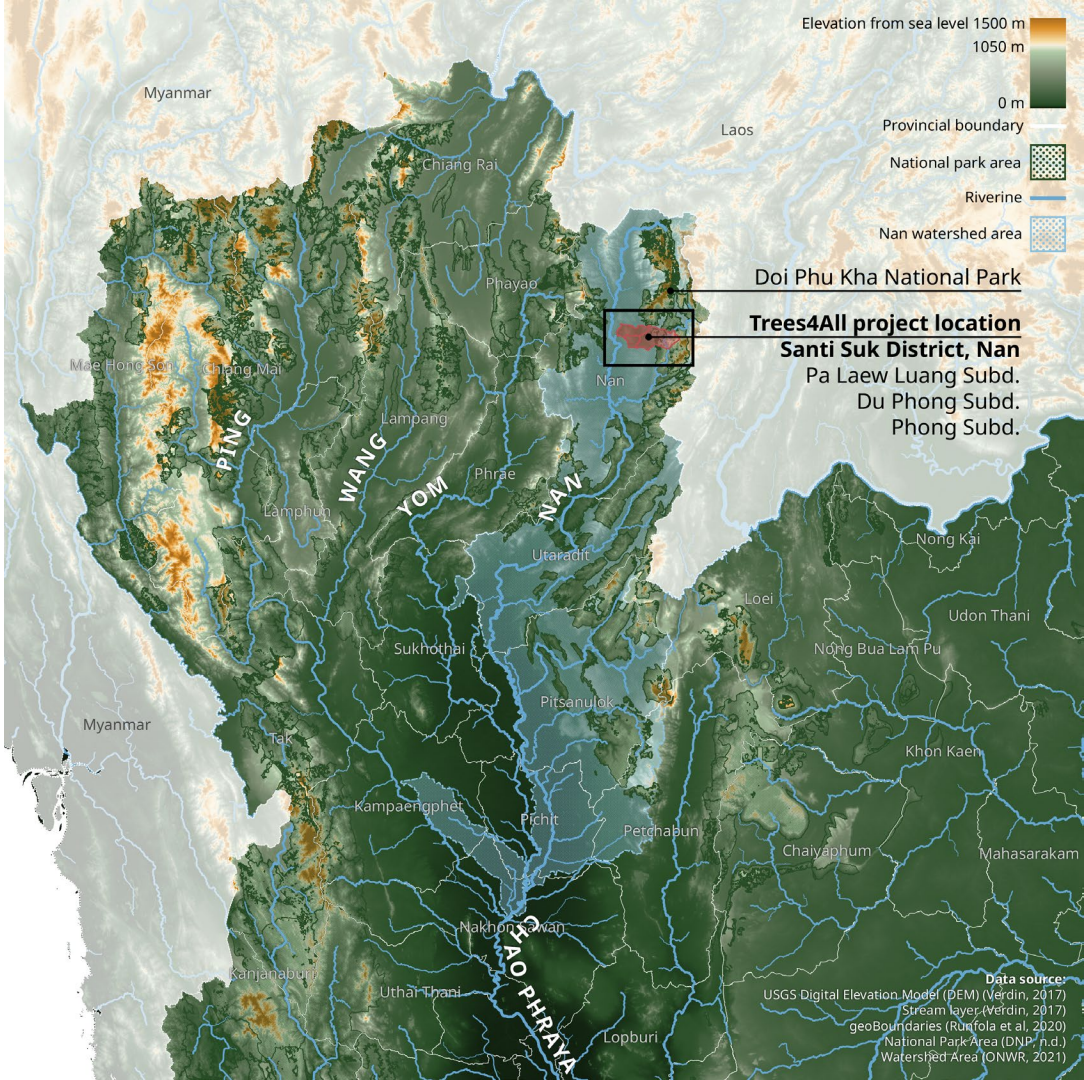

RECOFTC
Trees4All
Santi Suk District, Nan Province, Thailand
Past-Present-Future
trees4allthailand.org

