

Participatory Rainforestation and Monitoring System: The Bohol Island State University (BISU) Experience

STRATEGIES



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Project Leader, BISU Tree Farm



Forest
Foundation
Philippines

Presentation during the International Conference on Forest and Landscape Restoration on February 25-27, 2019 at New World Hotel, Makati City, Philippines

Objective of Presentation:

Monitoring System: A Bohol Island State
University (BISU) Experience

TO SHARE THE USEFUL PRACTICES
AND STRATEGIES EMPLOYED TO
COME UP WITH A TREE FARM
MANAGED BY ACTORS IN
ACADEMIC SETTING...

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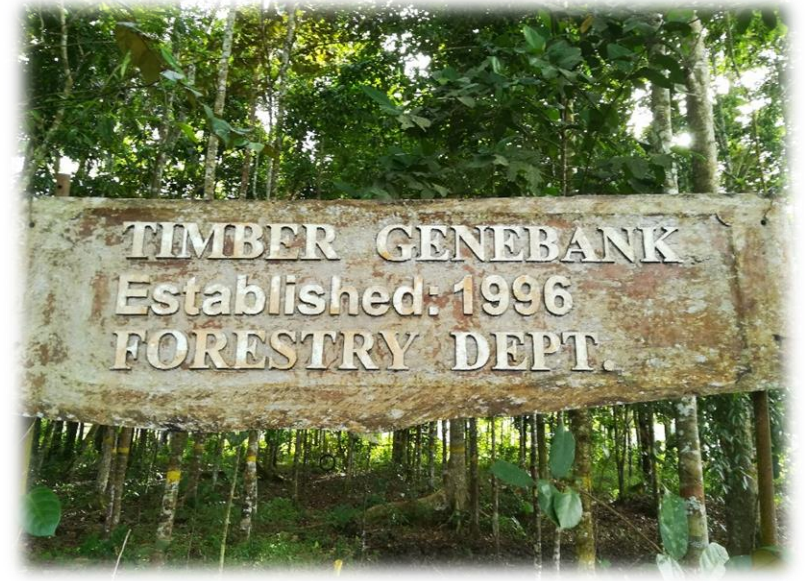
BISU Tree Farm

- a one-hectare farm established “participatorily” on August 2014
- funded by the Philippine Tropical Forest Conservation Foundation, Inc. (PTFCF) through the Philippine Forestry Education Network (PFEN)
- formerly forested in the 20s and transformed into pasture land in the 50s and eventually rehabilitated back to a tree farm
- composed of more than 40 species (1,300+ individuals) of native and naturalized trees
- blessed by bountiful waters (river and irrigation canal)



Rainforestation Efforts

- Tree Genebanks in 1996 (GTZ-funded)
- Rainforestation farms in 1998 (GTZ-funded)
- Individual tree farms since 1998 (student farms)
- Clonal facility and hedge gardens in 2012 (DENR-funded)
- Indigenous tree farm in 2014 (PTFCF-funded)
- Provision of free seedlings to neighboring barangays (farmers, rebel returnees and former drug-dependents) in 2015 onwards thru the municipal health offices



Policy and Management Support Systems

- Participation to national and international trainings
- Appropriation of regular budget (R&D) for the continuity of the project activities (tree farms and bambusetum)
- Provision of funds for the conduct of regular and in-service trainings
- Invitation of technical experts (PCRVS, PNM, Balik-Scientists, UPLB-BIOTECH)
- Resource sharing (supplies, materials and human resources)



Actors Participation

- Community residents, faculty and students participations are very crucial in tree farm establishment.
- Maintenance and other operations are done voluntarily (most of the time) or as sanctions/punishments.



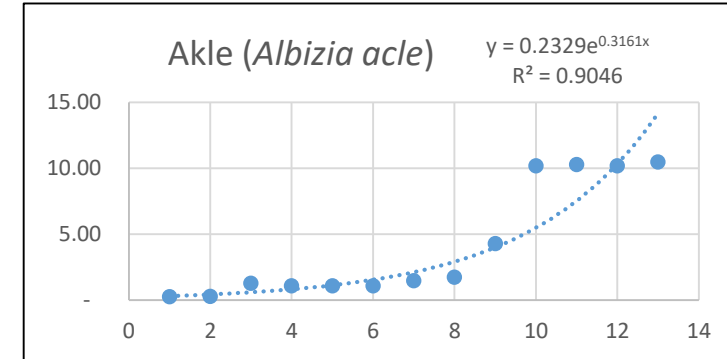
Monitoring Activities

- Faculty and students main work (FESSS, SMCI, CWTS, etc.)
- Bio-measurements (basal diameter, total height, and basal diameter)
- Pest and diseases monitoring, prevention and control
- Recording of dead seedlings/saplings (including intentionally cut) for restocking

