Environmental earth sciences—most cited papers: 2015–2016

EES progress report 2017

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Most cited papers

It is always difficult to select “best papers” from the large inventory of excellent publications in a comprehensive journal like Environmental Earth Sciences (EES) with broad aims and scope. The editors decided to award the 15 papers that were most cited over the last two years, i.e., the 2017 award goes to the most cited papers from 2015–2016. This procedure is at least compatible to the calculation of a journals impact factor (https://en.wikipedia.org/wiki/Impact_factor). It is controversial, whether good papers can really be measured during such a short period. Papers with long-lasting impact will fall out of the grid. This procedure can be improved substantially in the future, and recommendations are surely welcome.

It is our pleasure to award the most cited EES papers as of 2017 which are listed in the references including the number of citations in the “Web-of-Science” (WoS) (<https://webknowledge.com/>).

Li et al. (2015), Karthe et al. (2015), Zhang et al. (2015), Chalov et al. (2015), Belletti et al. (2015), Beskese et al. (2015), Ren et al. (2015), Youssef et al. (2015), Aishan et al. (2015), Hajihassani et al. (2015), Wu et al. (2015), Lim et al.

(2015), Abdullaev and Rakhmatullaev (2015), Kim et al. (2015) and Azarnivand et al. (2015).

Using one particular database might be another shortcoming of the procedure as there are other publication databases available, and there is no free access to WoS which was selected as the standard for ISI listed journals to guarantee this quality level. According to data from Essential Science Indicators (WoS), we can proudly announce that Li et al. (2015) belongs to the highly cited papers in the field of Environmental Sciences.¹ Of these, EES has a total of five highly cited papers in the field.

It is worth taking a closer look at the environment in which the most cited papers are published. Figure 1 depicts a “Wordle” of the paper titles of the 15 most cited papers, i.e., it highlights the most used terms in the paper titles. The size of the words corresponds to the number of times they appear in the paper titles. As can be seen from this illustration, the most cited paper topics dealt with “China, water, management, basin, control, fuzzy ...”.

This illustration might not be truly representative for the journals most cited topics in the long term and should not over-interpreted. Therefore, a “Wordle” was added for the most cited 100 papers since the journal assumed the name Environmental Earth Sciences in 2009 (Fig. 2) (The journal under similar names has been published since 1982). Again we see that “China” is an important region of related studies which coincides with the environmental challenges in the most populated country of the world with its strongly growing economy. Landslide susceptibility, CO₂ (storage), and groundwater belong to the major research topics in EES.

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¹ As of September/October 2017, this highly cited paper received enough citations to place it in the top 1% of its academic field based on a highly cited threshold for the field and publication year.

Scopus

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Fig. 3 EES publications by countries. (Source: Scopus)

Scope and audience of the journal

Information is presented and illustrated concerning the following:

- EES publications by topics: The above “Wordle” analysis illustrated the most frequently used words in paper titles and represents “popular” EES topics (Figs. 1, 2).
- EES publications by countries: Fig. 3 depicts the 10 most frequent citizenships of the corresponding authors. China is far ahead followed by a second grouping of authors from US, Germany, and India. A third group composed of authors from Iran, Turkey, Italy, Spain, South Korea, and Romania has a similar portion of published items.
- EES publications by affiliations: As can be expected from the countries’ analysis, a Chinese institution is leading the publications by affiliations record, namely the Chinese Academy of Sciences (CAS) with more than 100 institutes in China (Fig. 4). Among the top ten institutions two German affiliation are found: the Helmholtz Centre for Environmental Research and Technische Universität Dresden. It would be interesting to know the portion of multi-national joint publications by authors from different countries.

Usage and visibility of the journal

- **EES Impact Factor (IF) development:** The next set of figures illustrate impact factor development since 2012. IF development with and without self-citations are

depicted in Figs. 5 and 6, respectively. The impact factor of EES for the five years 2001–2015 equals 1.844.

