COURSE REPORT

National Rainforestation Trainers' Training

Leyte, Philippines
May 18-22, 2015

A workshop organized by:
The Environmental Leadership & Training Initiative (ELTI)
Visayas State University - Institute of Tropical Ecology & Environmental Management (VSU - ITEEM)

Background: It is estimated that the Philippines has lost approximately three-quarters of its forest cover and that primary forests now account for less than three percent of the country's total land area. Critical environmental goods and services have been lost, disasters such as landslides and flashfloods have become more common, and the livelihoods of many rural and indigenous communities have been compromised. Massive reforestation programs have thus been implemented throughout the country to counter these problems. However, most have used only a handful of fast-growing, exotic tree species, which are not particularly well suited to meet the objectives of the programs. They also tend to be carried out on a wage basis with little to no follow up, rather than involving local communities in a more meaningful way.

Starting in the 1990s, Visayas State University (VSU) and the German Agency for Technical Cooperation (formerly GTZ, now GIZ) developed an agro-forestry system known as "Rainforestation Farming," which uses native species to rehabilitate degraded landscapes, while providing forest-dependent communities

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

with a more sustainable source of livelihood. Equally important, they worked on a social approach in order to stimulate interest in forest restoration, organize communities, address land tenure issues, and ensure an equitable distribution of benefits. Subject to extensive research and experimentation, "Rainforestation Farming" has been refined into a cost-effective and widely applicable strategy for reforestation. Since then, other methods, known simply as "Rainforestation", have also been developed to rehabilitate critical watersheds, denuded portions of protected areas, and land slide areas, where income generation plays a less important role.

The Department of Environment and Natural Resources (DENR) has endorsed Rainforestation as an official reforestation strategy, but dissemination of this approach to the provinces has been limited and technical capacity remains inadequate. In order to overcome these hurdles, ELTI and VSU have been conducting a series of trainers' training courses on Rainforestation since 2009 aimed at scaling up the adoption of this restoration strategy throughout the country.

Objectives: The more specific aims of this training course were as follows:

1. To provide participants with a solid understanding of the theory and principles underlying Rainforestation, and its application in various social and ecological contexts;
2. To teach participants through hands-on, experiential learning, the process and practice of establishing a Rainforestation site and native species nursery;
3. To catalyze further training on Rainforestation;
4. To develop more Rainforestation demonstration sites throughout the Philippines, and;
5. To foster an exchange of experiences, lessons learned and best practices for applying Rainforestation to different areas in the country.

Course Format:

Day 1: The course started with opening remarks by VSU President, Dr. Jose Bacusmo, and ELTI Asia Program Coordinator, Dr. David Neidel. Participants and resource people were then introduced by ITEEM Director, Dr. Humberto Montes, Jr. Facilitation throughout the training was provided by Ms. Angelita Orias from ELTI and Ms. Mary Nierves, Ms. Joy Compendio, and Ms. Ange Cuarque from ITEEM. Dr. Marlito Bande (ITEEM) started the training proper with an introductory lecture that outlined the history of forest loss in the Philippines, the limitations of conventional reforestation approaches, the social and technical

processes of establishing Rainforestation sites, and the ecological and social benefits of forest restoration. To give the participants a better sense of the approach, the group visited three Rainforestation demonstration sites in the area, where they also had an opportunity to discuss the implementation process with the communities and individuals who developed the sites. After the visits, Mr. Ulysses Ferreras, one of the country's foremost field botanists, provided an introduction to the different forest formations of the Philippines, emphasizing the importance of understanding the forest ecosystem where rehabilitation is being planned.

Day 2: Dr. Bande provided an introductory presentation on the establishment and operations of native tree nurseries. Participants then went around the ITEEM nursery facilities, where they learned about several ongoing experiments that support the further refinement of the Rainforestation methodology, including ones looking at root development of forest trees in different soil types, relative tree growth under different nutrient levels, and seedling shading requirements. The participants proceeded to the original Rainforestation demonstration site, where they surveyed the impact of typhoons on indigenous trees, examined the characteristics of the soil in the region, visited several past planting sites, and participated in the construction of a temporary nursery facility using locally-available materials. Participants also conducted exercises on the monitoring of seedling growth in the nursery, where they learned to measure seedling height and root collar diameter, and monitoring of planted trees by geo-tagging them and measuring the tree height and diameter. Mr. Jimmy Pogosa (ITEEM) then facilitated a session on data analysis using the information collected during the exercises.