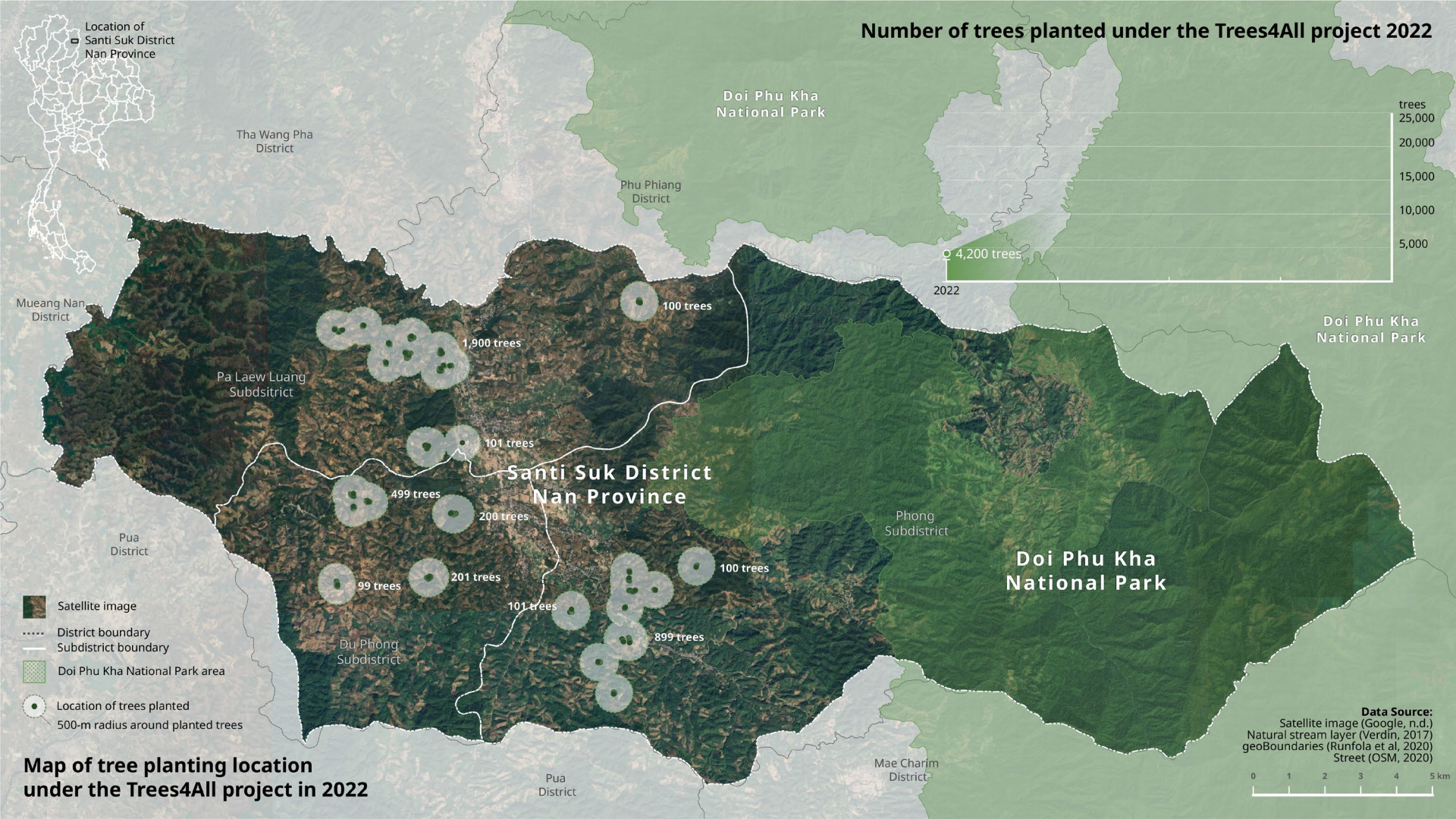
South of Doi Phu Kha National Park and at the beginnings of the Nan River basin, which flows into the Chao Phraya River, lies **Santi Suk District, Nan Province**, the site of the **Trees4All** project, initiated in 2022.

Presently, **over 23,000 trees** of more **than 30 species** have been planted by **173 participating farmers** in the project. The impacts are not limited to the number of trees but also encompass improved quality of life and improved relationship between people and forests as well.

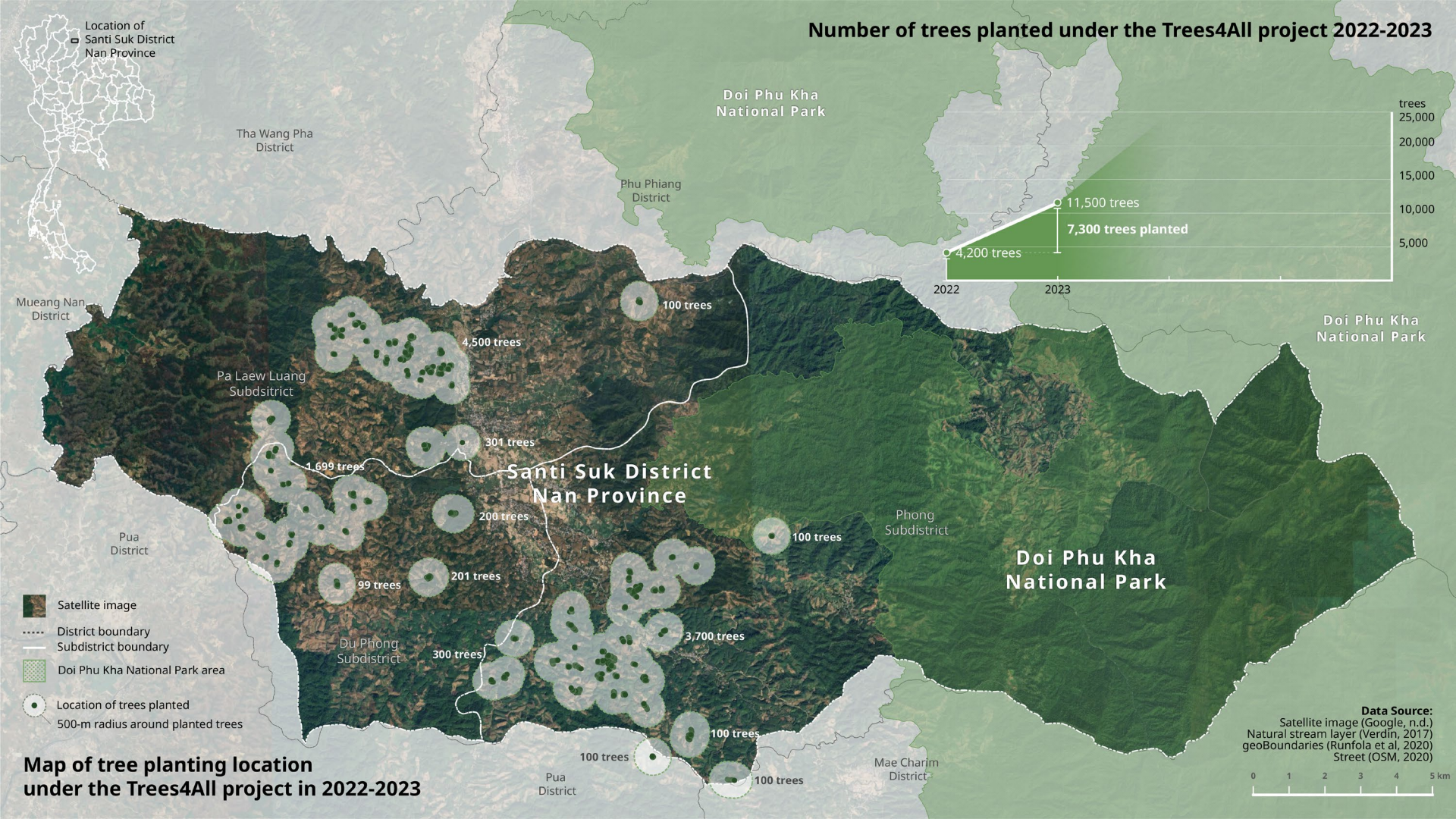
Trees4All works with farmers in forest areas under the supervision of the **National Land Policy Committee (NLPC) of the Royal Forest Department**, which allows for people who have used the forest areas before 2002 to continue their cultivation.

