

A Community-Based Alliance for Climate Change Mitigation: the Mae Fah Luang Reforestation Model



มูลนิธิแม่ฟ้าหลวง ในพระบรมราชูปถัมภ์
Mae Fah Luang Foundation under Royal Patronage



The Nan Reforestation Project

Geographical area : 40,000 hectares in 3 watershed areas

Administrative area : Nan Province, 3 Districts, 4 Sub-Districts, 20 Villages

Beneficiaries : 1,723 Households, 7,392 People

Watershed	Area (Hectares)	No. of Villages	No. of Households	No. of Peoples
1. Sobsai	5,490	3	194	676
2. Upper Yao	7,105	3	241	953
3. Upper Nan	27,405	14	1,288	5,763

Problems in the Area

- Average loss of 30 hectares of forest per day in the past decade
- Ranked third for the whole country in terms of poverty
- Herbicide contamination in water as high as 24.5 folds above safety standard
- Highest rate of cancer patients in the country

“Cultivate Land, Cultivate People”

2009



“Cultivate People”

Through Integrated Rural Livelihood Development

		Sobsai	Upper Yao	Upper Nan	Total
Water	Agriculture weir (weirs)	22	16	229	<u>267</u>
	Conservation weir (weirs)	2,730	434	3,095	<u>6,259</u>
	Pond (ponds)	81	49	147	<u>277</u>
	Water Delivery (meters)	16,702	29,615	89,693	<u>136,010</u>
Land	Rice terrace (ha.)	106	207	427	<u>740</u>
	Soil improvement (ha.)	106	207	427	<u>740</u>
	Total irrigated area (ha.)	310	417	1,130	<u>1,857</u>
Agriculture	Seed fund (funds)	7	8	6	<u>21</u>
	Value-adding fund (funds)	6	5	5	<u>16</u>
Livestock	Livestock and veterinary fund (funds)	7	6	5	<u>18</u>

2013



“Cultivate Land”

Through Reforestation Project

Forest	Sapling production (million saplings)	0.86	1.31	7.35	<u>9.52</u>
	Human capacity building (pax.)	-	-	-	<u>1,000</u>
	Conservation weir (weirs)	-	-	3,500	<u>3,500</u>
	Restored Economic Forest (ha.)	851	465	3,698	<u>5,014</u>
	Restored Sustenance Forest (ha.)	273	550	2,579	<u>3,402</u>
	Restored Watershed Forest (ha.)	981	1,666	5,310	<u>7,957</u>
	Total Restored Forest area (ha.)	2,105	2,681	11,587	<u>16,373</u>
	Fire breakage (km.)	19	27	147	<u>193</u>
	Fire surveillance tower (towers)	9	7	26	<u>42</u>
	Forest committee (groups)	4	4	14	<u>22</u>

2017



Year of Data Shown in this Document

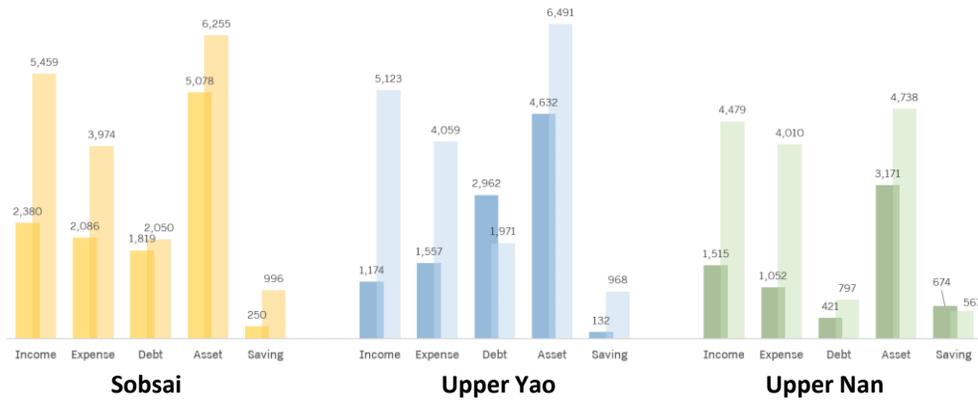
By applying Her Royal Highness Princess Srinagarindra’s approach “Cultivate Land, Cultivate People”, the Mae Fah Luang Foundation recognizes that Reforestation is not only to plant trees but also to equip the people with the tools to overcome poverty and develop livelihoods in order for them to live harmoniously with the nature.



Project Outcome

Economic Dimension

Comparison of Household Economics between 2009 and 2015 (USD per Household)



Social Dimension



The individual beneficiary has better health as a result of reduction in chemical usage, common in mono-cropping. S/he also has more alternatives in income generation for better quality of life.



The family is strengthened as a result of decreased urban migration, increased income, self-reliance, and resilience to natural disaster.



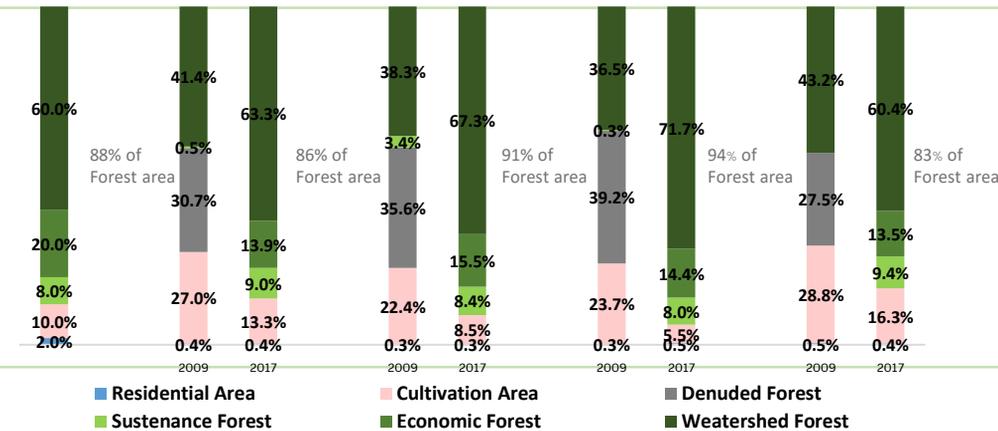
The community is strengthened as a result of engaging in development activities, and collective agreements/regulations established to maintain development efforts e.g. irrigation regulation, forest maintenance.

Environmental Dimension

Doitung Model **Total Project area** **Sobsai 5,490 ha** **Upper Yao 7,105 ha** **Upper Nan 27,405 ha**

Doitung Model
The approach to manage and balance land use of a watershed area which allows local communities to co-exist in harmony with forest in a sustainable manner.

Developed from our experience and lessons learned from 25 years of reforestation projects at Doitung (14,962 ha), Pang Mahan (2,242 ha) and Puna (5,011 ha) in Chiang Rai Province.



- Stop deforestation
- Reduce area damaged by wildfire by 99%
- Forest area increased from 41% to 86%
- Increase water retention
- Increase varieties of tree
- Restore life in the ecosystem

Impact to the World	Water retention*	Soil erosion reduction*	Carbon sequestration*
Year 2017	55 mil m ³ /year	6,300 m ³ /year	236,941 t-CO ₂ e/year
Year 2036	87 mil m ³ /year	10,133 m ³ /year	

*Evaluated with the Department of National Park's Methodology from the research "What is the value of biodiversity?"
**Evaluated with the methodology of Thailand Voluntary Emission Reduction Program