological Research "Siniša Stanković", Belgrade, Serbia

IMPLICATIONS

- 29.- **Preliminary biodegradation studies in water of commercial homo-polymer polycaprolactone by MALDI-TOF IMAGING technique**
Daniel Rivas¹, Sandra Pérez¹, Antoni Ginebreda¹, Carme Quero² and Damià Barceló^{1,3}
¹ Department of Environmental Chemistry, IDAEA-CSIC, Barcelona, Spain
² Institute of Advanced Chemistry of Catalonia (IQAC-CSIC), Barcelona, Spain
³ ICRA, Girona, Spain
- 30.- **Groundwater dependent ecosystems in the Chtouka Ait Baha region (South of Morocco): an economic valuation of ecosystems services**
Hirich Abdelaziz^{1,2}, Choukr-Allah Redouane¹, Nghira Abdessadek³
¹ Hassan II Institute of Agronomy and Veterinary Medicine, Agadir, Morocco
² International Center for Biosaline Agriculture, Dubai, UAE
³ Souss-Massa-Drâa Hydraulic Basin Agency, Agadir, Morocco
- 31.- **The participation of the local farmers of the transboundary Lake Prespa (North Greece), through sociological surveys in the common management of the distribution of water resources in the region. Interactions with the local policy makers**
Anna E. Latsiou and Olga Christopoulou
University of Thessaly, Volos, Greece
- 32.- **Ecosystem values and societal perceptions of intermittent rivers and ephemeral streams**
Phoebe Koundouri^{1,2,3}, Ioannis Souliotis^{1,3}, Andrew Boulton⁴ and Thibault Datry⁵
¹ Athens University of Economics and Business, Athens, Greece
² London School of Economics, London, UK
³ International Centre for Research on the Environment and the Economy, Athens Greece
⁴ School of Environmental and Rural Sciences, University of New England, Armidale, Australia
⁵ IRSTEA, UR MALY, centre de Lyon-Villeurbanne, Villeurbanne cedex, France

MANAGEMENT and POLICY

- 33.- **Climate Change and Adaptive Water Management Strategies in Chtouka Ait Baha region (Southern Morocco)**
Seif-Ennasr Marieme¹, Choukr-Allah Redouane², Zine El Abidine Ali El Morjani³, Hirich Abdelaziz⁴ and Zaaboul Rashyd⁵
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