TRAT FOREST RESTORATION RESEARCH AND DEVELOPMENT, THAILAND

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Asia-Pacific Forestry Week
AKECOP SIDE EVENT
15 Years of AKECOP: Experiences and Lessons Learned
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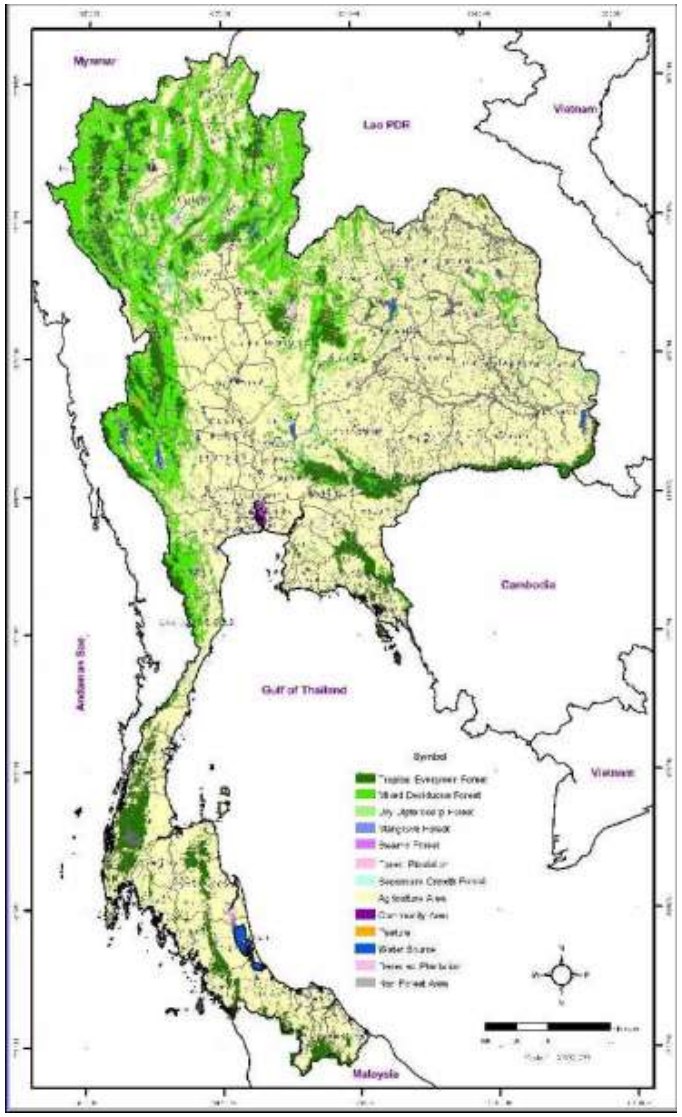
THAILAND: GENERAL INFORMATION



- Country area: 514,000 sq.km
- Forest cover by policy: 40%
- Forest cover in 2007
  - 30.92 %
- Types of forest
  - Evergreen forest
    - Tropical evergreen f.
    - Dry evergreen f.
    - Mangrove forest
    - Swamp forest
    - Beach forest
  - Deciduous forest
    - Mixed deciduous f.
    - Dry dipterocarp f.
    - Pine-deciduous dipterocarp f.

TRAT PROVINCE

- Eastern most province
- Province area: 2,866 sq.km.
- Forest cover
  - in 2000: 33.2%
  - In 2009: 25.9%
  - In 2014: 31.4%
- TAFRTS
  - Established in 1994
- AKECOP
  - Joined in 2002