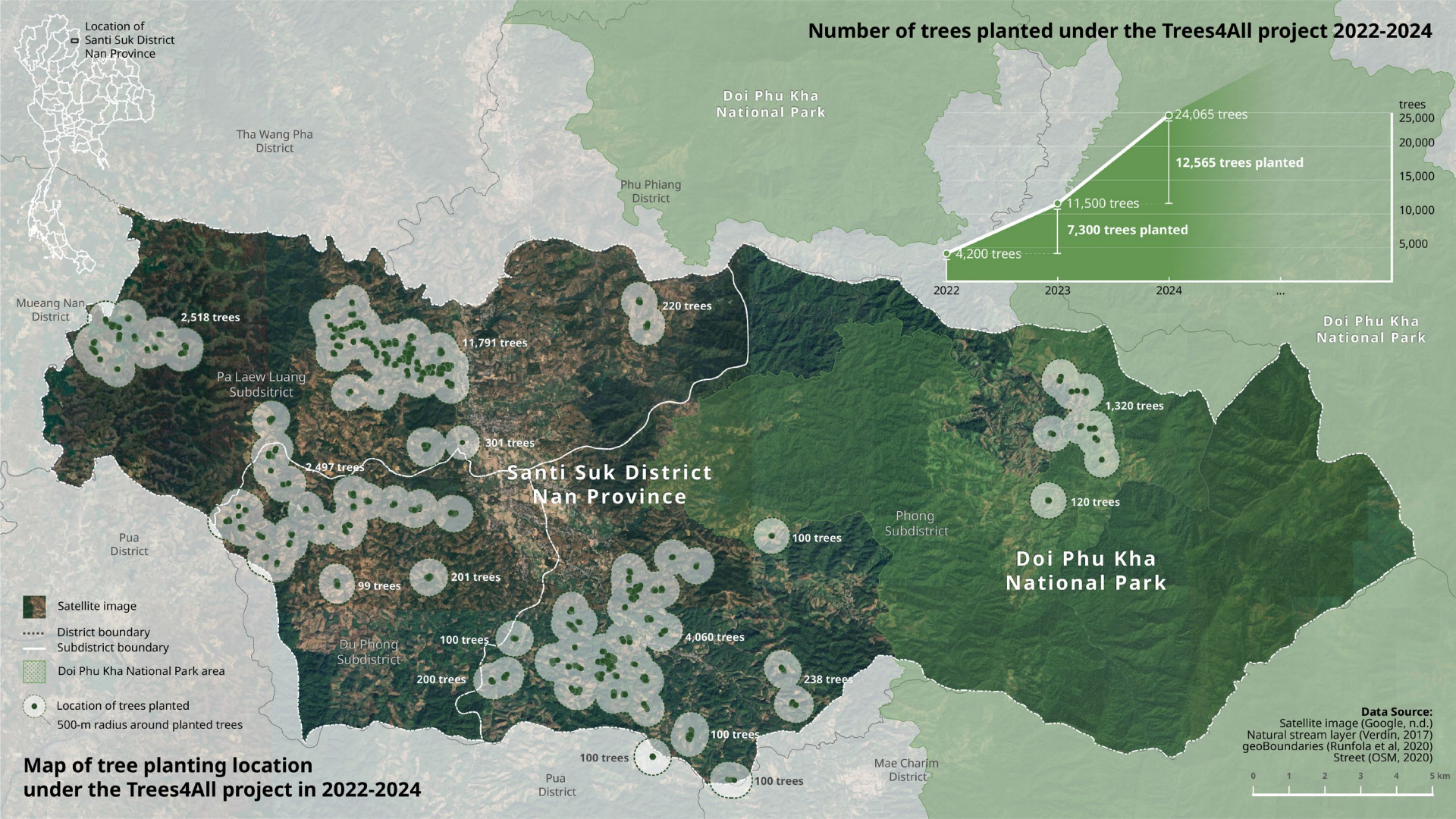
Project participants are farmers growing corn, rice, rubber, a mix of different plants, or just have vacant lands. The Trees4All project strives to **develop an ecosystem that supports both biodiversity and economic sustainability** through a 6000-THB tree care subsidy over 3 years, funded by donations.



