



Editor's Message: The 2022 Editors' Choice articles

Clifford I. Voss¹

Received: 6 February 2023 / Accepted: 10 February 2023 / Published online: 6 March 2023
© The Author(s), under exclusive licence to International Association of Hydrogeologists 2023

Last year, 2022, was the United Nations' 'Year of Groundwater' (IGRAC 2021; Wikipedia 2022; (United Nations, 2022). In addition to the special recognition that groundwater received globally, 2022 was also the 30th anniversary of *Hydrogeology Journal* (*HJ*).

Traditionally, since Editors' Choice began in 2010, five or six published articles from each publishing year have been selected as Editors' Choice articles. However, for the 2021 list, there were ten articles selected and promoted in order to support the United Nations' year of focus on groundwater. To again commemorate the Year of Groundwater, and also *HJ*'s birthday, the *HJ* editors decided to once more designate ten articles as Editors' Choice for 2022.

Editors' Choice articles are those that are considered to be exceptional by the editors: Martin Appold, Jean-Christophe Comte, Jean-Michel Lemieux, Rui Ma, Maria-Theresia Schafmeister and Clifford Voss. These have been selected from among the ~150 articles that were published in the *HJ* issues of 2022.

The Editors' Choice articles are generally distinguished by a variety of positive attributes including: outstanding science, innovative approach, potentially important interpretations or conclusions, important methodology, interesting field area or phenomenon, unusual topic, human/political/social/governance/historical/philosophical interest, challenging arguments, and more. The editors believe that *HJ* readers will find these articles to be especially interesting and valuable. These highlight the importance of groundwater in our world, how we humans interact with groundwater, and how we might preserve and manage groundwater resources in the future.

The 2022 *HJ* Editors' Choice winning articles are listed in Table 1, in order of appearance within the year's issues. In

this selection, the foci of the Editors' Choice articles can be considered as belonging to three extremely important areas of hydrogeology:

1. Measurement and forecasting techniques

- Houben et al. consider the advantages and uses of horizontal wells.
- King et al. evaluate coastal water supplies using geophysics.
- Marchant et al. use mathematical modeling for drought analyses.
- Çelik et al. evaluate karst aquifers using geochemical approaches.

2. Understanding phenomena

- Xanke and Liesch evaluate large-scale groundwater storage using GRACE.
- Lei et al. study overdraft impacts on subsidence, considering geologic properties.
- Widodo et al. evaluate liquefaction phenomena that occurred above a confined aquifer during an earthquake.

3. Human nature and human infrastructure

- Foster and Chilton expand understanding of the economics and valuation of groundwater.
- La Vigna evaluates the fragility of city water supplies.
- Rochford et al. consider the factors that affect the option of voluntary groundwater monitoring in rural areas.

We invite you to download, read, and share all ten articles. These articles may well provide an excellent set of discussion topics for students in groundwater classes and for groundwater professionals at both formal and informal meetings and sessions. These also provide important guidance for future expansion of hydrogeologic knowledge and for practical and effective management of groundwater resources.

C.I. Voss is the executive editor of *Hydrogeology Journal*

✉ Clifford I. Voss
HJ.Editor.CVoss@gmail.com

¹ International Association of Hydrogeologists, PO Box 4130, Goring, Reading RG8 6BJ, UK

Table 1 *Hydrogeology Journal's* 2022 Editors' Choice articles

Authors	Title	Vol(No):pages DOI Open access (OA) status
Georg J. Houben, Sarah Collins, Mark Bakker, Thomas Daffner, Falk Triller, Anvar Kacimov	Review: Horizontal, directionally drilled and radial collector wells	30(2):329–357 https://doi.org/10.1007/s10040-021-02425-w OA
Julian Xanke, Tanja Liesch	Quantification and possible causes of declining groundwater resources in the Euro-Mediterranean region from 2003 to 2020	30(2):379–400 https://doi.org/10.1007/s10040-021-02448-3 OA
Roslynn B. King, Wesley R. Danskin, Steven Constable, Jillian M. Maloney	Identification of fresh submarine groundwater off the coast of San Diego, USA, using electromagnetic methods	30(3):965–973 https://doi.org/10.1007/s10040-022-02463-y OA
Stephen Foster, John Chilton	Improving the valuation of groundwater	30(4):1031–1034 https://doi.org/10.1007/s10040-022-02484-7 Not OA
Kunchao Lei, Fengshan Ma, Beibei Chen, Yong Luo, Wenjun Cui, Yi Zhou, Fang Tian, Te Sha	Characteristics of land-subsidence evolution and soil deformation before and after the Water Diversion Project in Beijing, China	30(4):1111–1134 https://doi.org/10.1007/s10040-022-02489-2 Not OA
Francesco La Vigna	Review: Urban groundwater issues and resource management, and their roles in the resilience of cities	30(6):1657–1683 https://doi.org/10.1007/s10040-022-02517-1 OA
B. P. Marchant, D. Cuba, B. Brauns, J. P. Bloomfield	Temporal interpolation of groundwater level hydrographs for regional drought analysis using mixed models	30(6):1801–1817 https://doi.org/10.1007/s10040-022-02528-y OA
Lilik E. Widodo, Simon H. Prasetyo, Ganda M. Simangunsong, Irwan Iskandar	Role of the confined aquifer in the mechanism of soil liquefaction due to the 7.5 Mw earthquake in Palu (Indonesia) on 28 September 2018	30(6):1877–1898 https://doi.org/10.1007/s10040-022-02516-2 Not OA
Louisa M. Rochford, Carlos M. Ordens, Nevenka Bulovic, Neil McIntyre	Voluntary metering of rural groundwater extractions: understanding and resolving the challenges	30(8):2251–2266 https://doi.org/10.1007/s10040-022-02548-8 OA
Mehmet Çelik, Süleyman Selim Çallı, Zehra Semra Karakaş	The role of mineralogical studies in delineating the recharge area and groundwater circulation of Susuz springs, Central Taurus Belt, Turkey	30(8):2399–2415 https://doi.org/10.1007/s10040-022-02561-x Not OA

To make it easier for readers to access all of these articles, Springer Nature will grant the ones that are not already freely available online (open access) with free online access for a period of time in 2023 after this announcement. The Editors' Choice articles are also highlighted on the International Association of Hydrogeologists' website (IAH 2023), and via IAH and Springer Nature social media.

The congratulations from and appreciation of the hydrogeologic and water-resource community are due to all of

these distinguished authors for producing such valuable and interesting articles!

(While announcing the list of distinguished 2022 articles, the editors and HJ staff also wish to thank those special people who make HJ article publication possible by volunteering a significant amount of their time and energy. The continued excellent support provided to HJ and its authors by the HJ associate editors, by the reviewers of HJ manuscripts, and by HJ's abstract translation managers and their

teams of helpers is vital to the success of this journal and is much appreciated.)

References

- IAH (2023) Editors' Choice Articles (Hydrogeology Journal). International Association of Hydrogeologists (IAH). <https://iah.org/hydrogeology-journal/hj-editors-choice-articles>. Accessed Jan 2023
- IGRAC (2021) "Making the invisible visible: 2022, the year of groundwater". International Groundwater Resources Assessment Centre. <https://www.un-igrac.org/news/making-invisible-visible-2022-year-groundwater>. Accessed Jan 2023
- United Nations (2022) The United Nations World Water Development Report 2022: groundwater—making the invisible visible. UNESCO, Paris, 225 pp
- Wikipedia (2022) World Water Day. https://en.wikipedia.org/wiki/World_Water_Day#2022_%E2%80%93_Groundwater,_Making_the_Invisible_Visible . Accessed Jan 2023

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.