The Impact of Tin Mining in Bangka Belitung and Its Reclamation Studies

NURTJAHYA Eddy¹, FRANKLIN Jennifer², UMROH³, and AGUSTINA Fourmita⁴

¹ Biology Department, University of Bangka Belitung, Merawang 33172, Indonesia, eddy_nurtjahya@yahoo.com
² Forestry, Wildlife and Fisheries, University of Tennessee, TN 37936, USA, jafranklin@utk.edu
³ Fisheries Department, University of Bangka Belitung, Merawang 33172, Indonesia
⁴ Agrobusiness Department, University of Bangka Belitung, Merawang 33172, Indonesia

Method

Secondary data from across the island (Fig 1) were discussed. Greenhouse and laboratory studies took place in the University of Tennessee, USA.

Background

Tin mining increases the wealth, but it changes and decreases the environmental stability, and cause horizontal conflicts. Planting local tree is challenging. The best adapted species anatomically and physiologically were not those that best in the field (Nurtjahya et al. 2011).

Socio-economic impacts

The positive impact is economic (Erman 2013). In some areas, fishermen and farmers become miners. The income of fishermen is just one-third of miners (Nurtjahya et al 2008). Mining stimulate conflicts between locals and immigrant and attitude changes (Nurtjahya et al. 2015).

Water qualities, offshore biotas

Offshore mining reduced water quality, and biodiversity (Fig. 2). The economic benthic mollusc L. (sipit gonggong) is replaced by the Anadara granosa (Yulandra et al. 2008).

Results

Soil degradation, inland biota

Onshore mining reduces soil properties and biodiversity, causes floods, damages infrastructure (Table I). Recovery is costly, the major portion are for soil amendment (Nurtjahya et al. 2016).

Physiological character

Species that widely adopted for mine reclamation are in particular tolerant of low water and nutrient availability (Nurtjahya & Franklin 2016).


discussion

The mining increases the wealth, but it decreases the environmental stability, and stimulate horizontal conflicts. Plant height and cover, transpiration rate, and foliar pigments may be used to select plant adaptability. Species most widely used in reclamation tended to have a moderate growth rate (Table II).

Conclusions

Although rapid growth is often cited as a desirable characteristic, the most frequently used species tended to have a moderate growth rate (Table II).

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