- **537.616 downloads** in 2016: The number of full-text article requests is increasing significantly (2013: 250.348, 2014: 269.327, 2015: 330.764). “Hydraulic fracturing: a toxicological threat for groundwater and drinking-water?” Gordalla et al. (2013) was the most downloaded article in 2016 (1265 times), indicating the significant interest in this topic around the world. Figure 7 shows the article requests by geographical regions.
- **722 articles** were discussed in social media platforms.
- **h5 index 40:** h is the largest number of articles that have each been cited h times. Therefore, h5 gives information on journals rather than individual articles. This metric is based on the articles published by a journal over the previous five calendar years with a minimum of 100 articles in this period.

Publishing process

EES transferred to continuous article publishing (CAP) in 2016. This caused some delays in the transition period at the end of 2015, but the following numbers fully justify this decision. In 2016 it took an average:

- **58 days** from submission to first decision,
- **22 days** from acceptance to published online.

Scopus

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Fig. 4 EES publications by affiliations. (Source: Scopus)

Fig. 5 EES impact factor development. (Source: Clarivate Analytics)

Recent numbers show further acceleration of the review process. This proves the professional manuscript handling for a large journal like EES with almost 3000 submissions per year.

Strategic instruments

Thematic Issues and Topical Collections are strategic instruments that foster important and new research themes. These thematic collections of articles have become a “trademark” of the journal, and readers are encouraged to participate in these structured publication projects which have significantly influenced the impact of EES. Topical Collections papers belong to the most cited EES works

including three of the five highly cited papers in the area of Environmental Sciences including Environmental Software in 2012, Silk Road Economic Belt Li et al. (2015) in 2015, and Environmental Observatories in 2017. A complete list of Thematic Issues and Topical Collections including ongoing is as follows:

Thematic Issues 2015 (sorted chronologically)

- 73/02—Sustainable Water Management in Central Asia
- 73/06—Sustainability and Water Resources: Honouring Emeritus Professor EurGeol. Jos Martins Carvalho
- 73/09—Waste Water Treatment and Pollution Control in the Liao River Basin

Fig. 6 EES impact factor without self-citations. (Source: Clarivate Analytics)

Fig. 7 EES article requests in 2016 by geography. (Source: WebTrek)

- 73/10—Unconventional Gas Resources in China
- 73/11—Subsurface Energy Systems in China: Production, Storage and Conversion
- 73/12—ISMAR8 China
- 74/01—Mediterranean Karst Hydrogeology
- 74/02—Karst Water Under GCP, Guilin, China
- 74/03—Glacier fluctuation in northern and High Asia: historical and methods perspective
- 74/05—Water of the Erhai and Dianchi Lakes / Water of the Taihu Lake
- 74/08—Environment and Health in China I
- 74/10—Developing dynamic VGEs for geographic research
- 74/11—Robust Shallow Water Models
- 74/12—Utilization of Thermal and Mineral Waters / Progress in Karst Research.

Topical collections 2016/2017 (sorted by published items)

- Subsurface Energy Storage (55)
- Water in Germany (40)
- Water in Central Asia (31)
- Environment and Health in China II (31)
- 3RAGSU (25)
- Geomaterials used as construction raw materials and their environmental interactions (22)
- DECOVALEX 2015 (21)
- Environmental Research of the Three Gorges Reservoir (21)
- Advances of Research in Soil, Water, Environment, and Geologic Hazards Along Silk Road (13)
- Water resources development and protection in loess areas of the world (11)
- Groundwater Vulnerability (10)
- Environmental Problems and Solutions in India (5)
- Karst Hydrogeology: Advances in Karst Collapse Studies (5)
- Environmental Geology in Saudi Arabia (3).

Open topical collections (sorted by published items)

- Engineering Problems in Karst (13)
- NovCare—Novel Methods for Subsurface Characterization and Monitoring: From Theory to Practice (7)
- Climate Effects on Water Resources (4)
- Karst Hydrogeology: Advances in Karst Collapse Studies (5)
- Stone in Architectural Heritage (5)
- Water in Loess (3)
- 4RAGSU
- Learning from Spatial Data
- Subsurface Energy Storage
- Water Resources and Hydraulic Engineering.

