



**BOOK OF ABSTRACTS Biohydrology7:**  
**Biota, water and humans.**  
**Management for a sustainable**  
**world, Gandia 18-22 October 2023**



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VNIVERSITAT  
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# WELCOME

The Biohydrology7 meeting will be held in Gandia (Spain) in October 2023 (18th-22nd). Previous Biohydrology meetings were held in Prague (2006), Bratislava (2009), Landau (2013), Almeria (2016), Valencia (2019) and Krakow (2022). The aim of the BioHydrology conferences is to provide a forum to share knowledge and networking about any topic related to the interactions between biotic systems and hydrology. Biohydrology aims to gather scientists and practitioners dealing with issues in the field of hydrology, biohydrology, biology, ecohydrology, ecology, geography and engineering in natural, agricultural, forestry and anthropogenic areas.

The theme of the Biohydrology7 will be “Biota, water and humans. Management for a sustainable world”. We are planning two conference days (posters and talks), one day of mid-conference field visit and two days for a post-conference tour.

If you would like to act as an organizer of a specific scientific session, please, share with us your ideas at [biohydrology2023@gmail.com](mailto:biohydrology2023@gmail.com). Also if you have any questions or ideas, please do not hesitate to contact us.

Francisco Escriva & Artemi Cerdà

 <p><b>BIOHYDROLOGY7: “BIOTA, WATER AND HUMANS. MANAGEMENT FOR A SUSTAINABLE WORLD”</b></p> <p>The Biohydrology7 meeting will be held in Gandia (Spain) in October 2023 (18th-22nd). Previous Biohydrology meetings were held in Prague (2006), Bratislava (2009), Landau (2013), Almeria (2016), Valencia (2019) and Krakow (2022).</p>	<p><b>theme of the Biohydrology7</b></p> <p>will be “Biota, water and humans. Management for a sustainable world”. We are planning two conference days (posters and talks), one day of mid-conference field visit and two days for a post-conference tour.</p>  <p>If you would like to act as an organizer of a specific scientific session, please, share with us your ideas at <a href="mailto:biohydrology2023@gmail.com">biohydrology2023@gmail.com</a>. Also if you have any questions or ideas, please do not hesitate to contact us.</p>	<p><b>Objective</b></p> <p>The aim of the BioHydrology conferences is to provide a forum to share knowledge and networking about any topic related to the interactions between biotic systems and hydrology. Biohydrology aims to gather scientists and practitioners dealing with issues in the field of hydrology, biohydrology, biology, ecohydrology, ecology, geography and engineering in natural, agricultural, forestry and anthropogenic areas.</p> 
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# PROGRAM

**GANDIA [SPAIN]**

**18-22 OCTOBER 2023**



## PROGRAM

**18/10** Faculty of Geography and History, Ave. Blasco Ibañez, 28, 46010-Valencia.  
Valencia city tour and Scientific sessions

**19/10** Gandia UV International center, St. Tossal, 8, 46701 Gandia  
Scientific sessions

**20/10** Visit to the Marjal Pego-Oliva Natural Park

**21/10** Visit to the irrigation system of the Gandia orchard

**22/10** Visit to the coastal land and the marine hydrology.



More information on the webpage  
<https://7biohydrology.webador.es/program>

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## Scientific Committee

Anna Klamerus-Iwan, Faculty of Forestry, Department of Forest Engineering,  
University of Agriculture in Kraków, Poland

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Zahra Kalantari, Water Centre, KTH, Sweden

Manuel López-Vicente, Interdisciplinary Centre of Chemistry and  
Biology, Universidade da Coruña, CICA-UDC.

## Invited speakers

Fernando Valladares. Museo de Ciencias Naturales de Madrid. Consejo  
Superior de Investigaciones Científicas.

Saskia Visser. Wageningen University and Climate-KIC



## Water balance of Stagnosol and physical properties as an indicator of the need to implement complex amelioration measures

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### Abstract

The research was conducted on Stagnosol type soil within the multivariate drainage experimental field Varna of Institute of Soil Science, Belgrade. In the territory of Western and Northwestern Serbia, stagnosol soils occupy an area of about 285,000 ha or 15.7%. These soils are of great importance for agricultural production due to their potential fertility, as well as the fact that they are represented mainly on flat plots suitable for the application of mechanized cultivation. The analysis of the water balance revealed large surpluses of water in the colder part of the year (from autumn to spring). The physical properties of the tested soil are unfavorable and characterized by very low permeability of the sub-oric soil horizon. The reason for this is primarily the high content of clay and dust. The consequence of the above is the stagnation of water on the surface and the impossibility of implementing agrotechnical measures in the optimal period. In order to obtain stable yields of these potentially fertile soils, it is necessary to apply complex ameliorative measures, and their effectiveness was confirmed by performing horizontal pipe drainage and supplementary measures of mulching and scattering. The obtained results indicate the necessity of applying the mentioned measures, because they regulate the water regime and achieve economic profit in agricultural production.

**KEYWORDS:** water balance, water-physical properties, complex ameliorative measures