CONTENTS


- Logging Ban in 1989

HISTORICAL BACKGROUND OF THE RESEARCH STATION



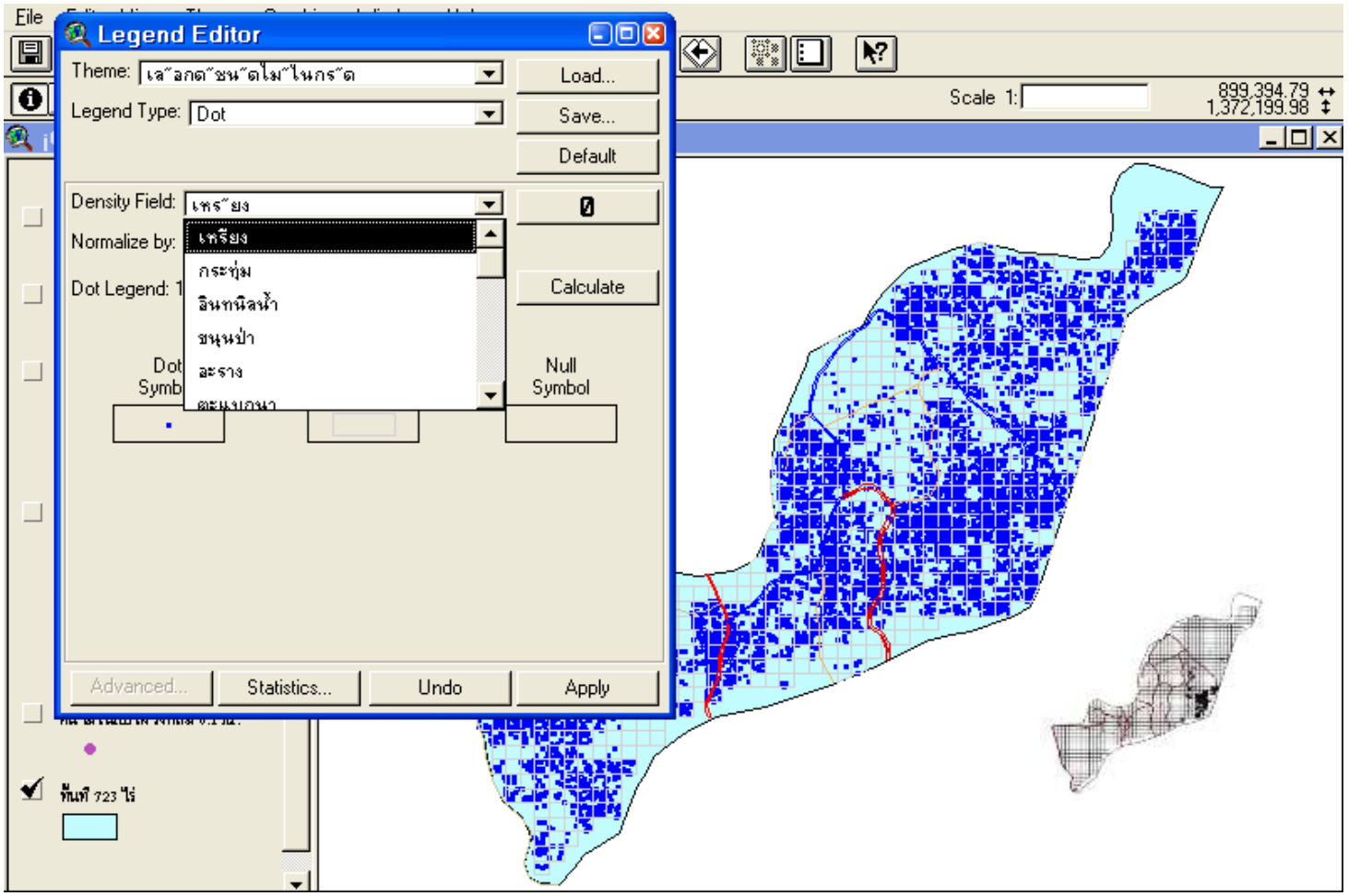



FOREST AND LAND DEGRADATION

1994: TRAT RESEARCH STATION

1996: TRAT R.STATION

GIS DATABASE INITIATIVE

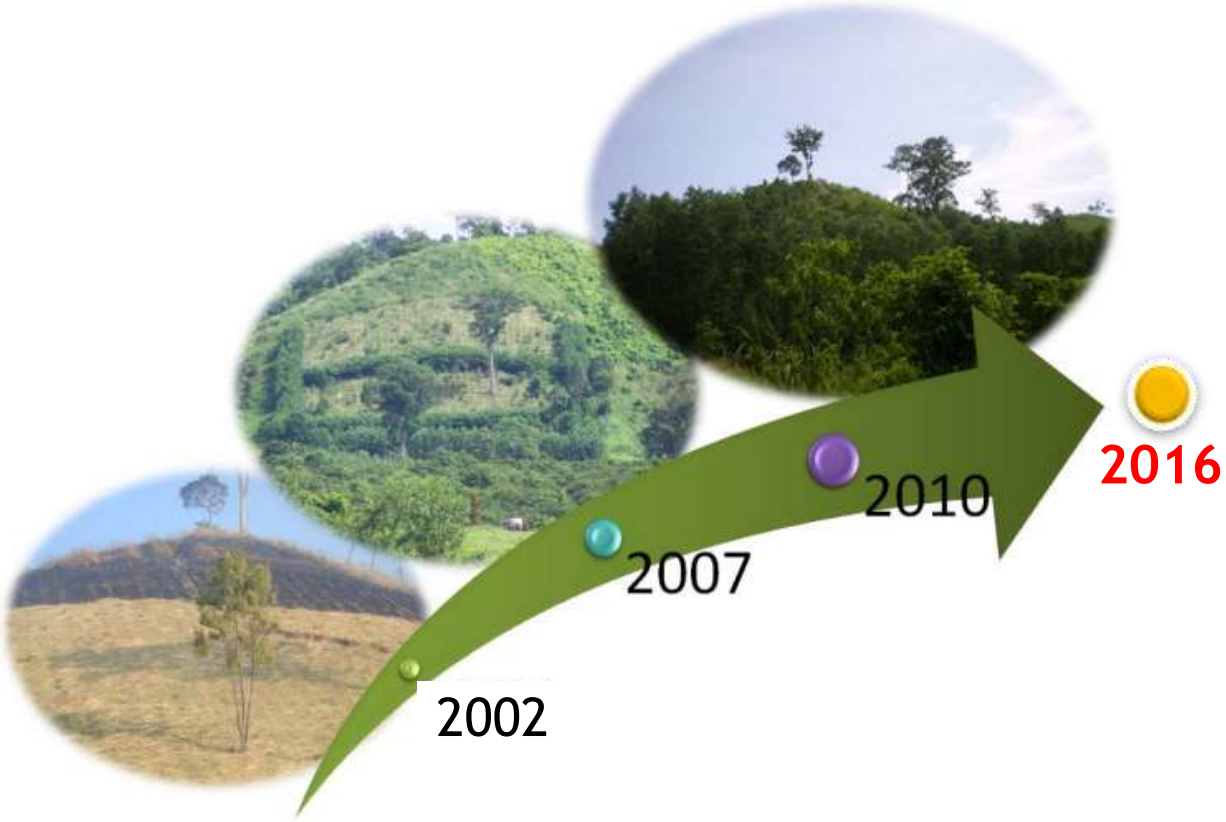


Vegetation Map of ~ 144 tree species

SILVICULTURAL RESEARCH

WS Management Team

- Efficiency of Different AF Model in Soil, Nutrient and Water Conservation
- Economic Evaluation on Direct and Indirect Benefit of AF Resources
- Processing Technology of Agricultural Products Channeling from HH to CL
- Development of Wood Utilization from Agroforestry Systems
- Structural Improvement Of Secondary Forest



DEVELOPMENT OF AKECOP RESEARCH

HISTORY/TIMELINE

		Regional Research	Conference Meeting Training
2015 2014 2013 2012	IV	Development Model of Forest Restoration Project through Collaborative Research	2015:1M 2014:1M 2013:1M 2012:1C
2011 2010 2009 2008	III	Restoration of degraded terrestrial forest and mangrove forest ecosystem in Thailand	2011:3V 2010:1G 2009:1G1ST 2008:1G
