



# Preparing for Planting

## Why do we need to plant trees?

Since 1961 Thailand has lost nearly two thirds of its forests, due mostly to clearing for timber harvest and agriculture.

Tropical and sub-tropical forests cover only 16.8% of Earth's land area, yet they are home to more than half the planet's plant and animal species. Forest destruction is causing extinction of many species.

Forests provide a wealth of natural products, such as medicinal and edible plants, honey, bamboo, mushrooms. Forests also provide vital ecological services, such as producing leaf litter that stabilises soil and stores water, preventing floods and landslides, and providing water flow in the dry season. Crop pollinators and animals that control pests live in the forest too.

By carefully selecting planting sites, forest restoration may provide benefits such as connecting habitat areas by wildlife corridors, protecting watercourses by planting around springs and along streams, and reducing the risk of soil erosion and landslides.

In large deforested areas a number of factors limit natural forest regeneration, such as lacking seed source and animal dispersers, unsuitable soil and microclimatic conditions for germination and early seedling growth, dominance by weeds, fire, domestic animal browsing, and seed predation.



## What do we plant?

The Forest Restoration Research Unit at Chiang Mai University in Northern Thailand is helping to plant forests by finding out which "Framework Species" trees grow fast, have wide canopies (to shade out weeds) and produce lots of fruit (to attract animals).

Framework trees are indigenous (locally native), non-domesticated, forest tree species which, when planted on deforested land, help to re-establish the natural mechanisms of forest regeneration and accelerate biodiversity recovery. The species list used reflects the forest type that would have naturally occurred on the site.

20-30 species are planted on a site, and then maintained (with weed control and fertiliser application) for 2-3 years until they are established. Fires must be prevented.

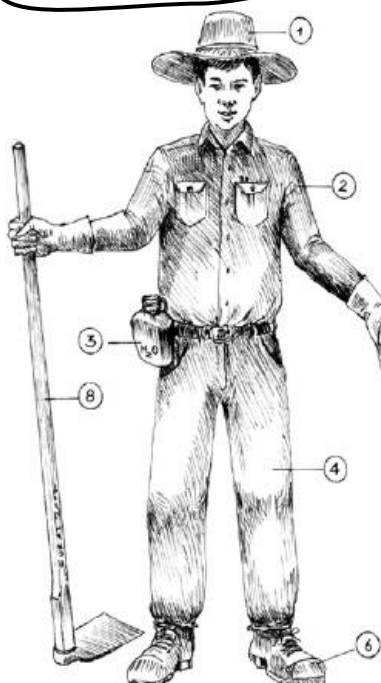
By planting these selected framework species, natural regeneration processes should enable further forest recovery.

## Why get school students involved?

**This is your opportunity to get out in nature and directly help us to improve the environment!**

**You will learn how to plant trees and take care of them so that they can live for more than a century!**

**So get your hands dirty and come to learn more about forest restoration with us**



*The perfectly prepared planter, with hat (1) to protect him from the sun; long-sleeved shirt (2); plenty of water (3); long trousers (4); a box cutter (5) to slash open plastic bags; strong boots (6) to protect his feet; gloves (7) and a hoe (8) to dig the planting holes.*

## Other equipment needed for tree planting:

- Fertiliser, bucket and pre-measured cups to deliver correct dose
- Baskets to distribute saplings
- Cardboard mulch mats (for lowland sites)
- Bamboo poles
- Buckets or hose and available water for watering plants
- First aid kit and sunscreen





# How to Plant

## When you arrive at the site:

- Make sure you listen closely to the planting coordinator. They will demonstrate the planting activities and will tell you about the site safety issues you will need to be careful about.
- The site should already be prepared for planting, by slashing and herbicide application. Equipment should be set out, and planting holes may already be prepared, so be careful where you walk!
- The site should be set out with bamboo stakes at 1.8m spacings. Plants will need to be planted at each of the stakes.

### 1



Use the hoe to dig holes twice the size of the containers, and drag away dead weeds.

### 2



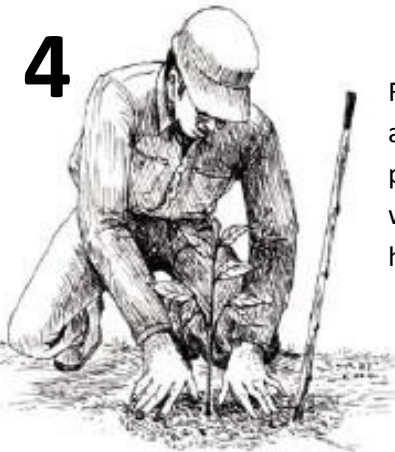
Remove saplings from containers keeping the root ball intact.

### 3



Place sapling upright in hole and fill in with loose soil, making sure the root collar is at the soil surface. Make sure the monitoring label is visible.

### 4



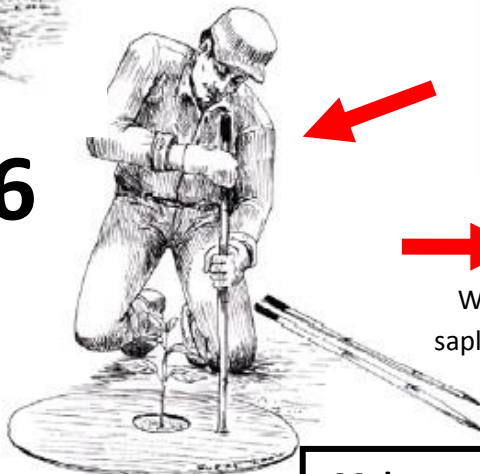
Firm down soil around the planted sapling with your hands.

### 5



Spread 50-100g of fertiliser in a ring 10-20cm from the stem

### 6



Place a cardboard mulch mat, 40-50cm in diameter around each planted sapling. Anchor it in place with the bamboo stake and pile up dead weeds onto the mat.

### 7



Water each planted sapling carefully with at least 2-3 litres.

**Make sure you help to clean up too!**