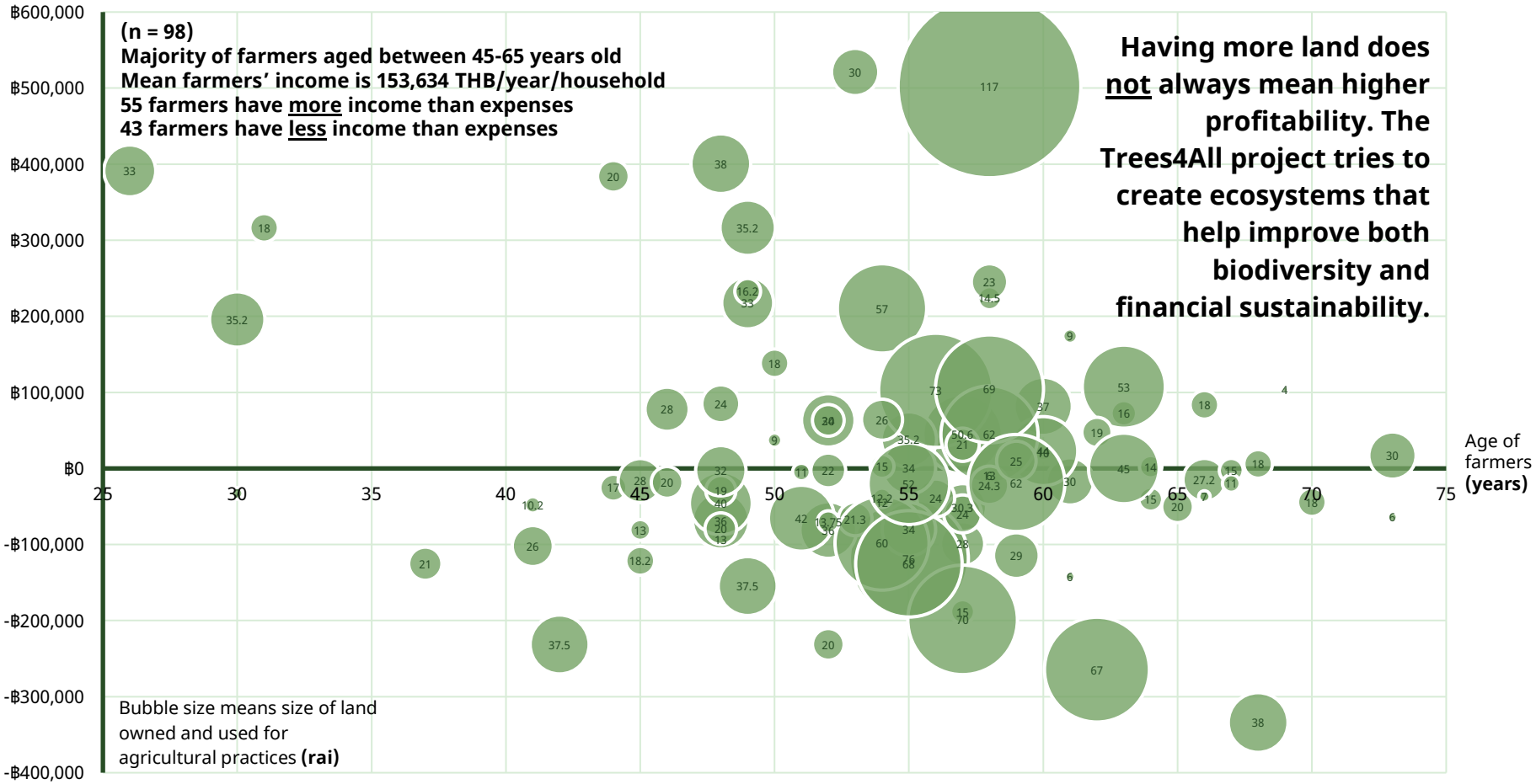


Map of tree planting location under the Trees4All project in 2022


Location of
Santi Suk District
Nan Province
Number of trees planted under the Trees4All project 2022-2023
trees
25,000
20,000
15,000
10,000
5,000
11,500 trees
7,300 trees planted
4,200 trees
2022
2023
Doi Phu Kha
National Park
Tha Wang Pha
District
Phu Phiang
District
Mueang Nan
District
Pa Laew Luang
Subdsitrict
100 trees
4,500 trees
301 trees
1,699 trees
Santi Suk District
Nan Province
200 trees
100 trees
Phong
Subdistrict
Doi Phu Kha
National Park
Pua
District
99 trees
201 trees
3,700 trees
Du Phong
Subdistrict
300 trees
100 trees
100 trees
100 trees
Mae Charim
District
Satellite image
District boundary
Subdistrict boundary
Doi Phu Kha National Park area
Location of trees planted
500-m radius around planted trees
Data Source:
Satellite image (Google, n.d.)
Natural stream layer (Verdin, 2017)
geoBoundaries (Runfola et al, 2020)
Street (OSM, 2020)
0 1 2 3 4 5 km
Map of tree planting location
under the Trees4All project in 2022-2023