2007 2006 2005	II	Silvicultural Management for Restoration of Logged-Over Area and Agroforestry Development through Collaborative Efforts	2007: 2006: 2005:
2004 2003	I	Assessment on Agroforestry Species for Regeneration of Degraded Forest Land and Increasing Biodiversity in Huairang-Klongpeed Watershed, Trat province, Thailand	2004: 1C 1S 2003: 1C 1S
2002		AKECOP is a collaborative project between ASEAN member countries and the Republic of Korea established since 2000.	

STAGE I: BUILDING TEAM

STAGE II PARTICIPATORY FOREST RESTORATION

Youth training on bio-resources conservation

STAGE II PARTICIPATORY FOREST RESTORATION

Figure 5

Fig

Figure 7. Planting day activity on June 28th, 2008.

Table 1 Allometric equations used to estimate biomass production.

Species	Allometric equations	R^2
Rhizophora apiculata		
Rhizophora mucronata		
Excoecaria agallocha		
Bruguiera cylindrical	$LogWs = -1.173820 + 0.890752(LogD^2H)$	0.9905

ASEAN-KOREA Environmental Cooperation Unit

Litter production and decomposition were determined from sampling using litter traps and litter decomposition bags. Nutrients in litter were analyzed. The results are summarized in Tables 1-8 below.

