Sustainable Development: Bauxite and Alumina

Lavinya Kugaswaran[1], Pernelle Nunez[2], Marlen Bertram[3], Miles Prosser[4] and Linlin Wu[5]
1. Environment (Bauxite & Alumina) Program Manager,
2. Deputy Secretary General, Director – Sustainability
3. Director – Scenarios & Forecasts
4. Secretary General
5. Manager – Statistical Analysis
International Aluminium Institute, London, United Kingdom
Corresponding author: kugaswaran@international-aluminium.org

Abstract

The International Aluminium Institute is celebrating 50 years since its establishment. At this auspicious time the Bauxite and Alumina Committee are reflecting on how to create an inflection point in the sustainable development of the industry. Aluminium is a lightweight, durable, conductive, and recyclable material with versatility in its applicability resulting in global demand for aluminium expected to grow by 80 % over the next 30 years. To disrupt the traditional intrinsic impact that bauxite extraction and processing has on the environment and society at large, an introspective examination by the industry is occurring. Initiatives developed such as the 2020 Alumina Technology Roadmap and various EU funded-multi producer projects, are signals to the wider Aluminium community on priority areas for the sustainable development of the industry. This paper seeks to outline the enablers identified as critical to four sustainable development themes relevant to alumina production: energy, residue, water and emissions.

Keywords: Sustainability, Bauxite and alumina, Bauxite residue, Water, Emissions.