COURSE REPORT

Training on Coal Mine Site Rehabilitation Regulations for Government Staff

Balikpapan, East Kalimantan, Indonesia
September 25-27, 2012

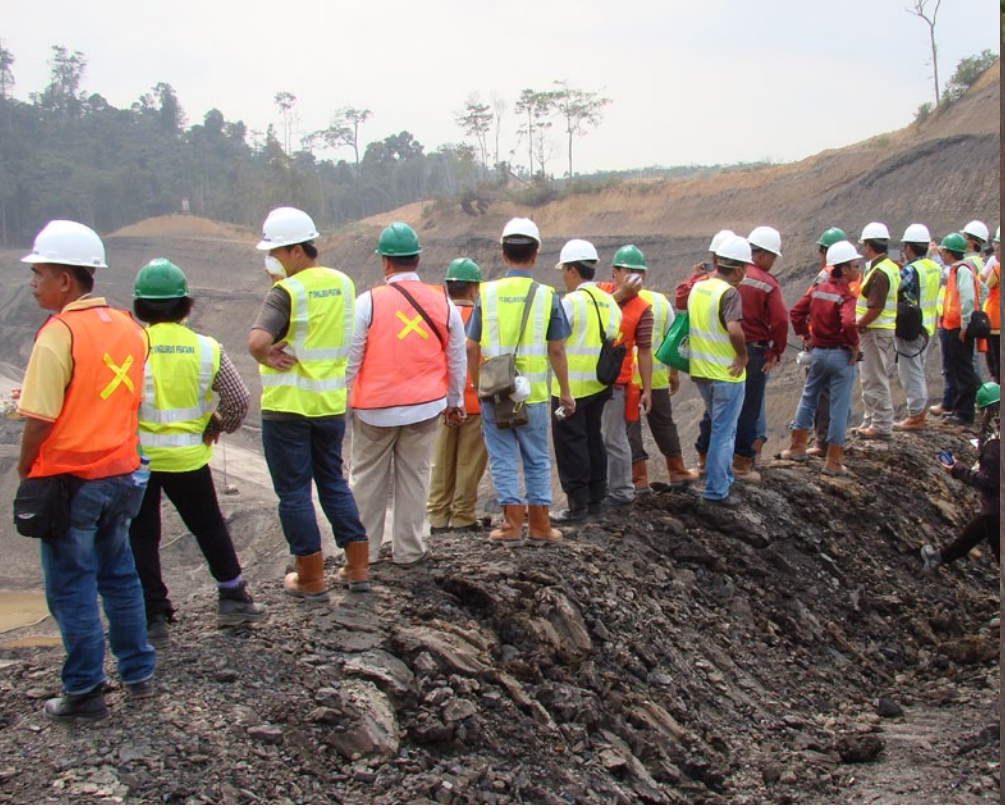
A course sponsored by:
Environmental Leadership & Training Initiative (ELTI)
Tropenbos International Indonesia Program (TBI Indonesia)
Faculty of Forestry, Bogor Agricultural Institute (IPB)
Balai Penelitian Teknologi Konservasi Sumber Daya Alam Samboja (BALITEK-KSDA)
PT. Akar Langitbumi
Mining and Energy Service of the Province of East Kalimantan (DISTAMBEN)

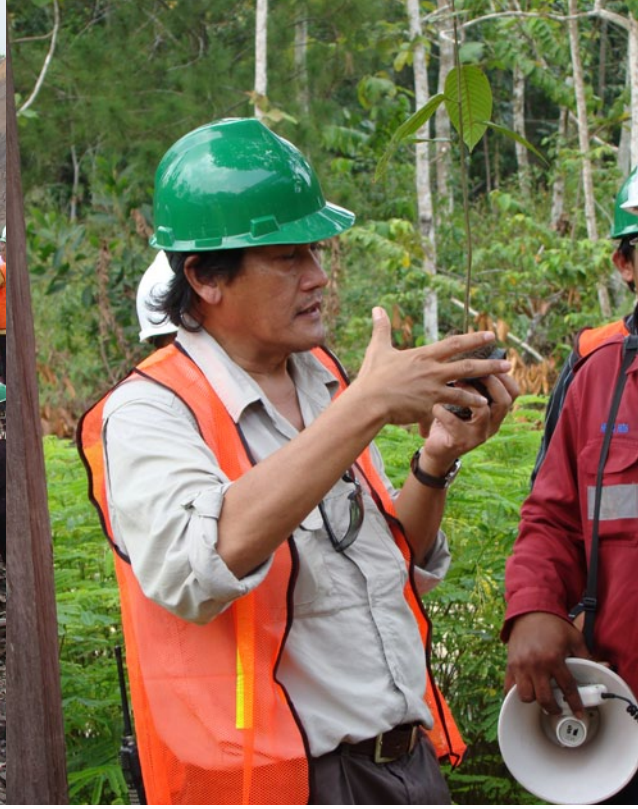
Background: Coal mining is a major industry in the province of East Kalimantan. Approximately 150 million tons of coal are extracted annually by more than 1200 companies. Significant growth is expected in coming years with the Province's Short-Term Development Plan for 2005-2025, allocating over 3 million hectares for mining concessions out of a total of almost 20 million hectares.