- Table 1 Species density by size (trees, saplings and seedlings) based on sample plot data
- Table 2 Relative density, frequency and dominance plus important value index based on sample plot data
- Table 3 Measured data for trees saplings and seedlings based on sample plot data
- Table 4 Biomass by component based on sample plot data
- Table 5 Increment by component based on sample plot data
- Table 6 Periodic seasonal litterfall based on sample plot data
- Table 7 Nutrient status of seasonal litter fall based on sample plot data
- Table 8 Seasonal decomposition rate based on sample plot data

STAGE III DEVELOPMENTAL MODEL

Figure 7 Training on the development of the Ban Pred Nai mangrove forest resource database (29 March 2014)

STAGE III DEVELOPMENTAL MODEL

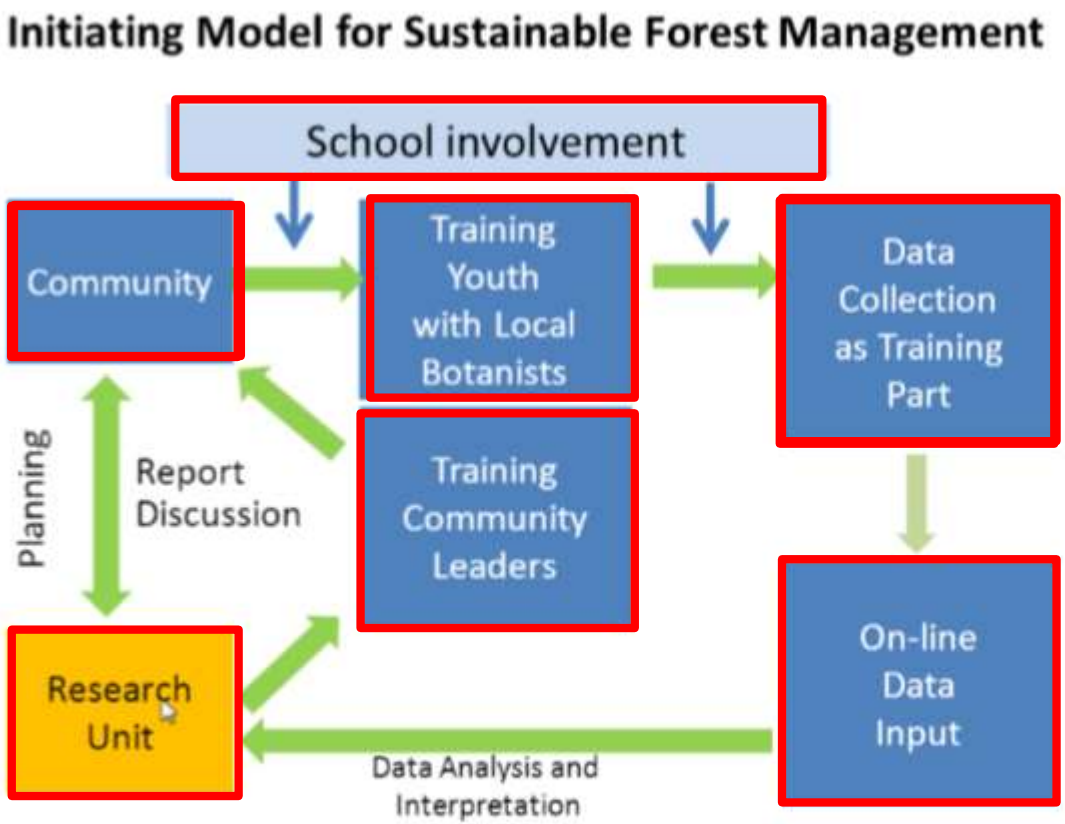


Figure 10 Initiating Model for SFM showing collaboration of Community, Schools and Researchers in Sustainable Forest Management.