Location of
Santi Suk District
Nan Province
Number of trees planted under the Trees4All project 2022-2024
trees
25,000
20,000
15,000
10,000
5,000
24,065 trees
12,565 trees planted
11,500 trees
7,300 trees planted
4,200 trees
2022
2023
2024
...
Doi Phu Kha
National Park
Tha Wang Pha
District
Phu Phiang
District
Mueang Nan
District
2,518 trees
220 trees
11,791 trees
Pa Laew Luang
Subdsitrict
301 trees
2,497 trees
Santi Suk District
Nan Province
1,320 trees
120 trees
Phong
Subdistrict
100 trees
Doi Phu Kha
National Park
Pua
District
99 trees
201 trees
100 trees
4,060 trees
Du Phong
Subdistrict
200 trees
238 trees
100 trees
100 trees
100 trees
Pua
District
Mae Charim
District
Satellite image
District boundary
Subdistrict boundary
Doi Phu Kha National Park area
Location of trees planted
500-m radius around planted trees
Data Source:
Satellite image (Google, n.d.)
Natural stream layer (Verdin, 2017)
geoBoundaries (Runfola et al, 2020)
Street (OSM, 2020)
0
1
2
3
4
5 km
Map of tree planting location
under the Trees4All project in 2022-2024

Farmers within the Trees4All project



Before restoration of corn plantations

Monoculture of corn for animal feed has been practiced for over a decade. The corn stubbles after harvest are often cleared by burning and ploughing. This results in degraded topsoil and lost of soil nutrient, which further reduce farm yields. This leads to increases in deforestation to expand crop areas and in use of chemical fertilizers. Thus, cost of production increases while selling price remains unpredictable and determined by middlemen and traders.

After restoration of corn plantations

- Additional perennials are planted on the plot to help retain the soil surface and increase soil moisture. Ground cover crops, such as mung beans and peanuts, are also rotated into the farm. Furthermore, dried and fresh compost as well as manure are also introduced.

“I hope we will have more produce, so that we can eat and sell them, increasing our income.”

K.Somboon
Owner of this corn plantation

Species planted on this plot

Gurjum 320 trees

Total 320 trees

Corn Plantation

Location of this corn plantation
Pa Laew Luang, Santi Suk, Nan

0 25 50 75 100 m

Goat husbandry

Generate income and improve soil quality

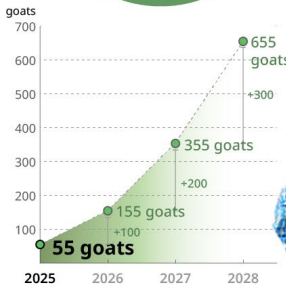
Goat farming provides additional income for farmers, enabling them to fatten and breed goats for sale. Furthermore, goat manure can be used as organic fertilizer, adding nutrients to the soil and enhancing soil quality.

Reduce the burning of agricultural waste

Goats feed on agricultural waste such as corn and rice stubbles, reducing burning and pollution.

Plants that help diversify income and increase biodiversity

Farmers are encouraged to grow mixed crops, including perennials, economic trees, and goat feed crops such as beans and Napier grass. This allows them to produce their own goat feed or sell it within six months, which allows farmers to earn more than one income per year and increases biodiversity.



Before restoration of rice farms

After harvesting rice, agricultural waste is often left behind. Farmers often burn them to manage waste. Additionally, monoculture farming on steep slopes causes frequent soil erosion, resulting in shallow and hard soil that continues to deteriorate.

After restoration of rice farms

Plant additional trees in the plot to increase diversity. The roots of the trees can help reduce erosion. Fallen leaves also become natural fertilizer, helping to restore soil fertility.

Effective water management

Designating parts of the land to create water reserves for agriculture in the dry season. This will allow for additional fish aquaculture for consumption.

Plant more fruit trees to increase income

“We, farmers in the upstream of the Nan River basin, are important agents of reforestation and rebuilding of ecosystems and environments. We can do so by maintaining the forest with land, the land with water. We plant native trees. Ultimately, farmers will benefit from the trees as well as earn income from them. **We intend to plant trees as a legacy for our children and grandchildren. A good reforestation is so that people can live a good life and earn income too."**

K.Wararat
Owner of this rice farm

Species planted on this plot

Gurjum	403 trees
Teak	32 trees
Siamese Rosewood	31 trees
Sappanwood	10 trees
Indian Gooseberry	8 trees
Black Rosewood	7 trees
Pink Cassia	7 trees
White meranti	3 trees
Burmese Rosewood	3 trees
Iron Wood	3 trees
Red Cotton Tree	1 tree
Total	**508 trees**

