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“Filling gaps and removing traps
for sustainable resource management”

Development of an Integrated Cattle Farm on an Ex-Coal Mining Area in Indonesia

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Abstract

Coal production plays a significant role for domestic income in Indonesia but its exploitation inflicts environmental and social damages. In order to rehabilitate the ex-mining land and ensure sustainable development, mine reclamation is mandatory and has to be implemented according to the area's function. The Good Mining Practice Implementation Guidelines of the Ministry of Energy and Mineral Resources of Indonesia, specified in Decree No. 1827.K/30/MEM/2018, determine that mine reclamation embraces revegetation to natural succession (particularly in forested areas) and other reclamation to area function including housings, tourism, water bodies (for pit lake or void) and livestock or farming. By this regulation, the government rules how the non-renewable resources contribute to a sustainable development whilst exploitation is over, for example by setting up a livestock (cattle) farming enterprise on ex-mining land. PT Berau Coal has initiated the Integrated Cattle Farm in East Kalimantan Province in 2010, which breeds the Balinese cattle (*Bos javanicus*; since 2010), the *Bos indicus* Donggala cattle breed (since 2011) and Brahman Cross cattle (*Bos indicus*; since 2012). This farm supports the government's project since Indonesia, to supply domestic consumption, imports about 23% of its beef - mostly from Australia, the United States and New Zealand. From 2010 till date, birth rates are 0.62 for the Brahman Cross, 0.45 for Balinese Cattle and 1.04 for Donggala cattle. According to measurements of weight increments, Brahman Cross gain 0.28 kg day⁻¹ of weight in intensive feeding (zero-grazing) and 0.18 kg day⁻¹ with semi intensive feeding (i.e., grazing). The nutrients supplied by cover crops and grasses cultivated on on ex-mining land were also tested and found to meet the nutrient requirements of beef cattle. Currently, the Integrated Cattle Farm of PT Berau Coal is not only a training centre for the local community surrounding the ex-mining area but also holds a certain potential as national beef production facility in Indonesia.

Keywords: Cattle, ex-mining area , integrated farming, reclamation