Day 3: Participants were first given a tour of a plantation of *Gmelina arborea* – a fast-growing, exotic species that is often encouraged by the DENR and outside agencies for its supposedly superior growth rate. The site, which had been established in Mahaplag, Leyte, by an Australian Center for International Agricultural Research-funded project, revealed that 95% of the trees had been heavily damaged or destroyed by Supertyphoon Haiyan (local name: Yolanda), despite the fact that the plantation was in a well-protected location. Moreover, the plantation was not able to prevent further erosion along the riverbank, close to where it was established. This was contrasted to the native

species sites, which suffered less damage and quickly showed signs of recovery. Afterwards, participants travelled to Silago, Southern Leyte, where some of the remaining primary forests in the province and in the country can be found. Before reaching the forest, participants walked along a portion of a recently established interpretative trail, where they were introduced to forest dynamics such as degradation, succession and natural regeneration along spatial and temporal gradients. Participants also stopped at coconut and banana plantations, and a quarry site along the trail to shortly discuss the socio-political factors behind deforestation. The group then met with a forest community, and learned about their efforts to protect and rehabilitate the watershed and to sustainably manage their forest area. Up in the forest, Mr. Ferreras led a discussion on plant taxonomy, as it relates to forest restoration strategies, as well as an exercise on collecting voucher specimens for proper identification of plant species. Dr. Bande proceeded to instruct the participants on how to properly collect wildings, transfer them to polybags, inoculate the seedlings with mycorrhizae, establish a recovery chamber, and plant out the seedlings. The participants then did all the activities themselves in the community's watershed area as a way to contribute to the community's rehabilitation initiative.

Day 4: Dr. Neidel started the day with a presentation discussing alternative strategies to forest restoration, such as Assisted Natural Regeneration and the Framework Species Method, and compared the two to Rainforestation based on ecological and social contexts and management objectives. Dr. Renezita Come (VSU) then discussed the importance of site-species matching and the morphological characteristics of native species. Afterwards, the participants visited a Rainforestation experimental site in a marginal area, exploring the different species combinations and treatments. In the adjoining area, the participants carried out an initial site assessment, doing a quick vegetation survey. Dr. Come discussed the results of the survey, and working in smaller groups, asked the participants to deliberate and decide on a strategy for reforesting the area, given the site's particular social and ecological characteristics. Following this exercise, participants were then given time to develop their own action plans, which lay out in detail how they plan to apply what they learned from the training once they return to their own communities.

Day 5: The last day of the course was dedicated to presentations of action plans, and feedback from fellow participants and training

instructors. Dr. Neidel also gave a presentation about the ELTI Leadership Program and discussed the different opportunities for follow up support to implement their action plans. Ms. Lyra Chu (Rain Forest Restoration Initiative, RFRI) introduced the RFRI network and talked about other resources available to the participants. The training ended with a course evaluation, closing remarks by Dr. Dennis Peke, Dean of the VSU College of Forestry & Environmental Studies, Dr. Montes and Dr. Neidel, and the issuance of certificates.

Participants: The training was attended by 29 participants, including representatives from Non-governmental organizations, Universities, People's Organizations, and Local Government Units. The participants came from the Visayas and Mindanao regions.

Follow Up: All of the participants have been added to the Rainforestation Discussion Group and their profiles will be added to the Rainforestation website's Trainers page. VSU, ELTI, and RFRI will track the progress of the participants in implementing their action plans, and provide assistance as requested directly to ITEEM or through the ELTI Leadership Program. One follow up training has already been implemented by a participant from Palawan province, with assistance from ELTI and ITEEM.

Another Rainforestation Trainers' Training is set for October 26-30 for participants from Luzon region, and more to come, as the need arises.

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