United Nations Educational, Scientific and Cultural Organization

Intergovernmental Hydrological Programme

UNESCO Land Subsidence International Initiative

Newsletter of the Unesco Land Subsidence International Initiative

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Conference

EGU General Assembly 2022

Session at the upcoming EGU General Assembly 2022

entitled "Interferometric Synthetic Aperture Radar added value products for Natural & Anthropogenic hazard assessment at local, regional and national scale" (https://meetingorganizer.copernicus.org/EGU22/session/43343)

Convener: Alessandro Novellino (BGS) | Co-conveners: Roberta Bonì (University of Urbino "Carlo Bo"), Marta Béjar-Pizarro (IGME-CSIC) and Pietro Milillo (University of Houston)

EGU22 will be a hybrid conference with a virtual component where everybody is welcome, in person or online (https://egu22.eu/about/provisional_meeting_format.html).

You can get further information on the abstract submission on the dedicated congress website at:

https://egu22.eu/abstracts_and_programme/how_to_submit_an_abstract.html

The submission deadline: 12 January 2022, at 13:00 CET.

New Literature

General

Molly E. Keogh et al., Organic Matter Accretion, Shallow Subsidence, and River Delta Sustainability

First published: 16 November 2021 https://doi.org/10.1029/2021JF006231

General

An integrated framework to model salinity intrusion in coastal unconfined aquifers considering intrinsic vulnerability factors, driving forces, and land subsidence,

Journal of Environmental Chemical Engineering,Volume 10, Issue 1,2022,106873,ISSN 2213-3437,

https://doi.org/10.1016/j.jece.2021.106873.

(https://www.sciencedirect.com/science/article/pii/S2213343721018509)

Banhgladesh

Steckler, M. S., Oryan, B., Wilson, C. A., Grall, C., Nooner, S. L., Mondal, D. R., ... & Goodbred, S. L. (2022). Synthesis of the distribution of subsidence of the lower Ganges-Brahmaputra Delta, Bangladesh. Earth-Science Reviews, 224, 103887.

https://www.sciencedirect.com/science/article/pii/S0012825221003883

France

Charpentier, A., James, M. R., and Ali, H.: Predicting Drought and Subsidence Risks in France, Nat. Hazards Earth Syst. Sci. Discuss. [preprint], https://doi.org/10.5194/nhess-2021-214 , in review, 2021.

Indonesia, Pekalongan Regency

Zainuri M, Helmi M, Novita M G A, Pancasakti Kusumaningrum H, Koch M. An Improve Performance of Geospatial Model to Access the Tidal Flood Impact on Land Use by Evaluating Sea Level Rise and Land Subsidence Parameters. Journal of Ecological Engineering. 2021.

http://www.jeeng.net/An-Improve-Performance-of-Geospatial-Model-to-Access-the-Tidal-Flood-Impact-on-Land,144785,0,2.html

Indonesia, Semarang

Hamdani, R.S.; Hadi, S.P.; Rudiarto, I. Progress or Regress? A Systematic Review on Two Decades of Monitoring and Addressing Land Subsidence Hazards in Semarang City. Sustainability 2021, 13, 13755. https://doi.org/10.3390/su132413755

https://www.mdpi.com/2071-1050/13/24/13755

PR China, Yangtze Delta

LIU Yilin, HUANG Haijun, LIU Yanxia, BI Haibo, ZHANG Yi, LUO Yafei. MONITORING OF LAND SUBSIDENCE AND IMPACTS OF HUMAN ACTIVITIES IN THE YELLOW RIVER DELTA USING THE SMALL BASELINE SUBSET METHOD[J]. Marine Geology & Quaternary Geology, 2016, 36(5): 173-180. doi: 10.16562/j.cnki.0256-1492.2016.05.018

http://en.cgsjournals.com/article/id/hydzydsjdz_0da5efd7-7024-4128-afcc-5da6d596b5e5

USA, Louisiana

Meselhe, E. et al., Influence of Key Environmental Drivers on the Performance of Sediment Diversions. Water 2022, 14,24. https://doi.org/10.3390/w14010024

Vietnam

Tran Tran & Le Le (2021) System dynamics approach for understanding scheme of Community-Based Adaptation to flooding: The case of a flood-prone district in Vietnamese urban city, Community Development, DOI: 10.1080/15575330.2021.1979063

https://www.tandfonline.com/doi/abs/10.1080/15575330.2021.1979063?src=&journalCode=rcod20