Coal mining results in significant levels of deforestation and the concomitant loss of environmental services, including water regulation, soil stabilization, carbon sequestration, and biodiversity habitat. It also reduces the value of the land, which cannot be used for other purposes. Although this environmental impact is an inevitable part of open-pit mining, the damage can be partially reversed through post-mine site rehabilitation.

Government regulations require post-mine site rehabilitation and or reclamation by the mining companies. Nevertheless, a significant percentage of big companies and the vast majority of small companies do not implement proper rehabilitation. In some cases, the mining companies do not have adequate technical knowledge to work with toxic soils and implement successful rehabilitation projects. In other cases, companies do not take the necessary steps because they recognize that the government has a limited capacity to monitor their activities. Contributing to this situation is the fact that the government mine site regulators themselves have inadequate knowledge of the environmental regulations, how to apply them in the field, and best practices in mine-site rehabilitation. As such, they are neither able to effectively regulate the industry nor give technical advice to the companies which they work with.

ELTI is a joint initiative of: Yale School of Forestry & Environmental Studies — Smithsonian Tropical Research Institute Panama





In order to begin addressing this situation, ELTI, TBI Indonesia, and IPB held a two-day symposium and workshop, *Mined Land Rehabilitation: Mainstreaming Landscape Restoration in Indonesia,* on March 6-7, 2012, in Balikpapan, East Kalimantan, which brought together various stakeholders to discuss steps needed to promote better post-mine land rehabilitation. Based on recommendations received during that forum, ELTI, TBI Indonesia, IPB, and BALITEK-KSDA developed in coordination with DISTAMBEN a follow-up, three-day training for mine regulators and other relevant government staff responsible for overseeing and facilitating mine site rehabilitation.

Course Objectives:

- To provide participants with an in depth understanding of the government regulations that pertain to mine site rehabilitation;
- To provide participants with a detailed, technical understanding of the steps needed to achieve mine site rehabilitation;
- To showcase best practices in mine site rehabilitation and broader forest landscape restoration; and
- To provide a forum for discussing challenges and obstacles to implementing government regulations and evaluate ways to overcome them.

Course Format: The first two days of the training were held at Hotel Le Grandeur in Balikpapan. The training started with opening remarks by Dr. David Neidel from ELTI, Dr. Petrus Gunarso from TBI Indonesia, and Dr. Rudi Koesnandar from the East Kalimantan Governor's Office.

Dr. Yadi Setiadi, a mined land rehabilitation specialist from IPB and an affiliate of PT Akar Langitbumi, then provided background information on the importance of forests, an introduction to the various government regulations regarding post-mine site rehabilitation, and a detailed discussion of rehabilitation techniques needed to meet the government requirements. The importance of conducting soil analysis before the initiation of planting was especially emphasized, given that toxic levels of iron, aluminum, and pyrite are often prevalent in coal mine sites. A variety of soil amendment techniques and other methods that could be used to counteract soil toxicity and other related problems were also discussed. Dr. Setiadi ended with a short film, produced by CIFOR and WWF, emphasizing the importance of addressing global environmental challenges.

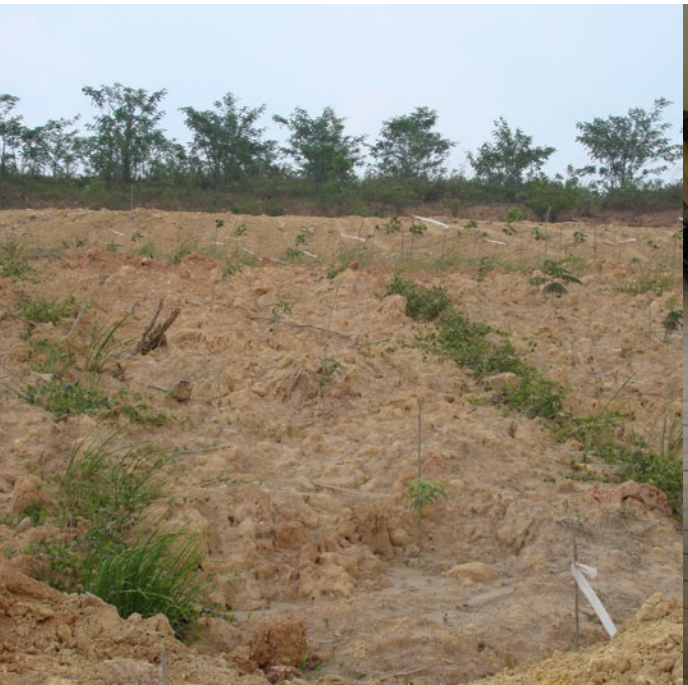
Dr. Petrus Gunarso of TBI-Indonesia then presented another film developed by the Governor's office which highlighted the wide spread environmental degradation that has been befallen the province. Pointing out the irony that the film had originally been developed to attract international investment to East Kalimantan, Dr. Gunarso then discussed the social and political dimensions of coal mine rehabilitation, stressing the need to overcome sectoral divisions that have contributed to the problem of ineffective mine site rehabilitation, and the government's difficulty in addressing it. In his presentation, Dr. Gunarso emphasized the importance of productive landscapes. Since mining is responsible for largely modifying the landscape and rendering it infertile afterward, rehabilitation and restoration are therefore, highly important, and the regulations related to them have to be enforced.

