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Geological themes in need of more attention

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Special Issues of the Past

Episodes has published many excellent articles on relevant, provocative, and interesting geological themes in Special Issues (SIs). The IUGS Publications Committee and editorial team have endeavored to publish SIs regularly; however, it has remained inconsistent (Table 1). The themes of the SIs published in this journal include natural stones, asbestos, the geodynamic evolution of the Indian subcontinent, forensic geology, the great mineral fields of Africa, ophiolites, global heritage stone resources, catastrophic tsunamis, geology of the Oceania, and Nordic geoscience (see Table 1). Each SI contains 7 to 43 articles with a mean of 17. A Google Scholar search revealed that currently, each SI has been cited 12 to 1,099 times (mean = 252). Each article in the SIs has been cited 1.71 to 37.89 times. The SIs celebrating the International Geological Congress (IGC), held every four years, were a great success with regard to the citations by other studies.

Interesting Geological Themes for Special Issue

Many interesting geological themes have been overlooked as SIs in this journal. These include climate change, underground CO₂ storage,

earthquakes, geoparks, and microplastics in the soil and groundwater.

We are experiencing drastic changes in our climate at an unprecedented rate. Mitigation and adaptation strategies to manage these changes are essential. Therefore, understanding past periods of climate change recorded in the Earth's geology is critical (Lee et al., 2018; Lear et al., 2020). Thus, articles concerning the analyses of geological records relevant to climate change may draw interest from geologists and public communities. Carbon capture and storage (CCS) has been widely studied to manage and mitigate the negative effects of global warming (Bickle, 2009), and its commercial implementation is planned worldwide (Romanak and Dixon, 2022). The implementation of net-zero-carbon and carbon neutrality strategies in many countries has accelerated the practical application of CCS technologies (Bui et al., 2021). However, there are scientific and technological challenges that remain to be resolved, including public awareness (acceptance), siting of optimal locations, and the monitoring of CO₂ leakage (Pianta et al., 2021). Articles addressing these social and technological challenges are very attractive.

Historically, earthquakes are themes that have been heavily researched (Valensise et al., 2003). There have been technological advancements in this field, and earthquake monitoring systems have been implemented worldwide, however, the risk to lives and infrastructure remains. The increasing urban population density exacerbates these risks (Celano

Table 1. Some of Special Issues published in *Episodes*

Year	Vol(No)	Subjects (Theme)	No. of Published Items (A)	Citation** (B)	A/B
2021	44(1)	Natural Stones	8	23	2.88
2020	43(3)	Asbestos	7	12	1.71
2020	43(1)*	Geodynamic Evolution of the Indian Subcontinent – Hadean to Recent	43	272	6.33
2017	40(2)	Forensic Geology	10	81	8.10
2016	39(2)*	The Great Mineral Fields of Africa	17	294	17.29
2015	38(4)	Ophiolites: Mantle Sources, Melt Evolution and Emplacement Mechanisms	8	265	33.13
2015	38(2)	Global Heritage Stone Resource: An Update	9	94	10.44
2014	37(4)	Towards More Effective Risk Reduction: Catastrophic Tsunami	15	129	8.60
2012	35(1)*	Geology in the Oceania Region	29	1,099	37.89
2008	31(1)*	Nordic Geoscience	26	NC***	NC

*Special issue for the International Geological Congress (IGC)

**Total number of citation by other studies (searched using Google scholar, as of February 4, 2022)

***Not computed

Figure 1. Distribution of Global Geoparks (GGPs) in the world with the number of GGPs in each country. The figure was modified from a photo taken at the Hantangang Global Geopark in Korea.

and Dolsek, 2021). As a result of numerous studies involving advanced monitoring systems, our understanding of earthquakes has enhanced significantly. However, there are still considerable gaps in our understanding of their developmental mechanisms and precursors. Recently, public concern has arisen regarding induced seismicity involved in enhanced geothermal systems and the hydrofracturing of shale gas (Lee et al., 2016). Timely SIs covering natural earthquakes and induced seismicity may be beneficial to the IUGS community.

Geoparks are single, unified areas that advance the protection and use of geological heritage sites sustainably while promoting the economic well-being of the people who live in these areas (Mc Keever and Zouros, 2005). Both global and national geoparks exist, and as of 2021, there are 169 UNESCO global geoparks in 44 countries (UGGP, 2022; Fig. 1). These geoparks attracting increasing interest worldwide. Designating national and global geoparks attracts many visitors, promotes the local economy, draws conservation efforts, and brings investment from central and provincial governments (Henriques and Brilha, 2017; Kim and Lim, 2019; Cho et al., 2021). To obtain and sustain the status of national and global geoparks, various efforts, including geological researches and managerial measures by governments, are essential. Thus, special articles dealing with geoparks will attract attention from geoscientists and governmental officials.

Plastic particles less than 5 mm in length, termed microplastics, are considered contaminants of emerging concern found in marine and freshwater environments, and are attracting interest from researchers and the public (Chia et al., 2021; Lee et al., 2021). Reports on the risks microplastics pose to human and ecosystem health are increasing, and public grievances are growing since studies have revealed that microplastics are often contained in drinking water and commonplace prod-

ucts such as fruits and vegetables, toothpaste, cosmetics, and clothing (Kim and Lee, 2020; Rahman et al., 2021; Senathirajah et al., 2021). Studies have shown that microplastics are present in inland soil and groundwater (Cha and Lee, 2021; Kim et al., 2021). However, few have focused on the occurrence, distribution, fate, and transport of microplastics in aquifers, particularly from a hydrogeological perspective (Jeong and Lee, 2021). Without a detailed examination of the relevant geology and hydrogeology, a reliable understanding of microplastic distribution and transport in groundwater cannot be achieved.

In this regard, we await proposals for SIs concerning interesting and provocative themes, including those mentioned above. Proposals for SIs will be considered if they are agreed with the potential guest editors for at least one year in advance of its publication if approved. The submission must fit within approximately 75 printed pages (six to eight articles). Contributors must secure funds to support the expanded issues. No guest editor can author or co-author more than one article on their SI except for an editorial. The proposal should include the SI's title, a list of potential articles and their outlines, the authors and their affiliations, a clear motivation, the proposal goals, and submission and review timelines. Proceedings or contributions originating from a meeting or conference will not be published. SIs should focus on a single geological theme. There should be cohesion amongst the themes and a primary focus in each issue. All studies should be of broad international interest. The acceptance or rejection of a proposal depends entirely on the evaluation by the IUGS Publications Committee. All proposals must be submitted to the Editor-in-Chief of *Episodes* for evaluation.

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