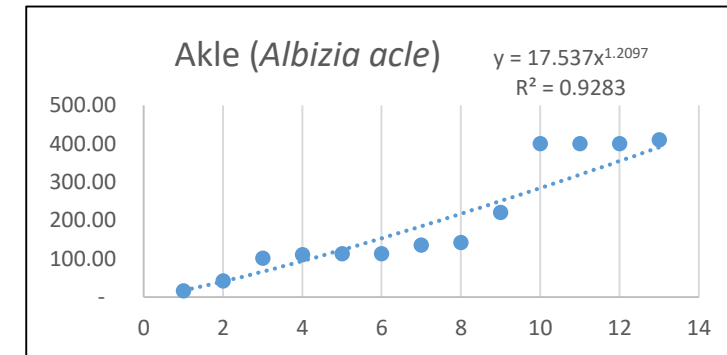


Outputs of Monitoring Activities

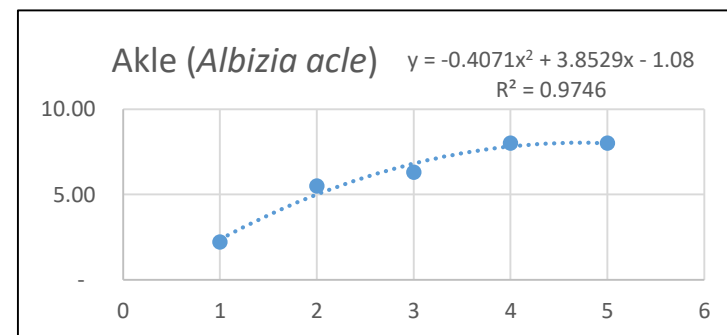
- Database of quarterly bio-measurements (basal diameter, total height, and diameter at breast height)
- Growth rate measurements/computations
- Pest and diseases records (applied prevention and control measures)
- Restocking and enrichment planting records



BD (cm)



TH (cm)

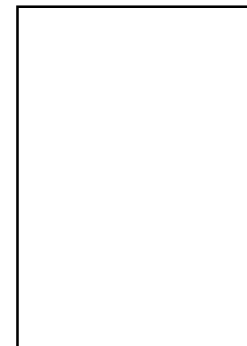
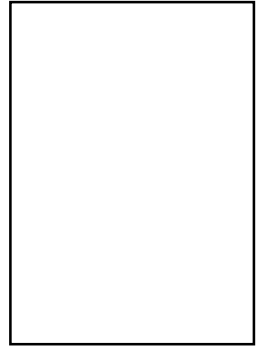


DBH (cm)

Outputs of Monitoring Activities

Species	Growth Rate (%)		
	BD	DBH	TH
Amugis	24.51%	37.31%	23.48%
Balukanag	22.04%		21.14%
Bitanghol	23.94%	7.06%	20.37%
Dao	28.70%		22.65%
Ipil	22.64%	2.92%	20.86%
Kalumpit	26.40%	1.92%	22.55%
Lamog	21.93%	7.51%	18.99%
Marang	21.06%	24.05%	22.40%
Taguibokbok	21.56%		16.43%
Toog	22.51%	11.35%	20.82%
White lauan	22.20%	3.31%	19.44%
White nato	25.77%	2.85%	23.54%

Note: 12 out 44 species stood-out



Developed Tree-Farming Protocols

- hardening of seedlings for at least 2 months, preferably March and April
- acclimatization for a month (May)
- outplanting during the onset of rainy season (June or July)
- holing of 20-cm diameter and 30-cm depth
- use of topsoil plus partially-decomposed ricehull with chicken dung or vermicast(50:50)
- application of complete fertilizer (15 to 30 grams at a distance of 5 to 10 cm)
- brushing and/or ring weeding monthly in the first year and quarterly in the succeeding years
- handpicking of pests once observed (or fungicide/pesticide application)
- restocking of dead and intentionally cut seedlings/saplings
- quarterly biomeasurements for research and instruction purposes

Future Plans and Directions

- Ecological research (phytozoosociological relationships) with response volunteers and scientists
- Nanotechnology research (fertilizer application)
- Carbon sequestration studies using sapflow meters and other equipment
- Replicational work, dissemination of tested protocols, and advocacy

Conclusion

- Participatory rainforestation in a university setting is ideal only if the following ingredients are complete:
 - interested faculty and students
 - supportive administration
 - available policy and management support systems
 - well-planned maintenance and monitoring activities

THANK YOU