Mining

Bangladesh, Barapakuria

Arifeen, H.M. et al., Role of a Mine in Changing Its Surroundings—Land Use and Land

Cover and Impact on the Natural Environment in Barapukuria, Bangladesh. Sustainability 2021, 13,

13602. https://doi.org/10.3390/su132413602

https://www.mdpi.com/2071-1050/13/24/13602/pdf

Poland,

Kidawa, J., & Molenda, T. (2021). Degradation of dam reservoirs under the influence of mining subsidence in Upper Silesian Coal Basin, South Poland. Lakes & Reservoirs: Research & Management, 26(4), e12388.

https://onlinelibrary.wiley.com/doi/abs/10.1111/lre.12388

PR China

Zaiyong Wang et al.,

Mathematical Evaluation on the Control of Mining-Induced Ground Subsidence in Thick Loose Strata

https://pubs.acs.org/doi/10.1021/acsomega.1c04970

PR China, Pingdingshan City

Li, X. et al., Comparative Analysis of Three Governance Modes for Resource-Based Urban Sustainability in China Based on Residents' Perception: An Empirical Study of Pingdingshan City, Henan Province,

China. Sustainability 2021, 13, 13658.

https://doi.org/10.3390/su132413658

Wei Yang, Wenxiao Zhang, Baiquan Lin, Guangyao Si, Jianguo Zhang, Jianli Wang,

Integration of protective mining and underground backfilling for coal and gas outburst control: A case study,Process Safety and Environmental Protection,Volume 157,2022,Pages 273-283,ISSN 0957-5820,https://doi.org/10.1016/j.psep.2021.11.016.

(https://www.sciencedirect.com/science/article/pii/S0957582021006121)

PR China, Shanxi Province

Yi Tan, Hao Cheng, Shuang Gong, Erhu Bai, Minchao Shao, Bingyuan Hao, Xiaoshuang Li, Han Xu, "Field Study on the Law of Surface Subsidence in the High-Intensity Fully Mechanized Caving Mining Working Face with Shallow Thick Bedrock and Thin Epipedon in Hilly Areas", Advances in Materials Science and Engineering, vol. 2021, Article ID 6515245, 13 pages, 2021. https://doi.org/10.1155/2021/6515245

https://www.hindawi.com/journals/amse/2021/6515245/

Peat

The Netherlands

Norris, J.; Matzdorf, B.; Barghusen, R.; Schulze, C.; van Gorcum, B. Viewpoints on Cooperative Peatland Management: Expectations and Motives of Dutch Farmers. Land 2021, 10, 1326. https://doi.org/10.3390/land10121326

https://www.mdpi.com/2073-445X/10/12/1326/htm

From the Press

Egypt, Nile Delta

The Nile Delta's Disappearing Farmland

https://www.earthobservatory.nasa.gov/images/149183/the-nile-deltas-disappearing-farmland

Indonesia

PUPR Urges Water Companies to Avoid Groundwater Overuse

https://en.tempo.co/read/1537406/pupr-urges-water-companies-to-avoid-groundwater-overuse

PR China, Shanxi Province

This article in the Guardian refers to a paper of which Mahdi Motagh is co-author.

https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.theguardian.com%2Fscience%2F2021%2Fdec%2F01%2Fterrawatch-what-the-world-can-learn-from-chinas-sinking-city&data=04%7C01%7C%7Cdd5378bff8e9410c83ac08d9b522838e%7C15f3fe0ed7124981bc7cfe949af215bb%7C0%7C0%7C637739982111768237%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=c8i89E7Ih1jo%2BqWoH36aRSUWG7FehkEjPrMnNzaR7DM%3D&reserved=0

In this article is a hyperlink to the original paper that was also mentioned already in vol. 20 of this Newsletter.

Spain, Ebro Delta

Spain's Changing Mediterranean Coastline'

https://earthobservatory.nasa.gov/images/149170/spains-changing-mediterranean-coastline

USA, California

Critics say valley groundwater managers relying too much on recharge, not enough on pumping cuts

https://www.bakersfield.com/news/critics-say-valley-groundwater-managers-relying-too-much-on-recharge-not-enough-on-pumping-cuts/article_c2f414ac-6764-11ec-8bce-bf2c74f29dc9.html

USA, Louisiana

Studies find that river diversions can overcome Louisiana's rapid sinking

https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=304054