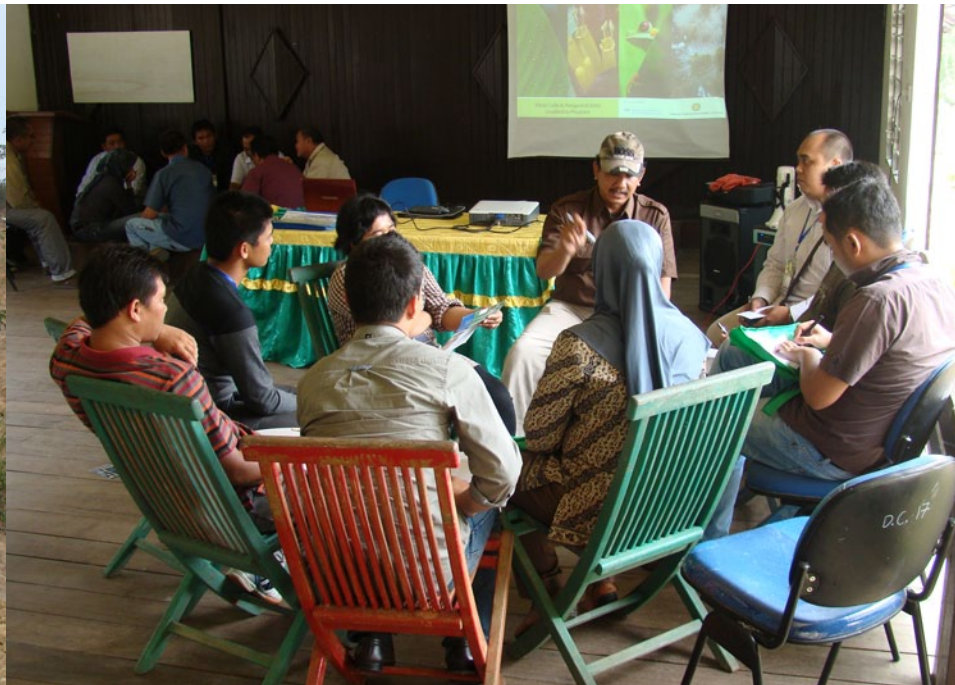
The second day of the training, Dr. Setiadi discussed land rehabilitation measures to minimize the possibility of acid mine drainage and erosion, including proper land restructuring, hydro-seeding, the use of legume cover crops, and the *templok* method for steep areas. He then discussed potential native tree species that are appropriate for reforestation in coal mine sites, the establishment of nurseries for these species, and methods for propagating planting material.

Dr. Chandra Boer from the University of Mulawarman then delved into the importance of restoring biological diversity in mine site rehabilitation. He described the role of wildlife in a landscape, and how conserving them will help in the rehabilitation process.

The third day consisted of a field trip to the PT. Singlurus Pratama coal mine, which is located on the outskirts of Balikpapan. Three sites visited included a closed pit, an open pit, and a reforestation area. Mr. Sumaryanto, Mr. Andi Saipullah, and Mr. Heru Desamte Hens from PT. Singlurus Pratama explained the company's mine planning and closure, site rehabilitation, and reforestation strategies, respectively. In all three areas, Dr. Setiadi followed up with practical questions for the participants to allow them to apply the knowledge they had learned over the past two days. The group then proceeded to the Bukit Bankirai nursery, which is jointly managed by Inhutani and PT. Singlurus Pratama, where nursery management and seedling production techniques were discussed.