Rice Farm

Rice Farm

350

Location of this vacant plot
Pa Laew Luang, Santi Suk, Nan

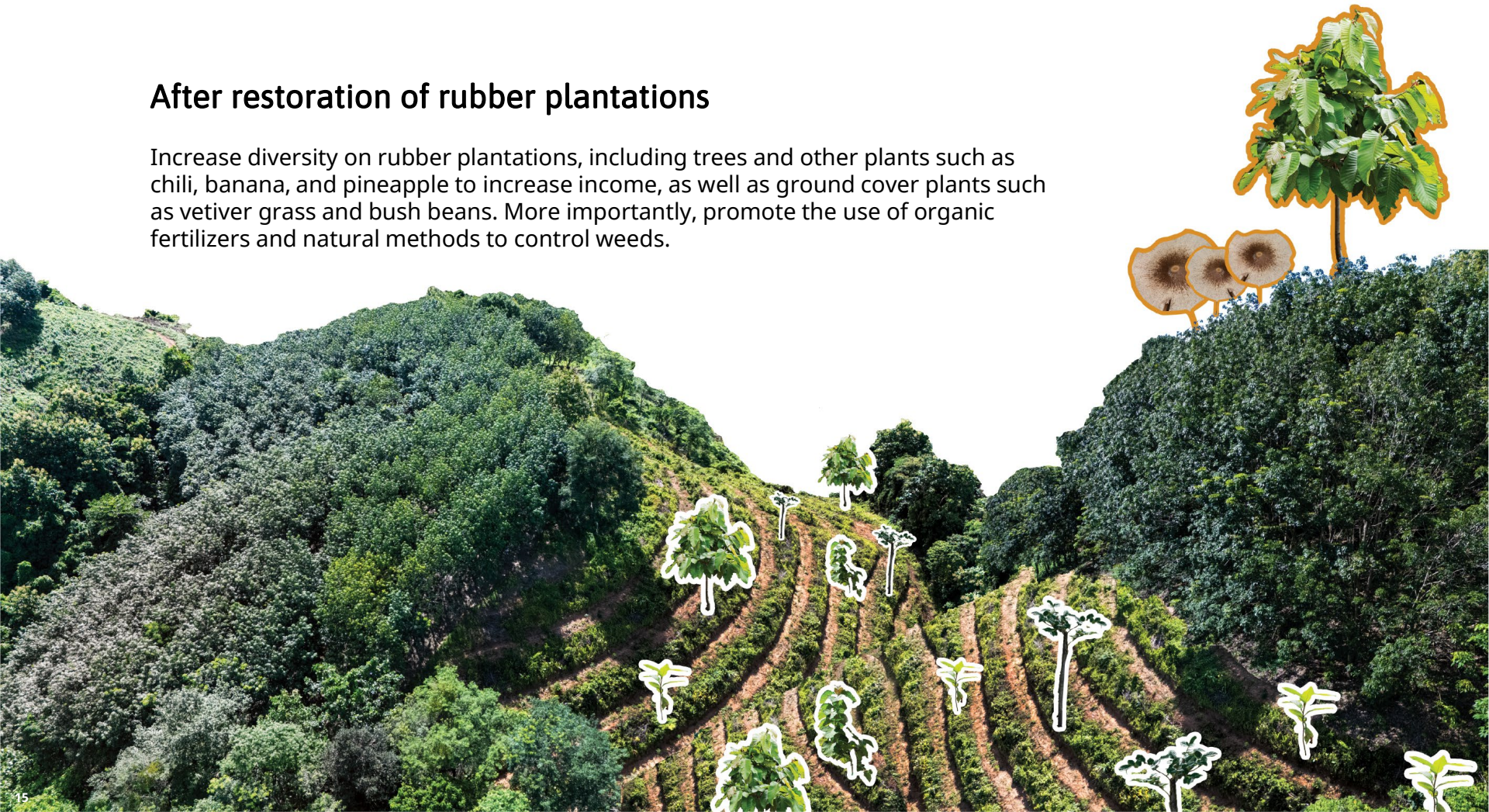
0 25 50 75 100 m

Before restoration of rubber plantations

Rubber is the main economic crop in the area. Demands to expand and protect rubber plantations lead to logging of native plants and usage of chemicals. We must promote diversification of trees to help improve sustainability in the plantations.

After restoration of rubber plantations

Increase diversity on rubber plantations, including trees and other plants such as chili, banana, and pineapple to increase income, as well as ground cover plants such as vetiver grass and bush beans. More importantly, promote the use of organic fertilizers and natural methods to control weeds.



“Since joining Trees4All, I have learned a lot. I’m also happy to see more greenery from other types of plants.”

K.Sakulsak
Owner of this rubber plantation

Species planted on this plot

Gurjum	64 trees
Burmese Rosewood	43 trees
Iron Wood	12 trees
Jambolan Plum	1 tree
Total	**120 trees**

Rubber Plantation

Location of this rubber plantation
Pong,
Santi Suk, Nan

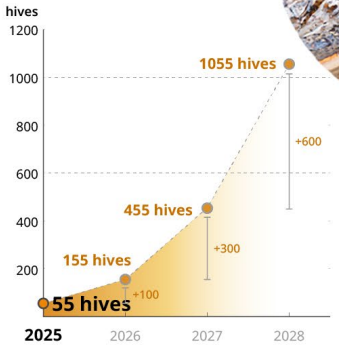
Before restoration of integrated farms

The integrated farmlands are already filled with a diversity of plants. However, if the proportion of commercial crops (e.g., corn or rubber) grows larger, the soil can quickly lose its nutritional balance and reduce the biodiversity on the land.

After restoration of integrated farms

Greater variety of crops can be planted, including **perennials** that hold the soil together and provide shade (e.g., rubber trees and padauk); **ground cover plants** that prevent soil erosion (e.g., vetiver grass); and **local herbs** that require little water and are easy to care for (e.g., galangal and lemongrass). **Fast-growing plants** can also quickly restore soil and retain water (e.g., bananas and bamboo). **Short-term cash crops** can be harvested quickly for consumption or income generation (e.g., pineapple and eggplant). **Fruit trees** can yield fruit at various times of the year provide a continuous income and serve as a food source for bees (e.g., lychees, rambutans, and longkong).