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References

- Abdullaev I, Rakhmatullaev S (2015) Transformation of water management in central Asia: from state-centric, hydraulic mission to socio-political control. *Environ Earth Sci* 73(2):849–861. (cited by SCOPUS / ISI: 16)
- Aishan T, Halik U, Kurban A et al (2015) Eco-morphological response of floodplain forests (*Populus euphratica* Oliv.) to water diversion in the lower Tarim River, northwest China. *Environ Earth Sci* 73(2):533–545. (cited by SCOPUS / ISI: 16)
- Azarnivand A, Hashemi-Madani FS, Banihabib ME (2015) Extended fuzzy analytic hierarchy process approach in water and environmental management (case study: Lake Urmia Basin, Iran). *Environ Earth Sci* 73(1):13–26. (cited by SCOPUS / ISI: 16)
- Belletti B, Rinaldi M, Buijse AD et al (2015) A review of assessment methods for river hydromorphology. *Environ Earth Sci* 73(5):2079–2100. (cited by SCOPUS / ISI: 16)
- Beskese A, Demir HH, Ozcan HK, Okten HE (2015) Landfill site selection using fuzzy ahp and fuzzy topsis: a case study for Istanbul. *Environ Earth Sci* 73(7):3513–3521. (cited by SCOPUS / ISI: 23 / 24)
- Chalov S, Jarsjo J, Kasimov NS et al (2015) Spatio-temporal variation of sediment transport in the Selenga River Basin, Mongolia and Russia. *Environ Earth Sci* 73(2):663–680. (cited by SCOPUS / ISI: 16)
- Gordalla BC, Ewers U, Frimmel FH (2013) Hydraulic fracturing: a toxicological threat for groundwater and drinking-water? *Environ Earth Sci* 70(8):3875–3893. (cited by SCOPUS / ISI: 56)
- Hajihassani M, Armaghani DJ, Monjezi M, Mohamad ET, Marto A (2015) Blast-induced air and ground vibration prediction: a particle swarm optimization-based artificial neural network approach. *Environ Earth Sci* 74(4):2799–2817. (cited by SCOPUS / ISI: 23 / 22)
- Karthe D, Chalov S, Borchardt D (2015) Water resources and their management in central Asia in the early twenty first century: status, challenges and future prospects. *Environ Earth Sci* 73(2):487–499. (cited by SCOPUS / ISI: 34)
- Kim H-S, Kim K-R, Kim H-J, Yoon J-H, Yang JE, Ok YS, Owens G, Kim K-H (2015) Effect of biochar on heavy metal immobilization and uptake by lettuce (*Lactuca sativa* L.) in agricultural soil. *Environ Earth Sci* 74(2):1249–1259. (cited by SCOPUS / ISI: 20 / 23)
- Li P, Qian H, Howard KWF, Wu J (2015) Building a new and sustainable “silk road economic belt”. *Environ Earth Sci* 74(10):7267–7270. (cited by SCOPUS / ISI: 55 / 51)
- Lim LBL, Priyantha N, Mansor NHM (2015) *Artocarpus altilis* (breadfruit) skin as a potential low-cost biosorbent for the removal of crystal violet dye: equilibrium, thermodynamics and kinetics studies. *Environ Earth Sci* 73(7):3239–3247. (cited by SCOPUS / ISI: 21 / 27)
- Ren F, Wu X, Zhang K, Niu R (2015) Application of wavelet analysis and a particle swarm-optimized support vector machine to predict the displacement of the shuping landslide in the three gorges, China. *Environ Earth Sci* 73(8):4791–4804. (cited by SCOPUS / ISI: 23 / 21)
- Wu J, Li P, Qian H (2015) Hydrochemical characterization of drinking groundwater with special reference to fluoride in an arid area of China and the control of aquifer leakage on its concentrations. *Environ Earth Sci* 73(12):8575–8588. (cited by SCOPUS / ISI: 21 / 18)
- Youssef AM, Pradhan B, Jebur MN, El-Harbi HM (2015) Landslide susceptibility mapping using ensemble bivariate and multivariate statistical models in Fayfa area, Saudi Arabia. *Environ Earth Sci* 73(7):3745–3761. (cited by SCOPUS / ISI: 23 / 21)
- Zhang J, Zhang Q, Sun Q, Gao R, Germain D, Abro S (2015) Surface subsidence control theory and application to backfill coal mining technology. *Environ Earth Sci* 74(2):1439–1448. (cited by SCOPUS / ISI: 31 / 31)