The afternoon was spent at the Inhutani complex near the Bukit Bangkirai nursery. Ms. Victoria Kalalo and Mr. Stefanus Rio Sulistio first gave a presentation on PT. Singlurus Pratama's Corporate Social Responsibility program, which led to a discussion on how best to include local communities in mine rehabilitation efforts. In order to map out future plans, the participants were divided into four groups and were asked to brainstorm possible solutions to conflicting government regulations, as well as to explore options for implementing





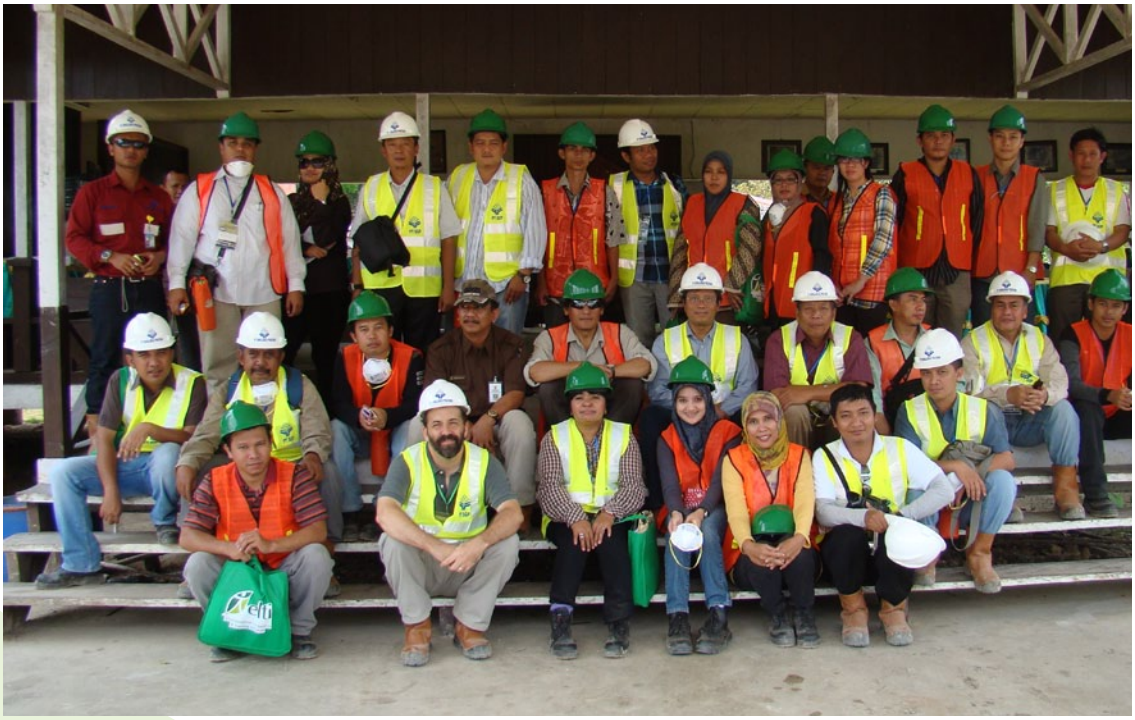
various elements of the training once they returned to their own offices. Ms. Pangestuti Astri then presented on the ELTI Leadership Program, explaining the types of support that ELTI could provide the participants in implementing their initiatives. Finally, Dr. Petrus Gunarso delivered the closing remarks and, along with Dr. Neidel and Dr. Setiadi, issued training certificates.

Participants: The training was attended by thirty-two participants representing the Forestry, Environment, and Energy & Mineral Resources Departments from the city of Balikpapan and Districts in East Kalimantan.

Press Coverage: The training was covered through the following articles in the local press:

- **Tribun Kaltim, 25 September 2012:** ELTI Gelar Pelatihan Rehabilitasi Lahan Tambang Batu Bara di Balikpapan
- **Tribun Kaltim, 25 September 2012:** David: Tanah Eks Tambang di Kaltim Beracun
- **Tribun Jakarta, 25 September 2012:** Bekas Tambang di KALTIM beracun, Tribun Jakarta
- **Tribun Kaltim, 25 September 2012:** Banyak Lahan Bekas Tambang di KALTIM yang Beracun

Follow-up: An email listserve has been developed so that the group can remain in contact with each other. The government regulators requested that additional trainings be held for the coal mine companies, especially the small ones that are responsible for a large amount of the damage. ELTI is also looking into the possibility of holding trainings for concessionaires from the forestry sector who are often hired by the companies as contractors but who do not have the knowledge or skills needed to deal with the toxic soil conditions. A number of the participants also expressed interest in holding various types of trainings for local companies and communities in their own regions, so ELTI, together with the other partners, will continue to monitor and assist with their activities when possible.



This event was possible thanks to Arcadia Fund, whose Environmental Conservation grants support programmes that protect and enhance biodiversity, and provide field training and academic research.