Keeping stingless bees



Stingless bees generate income from its products

Stingless bees create more income for farmers through its medicinal honey or through added-value transformation, such as propolis, soap, and lotion. Additional income can also come by expanding and reselling hives.

Stingless bees as producers

Stingless bees are pollinators, which helps increase crop yields, especially for fruit trees. Farmers are also motivated to reduce their use of chemicals because bees cannot survive in chemical-contaminated areas, thereby protecting both the environment and farmers' health.

Integrative land management to increase productivity holistically

Farmers are equipped with knowledge on stingless bees, including hive making and expansion to increase the population and yields. This includes care, such as pest control and water management. Furthermore, farmers are encouraged to grow food (e.g., fruit trees and flowers) for the stingless bees, which further increase biodiversity.

“The soil has more moisture, and the stingless bees are helping with pollination, so the trees bear more fruits.”

K.Krirkkrai
Owner of this integrated farm

Integrated Farm

Species planted on this plot

Gurjum	54 trees
Siamese Rosewood	42 trees
Burmese Rosewood	17 trees
Black Rosewood	7 trees
Total 120 trees	

Location of this integrated farm
Pa Laew Luang, Santi Suk, Nan

0 25 50 75 100 m

Before restoration of vacant plots

Vacant plots include those with steep slopes or in remote places, making them difficult to maintain consistently. Some plots are abandoned due to severe soil degradation resulted from intensive monocultures such as corn or rubber plantations.

After restoration of vacant plots

More trees are planted. The Trees4All trees are native to the local environments, which makes the restoration effort more effective and resilient.

“I’m proud to be a person who helps care for the upstream environment. I hope that this will help reduce flooding in the future.”

K.Pratana
Owner of this vacant plot

Species planted on this plot

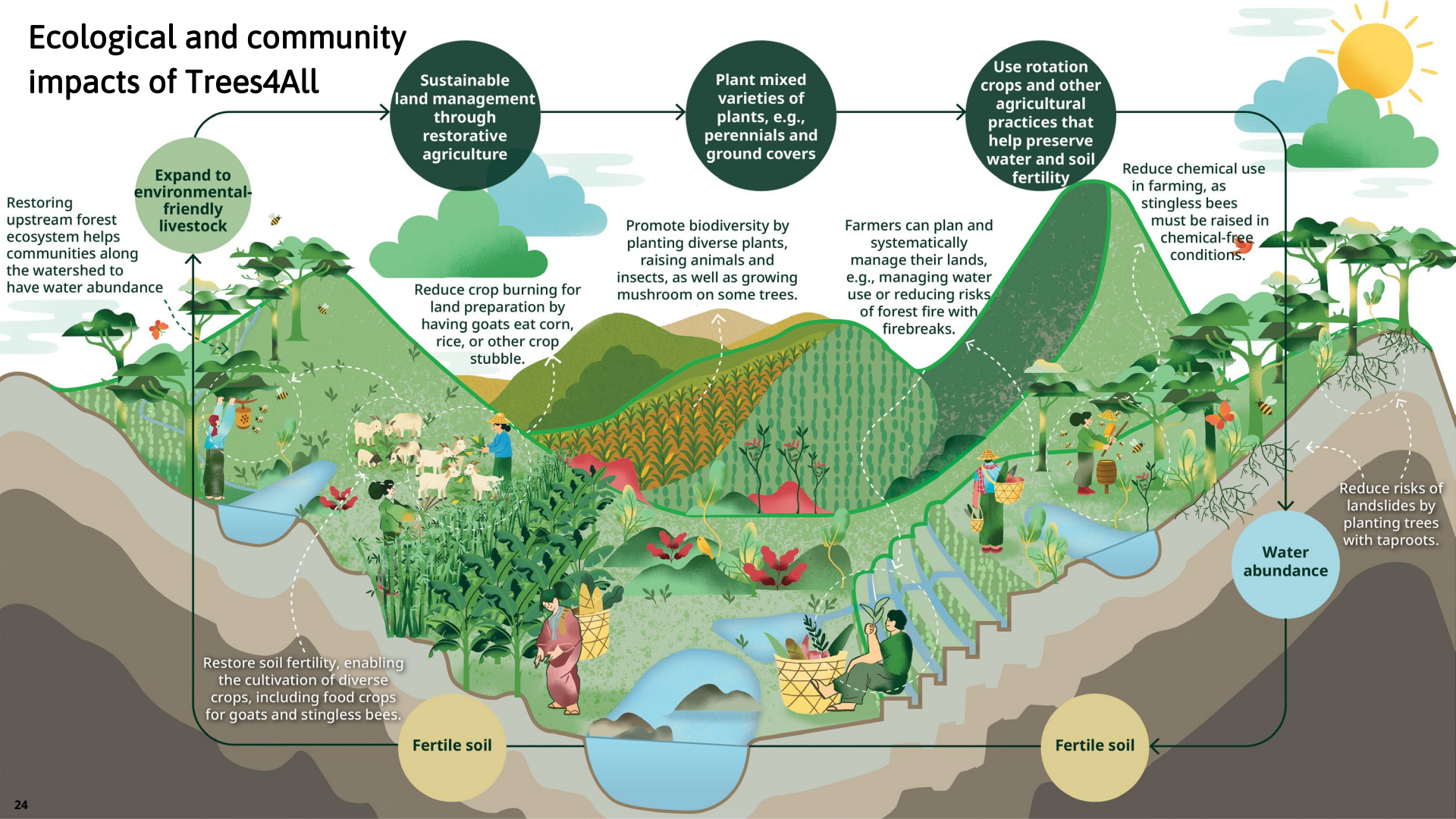
Gurjum	155 trees
Teak	41 trees
Wampee	1 tree
Burmese Rosewood	1 tree
Trumpet	1 tree
Cassod	1 tree