STAGE III DEVELOPMENTAL MODEL

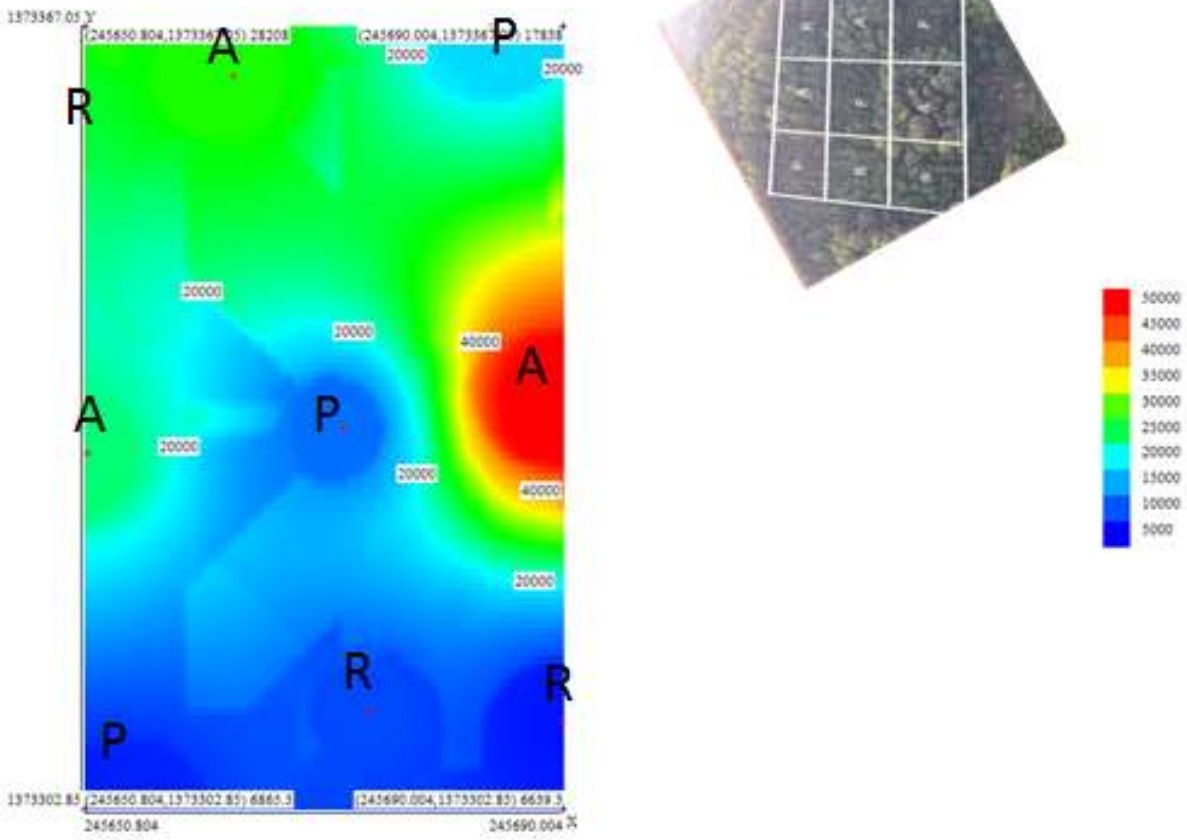
Figure 15 Presentation of structural characteristics of the community forest and silvicultural implications to the community forest committees.


CONTINUING

- Monitoring forest dynamics at Khao Kalong site
- Conducting more training to improve the developmental model


CHANGES IN STRUCTURAL CHARACTERISTICS OF MIXED SPECIES 10 YEARS AFTER PLANTING AT KHAO KALONG, TRAT PROVINCE

Total Biomass



LESSON LEARNED


LESSONS LEARNED

1. Forest restoration is not just planting trees, but also community involvement, knowledge and maintenance, and on-going benefit.
2. Local people like to be involved and consulted, but it is hard for them to understand the scientific complexity.
3. The right people to involve are not necessarily those who will get the direct benefits.
4. Keep expanding the number of people involved each year and maintain participants' (community and researchers) interest through regular coordinated activities.

LESSONS LEARNED

5. Start community involvement with schools, but build up slowly to get long term success.
6. The results and activities should be expanded to other areas to maximize on-going benefit.
7. Must adapt project expectations over time because forest is dynamic and changes with time.

LESSONS LEARNED

8. Research output must be readily available and generate policy input.
9. Monitoring and research results must be regularly entered into a central, well-maintained database so the information can be more widely used.
10. Successful forestry requires long-term commitment and handover including the administration.

CONCLUSION

- 15 years of AKECOP has been a worthwhile and rewarding experience.
- For the future, cooperation must be continued.


Thank You



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HISTORICAL BACKGROUND
OF THE RESEARCH STATION

DEVELOPMENT OF AUEC OF
RESEARCH

LESSON LEARNED

RECOMMENDATION