COURSE REPORT

Tropical Forest Restoration Strategies

September 25 to November 5, 2017

An online course organized by:
Environmental Leadership & Training Initiative (ELTI)

Participant Andri Mauldi's proposed restoration site: an illegal gold mining area in West Kalimantan

Background: As the damaging effects of deforestation are being observed in Tropical Asia and around the world, there has been increasing interest in the restoration of tropical forests. Forest restoration aims to increase the ability of degraded lands to provide ecosystem services, such as hydrological cycling, the conservation of biodiversity, carbon sequestration, and support for forest products industries. However, many restoration projects fail over time because the species and methods employed do not match the biophysical and social conditions of the restoration site.

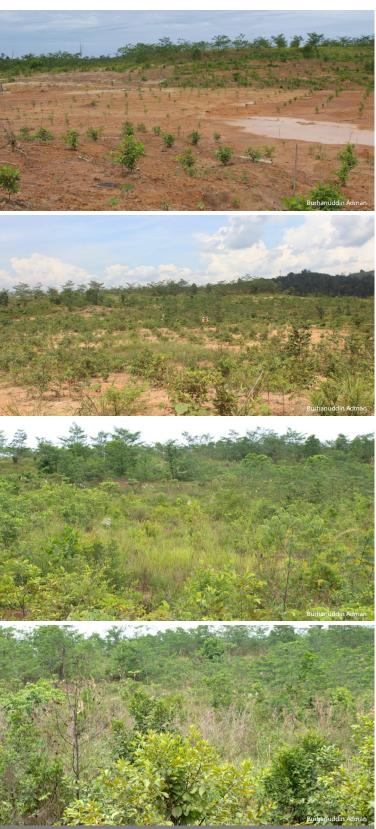ELTI is an initiative of: **Yale** SCHOOL OF FORESTRY & ENVIRONMENTAL STUDIES

In Indonesia the term "forest restoration" is not widely known. On a small scale, restoration is intended to restore degraded land by using natural processes to return the forest to earlier conditions. At a broader landscape scale, restoration has been adopted as the term for a process through which stakeholders decide on land use patterns that optimize the distribution of ecosystem services for the benefit of society. According to this broader perspective, restoration can be used to return land to an earlier state (like in the narrow definition), but can also aim for improving land use management practices so the land is more productive while still being sustainable.

This online course provides an introduction to the concepts and techniques needed to develop and implement strategies for the restoration of tropical forests and ecosystem services in multi-use landscapes in Asia, and especially Indonesia. The course, which is being held in Indonesian, is designed for practitioners and professionals looking to advance their knowledge about forest ecology and restoration through a series of presentations, discussions, readings, and case studies.

Course Objectives:

- Provide the knowledge needed to evaluate and compare an array of tropical forest restoration methodologies, as well as to assess how different biophysical and social economic factors at the site affect decision making about what strategy to use;

- Provide an opportunity for participants to analyze ecological conditions, the history of disturbance, social political factors, and monitoring planning in order to conduct adaptive management at the restoration site; and

- Provide an opportunity for participants from different parts of Indonesia to meet and share their experiences with other course participants, ELTI instructors, and other experts.

Burhanuddin Adman

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Four-year time series showing the results of mine site rehabilitation at PT Singlurus Pratama's mine site in East Kalimantan

Course Format:

This six-weeks course is divided into thematic modules, each one lasting a week. The thematic modules are:

Module 1: An Introduction to Deforestation, Restoration, and Ecosystem Services.

Module 2: Disturbance and Regeneration in Tropical Forests.

Module 3: Strategies to Catalyze Restoration in the Tropics.

Module 4: Social and Political Aspects of Restoration.

Module 5: Monitoring and Evaluation.

Module 6: Development of a Restoration Management Plan.

Educational Tools: All course materials are available online on Yale University's Canvas Platform. The material components that can be accessed anytime throughout the course are:

- Interactive presentations without audio;

- Pre-recorded videos of guest lectures with audio;

- Case studies providing restoration examples from a variety of projects;

- Recommended readings and references;

- Five optional live discussion sections where participants are encouraged to interact directly with guest experts;

- Weekly short answer assignments which evaluate the participant's understanding of the content; and

- A final project in the form of a management plan which is the accumulation of weekly assignments, as well as feedback from course instructors and other participants, that connect the course material to the participants' restoration site

Participants of the online training course

Course Participants: ELTI selected 22 participants from over 100 applicants based on their potential to involve themselves directly in forest landscape restoration in Indonesia. The 22 participants were also chosen to reflect a diversity of geographical regions and employers, including government institutions, research and academic institutions, NGO practitioners, and even an environmental journalist.

Course Instructors: The delivery and management of the course was facilitated by Dr. Arbainsyah, the ELTI Indonesian Program Assistant, Pangestuti Astri, MSc., and Dr. David Neidel, Ph.D, the ELTI Asia Program Coordinator. Substantive feedback was provided on the written homework by all instructors. Guest experts who provided pre-recorded video lectures, recorded interviews, case studies, and/or live video conferences included:

- Ishak Yassir, Ph.D., Balai Penelitian Teknologi Konservasi Sumber Daya Alam-Samboja, Indonesia.
- Mark Ashton, Ph.D., Yale School of Forestry & Environmental Studies, USA.
- Marlito Bande, Ph.D., Visayas State University, Philippines.
- Stephen Elliot, Ph.D., Chiang Mai University, Thailand.
- Petrus Gunarso, Ph.D., Perkumpulan Sarjana Kehutanan Indonesia.
- Nimal Gunatileke, Ph.D., Department of Botany, University of Peradeniya, Sri Lanka.
- Savitri Gunatilleke, Ph.D., Department of Botany, University of Peradeniya, Sri Lanka.
- Muayat Ali Muhshi, Konsultan Lingkungan untuk Perhutanan Social, Indonesia.
- Tukirin Partomihardjo, Ph.D., Lembaga Ilmu Pengetahuan Indonesia.
- Erica Pohnan, MSc., Alam Sehat Lestari Indonesia.
- Satrio A Wicaksono, World Resource Institute, Indonesia.

Course Outcomes and Follows-up: Twenty of the twenty-two participants successfully completed the course. The participants benefited from the feedback they received from the instructors and their peers, and successfully completed their preliminary management plans. In the months following the course, ELTI will follow up with the participants to see how the course and their site management plans have influenced their professional development and the management of their individual restoration sites. ELTI will also follow up with participants who expressed an interest in applying for follow-up support for their projects through the Leadership Program.