Total 200 trees

Vacant Plot

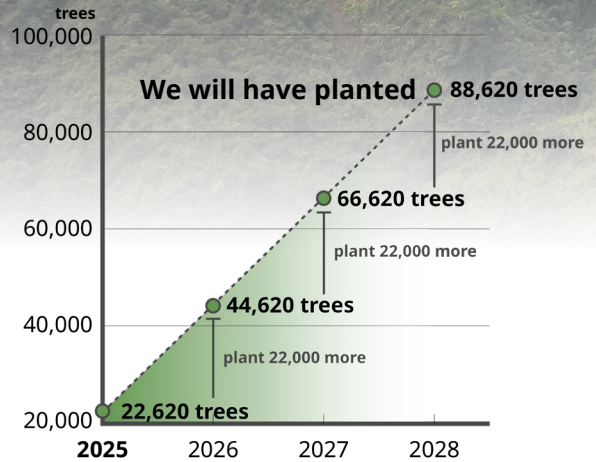
Location of this vacant plot
Pa Laew Luang, Santi Suk, Nan

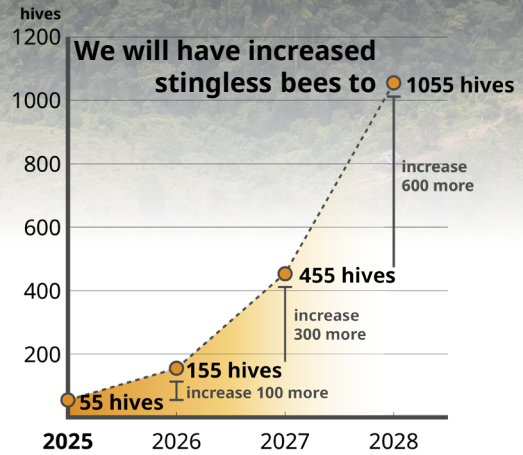
Ecological and community impacts of Trees4All

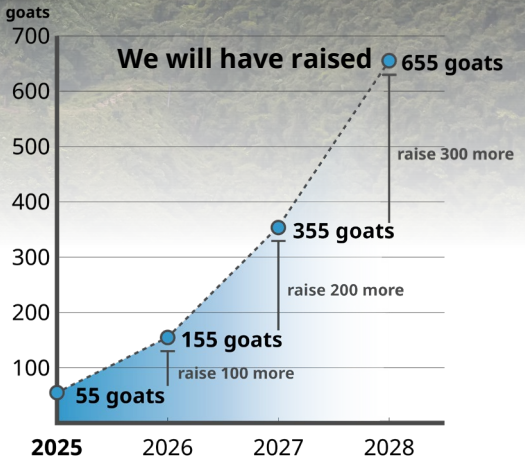


The Future of Trees4All

Our goal is...
to have a 2,860,000 Baht/year increase in donations so that we can support 100 more farmers annually, cumulating to a total of 491 farmers by 2028.







Contributors

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Trees4All project | trees4allthailand.org
Trees4All community enterprise – Rak Santi Suk | Facebook

Data analyst and designer
NACSA – Nature and City Scape Analytics | www.nacsanalytics.com
Wan Chantavilasvong
Pitchapa Jular

Project period: July-September 2025

Data reference

Data	Downloadable Link	Citation
Digital Elevation Model (DEM)	https://www.sciencebase.gov/catalog/item/591f92f9e4b0ac16dbdde23e	**Verdin, K.L. (2017).** *Hydrologic Derivatives for Modelling and Applications (HDMA)* database: U.S. Geological Survey data release. DOI: https://doi.org/10.5066/F7S180ZP
Flow accumulation	https://www.sciencebase.gov/catalog/item/591f9304e4b0ac16dbdde242	
Stream layer	https://www.sciencebase.gov/catalog/item/592866bae4b016f7a93f8cb2	
geoBoundaries	https://www.geoboundaries.org/countryDownloads.html	**Runfola, D. et al. (2020).** geoBoundaries: A global database of political administrative boundaries. *PLoS ONE 15*(4): e0231866. DOI: https://doi.org/10.1371/journal.pone.0231866
National park area boundary	http://www2.dnp.go.th/gis/Blog%20Posts/ดาวนโหลด-ตาราง-และ-shp.html	**Department of National Parks, Wildlife and Plant Conservation. (n.d.).** Protected areas. Database: GIS Division, Protected Area Rehabilitation and Development Office, DNP. URL: http://www2.dnp.go.th/gis/Blog%20Posts/ดาวนโหลด-ตาราง-และ-shp.html
Watershed boundary	http://www.onwr.go.th/?page_id=9893 https://webgis.dwr.go.th/downloads	**Office of the National Water Resources (2021).** Royal Decree on Watershed Designation 2021. Database: ONWR. URL: http://www.onwr.go.th/?page_id=9893