From the Editor

It is April; the time for this journal to see you again. Amid the rapid spreading of Coronavirus disease (COVID-19), we try to publish the journal on time. The virus is spreading so rapidly through the camp that we simply cannot afford to let anyone out. Several difficulties occur due to our office applied work from home (WFH) policy. Sometimes communication problem between the editors and the writers makes it problematic for a job. There is always a security problem with data being transferred and that can't be monitored easily.

Back to the journal issue, we have five topics published in this journal. The themes of four papers are related to the properties of the subject either soil or rocks while paper discussess kinetics of the leaching. The first paper discusses the relationship among the water content, density, and saturation degree in the 5 soil samples tested under constant specific gravity conditions. The tests show that the degree of saturation and soil density will increase due to water addition until the water content reaches the optimum condition. After passing this condition, the degree of saturation and density decrease even though the water content has increased. These values can be used as a reference for conducting a field compaction using roller compactor to increase the bearing capacity of soils.

The second article relates to the Illegal artisanal gold mine that always have problems. One of them is the environmental damage of community plantation as the mercury-based gold extraction is the potential source to contaminate soil and water and threaten the plantation productivity and its food chain. The study shows that the soil in post artisanal gold mine area had changed physically, disappearing the A and B horizon while the C horizon becomes a top soil with the depth of 0 - 100 cm depend on sampling location. The mercury content within the river stream exceeds the threshold based on Indonesia Regulation. The research suggested that developing oil palm plantation in Kebunlado needs land reclamation to improve the soil physics and increasing its C/N and remediation to reduce mercury in soil and water.

Lead smelting has a negative impact to the environment due to its emissions of dust, SO_2 gas and lead. Changing the smelting method to the leaching process is intended to reduce the smelting's weaknesses by extracting the lead without harming the environment as stated in the third article. The fourth article reviews a shear test of the broken rock tested at a laboratory scale - the most significant factors that affect pile slope stability. The last article discusses the economic analysis of mini coal gasifier commercialization for small and medium industries. Mini coal gasifier technology is an energy diversification effort that is proven to be environmentally friendly and is suitable for use in small and medium industries to substitute subsidized LPG and diesel as well as substitute heavy oils which include fuels and poisons. This economic analysis is very important for both *tek*MIRA as a technology provider to find out the value of technology, and its potential partners as input in making decisions as a partnership with *tek*MIRA.

Enjoy the reading.

Editor in Chief