South Africa has one of the most prominent mining industries in the world. The country saw a boom in the mining industry in the late 19th century with the drivers being gold and diamond mining, followed soon after by coal mining, then PGM processing. Today, gold, PGMs, and coal mining continue to make significant contributions to the economic and social development of the country. Despite the criticality of mining to the growth and development of South Africa and other nations across the globe, the industry is associated with process challenges and legacies of environmental impact, one of which, is the issue of mine-impacted water.

Mine-impacted water is considered to be one of the main pollutants of surface- and groundwater in many countries that have historical or current mining industries and its potential effects on natural resources, communities, and human health have become increasingly evident. Mine-impacted water has long been regarded as one of the most serious and pervasive challenges facing the mining and minerals industry. While a wide range of technologies are being developed for preventing the generation of, and the control and remediation of, mine-impacted water, most of these approaches consider it a nuisance that needs to be quickly disposed of after minimum required treatment, in line with the legislation of that particular country. However, recently, there has been an emerging paradigm shift towards environmental responsibility and sustainable development. Thus, studies focusing on sustainable treatment technologies, value recovery from the waste solutions, mining closure practices, and legislation to mitigate potential future challenges arising from mine-impacted water have become predominant.

One of the best approaches to dealing with mine-impacted water is to consider it as a valuable resource and look at the recovery of clean water to satisfy the needs of a variety of mining and non-mining users. Since South Africa is a water-scarce country, this is a more practical and applicable approach to the problem. The production of other valuable and saleable by-products such as metals and salts that could be used to offset some of the operational costs is also being considered. In fact, recycling, and re-use of water and the recovery of value products is one of the emerging pragmatic approaches to mitigating the challenges associated with mine-impacted water.

It is at events such as conferences, workshops, and seminars that stakeholders can share unbiased, state-of-the-art expertise and knowledge, novel solutions and approaches, technical knowhow, and advocacy with respect to the legacy of, and sustainable solutions related to, mine-impacted water. Such events can help inspire and accelerate some of the work being done by all interested stakeholders on sustainable and holistic ways to deal with the issue of mine-impacted water. The papers in this edition of the Journal reflect some of the discussions arising from the conference held in November 2020.

Journal Comment *(continued)*

The conference, which was organized by the SAIMM in collaboration with the University of the Witwatersrand, Mintek in South Africa, and RWTH Aachen University in Germany, attracted speakers and authors from a number of countries such as South Africa, the UK, Germany, Nigeria, Zambia, Serbia, and Belgium. The idea of the conference was born from a collaborative project between Wits University through the School of Chemical and Metallurgical Engineering and the Institute IME Process Metallurgy and Metal Recycling at RWTH Aachen University, which was sponsored by the National Research Foundation in South Africa and the Federal Ministry of Education and Research (BMBF) in Germany. Since the issue of mine-impacted water is going to be with us for a long time to come, we foresee more such conferences being organized in the future by these well-known higher education and research institutions in collaboration with the SAIMM on a regular basis.

It is my greatest wish that you all enjoy reading the papers in this edition of the *Journal*, and I hope that you will benefit from some of the ideas presented by the authors.

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