FORRU-CMU EDUCATIONAL SERVICES IN CHIANG MAI

FORRU

INTRODUCTION

Chiang Mai University's Forest Restoration Research Unit (FORRU – CMU) is a small team of ecologists and research students in the university's Science Faculty. We carry out research to develop efficient methods to restore tropical forest ecosystems for biodiversity conservation, environmental protection and carbon storage.

GOALS

Our education and outreach program teaches science based techniques to those interested in:

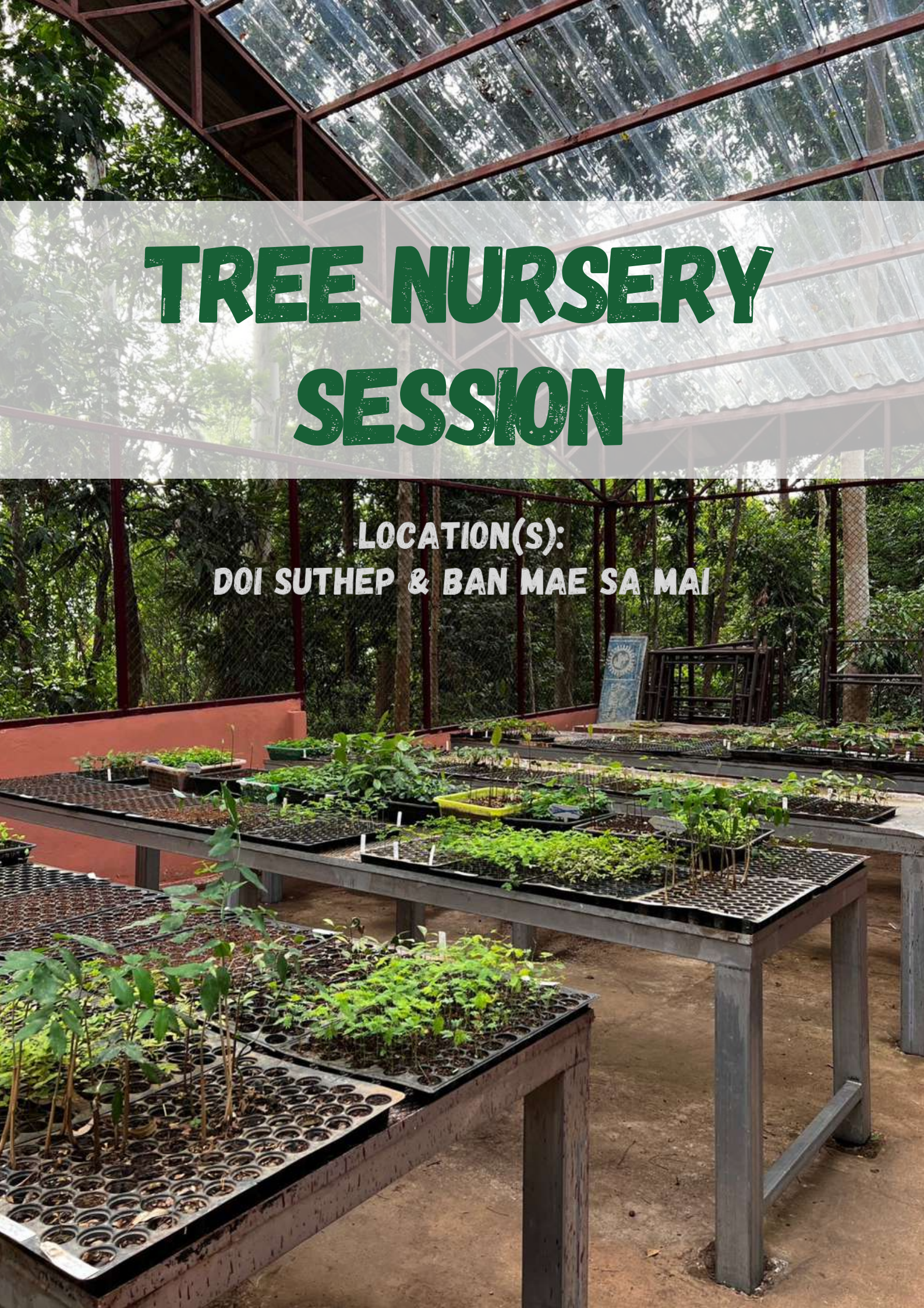
- Restoring deforested and degraded sites,
- Promoting environmental conservation,
- Carbon sequestration.

SERVICES

Our education staff provide a wide variety of activities, ranging from interactive group-based activities within the classroom (i.e. principles of restoration) to outdoor hands-on activities within our tree nurseries, field plot systems and natural forests.

PROGRAMS

Programs are tailored to primary, secondary and post-secondary students, government officials, NGO's, and private sector employees. Events are either run as full-day or half-day programs, depending on the client's request.



TREE NURSERY SESSION

LOCATION(S):
DOI SUTHEP & BAN MAE SA MAI

MODULE ONE

ESTIMATED TIME:

30 MIN

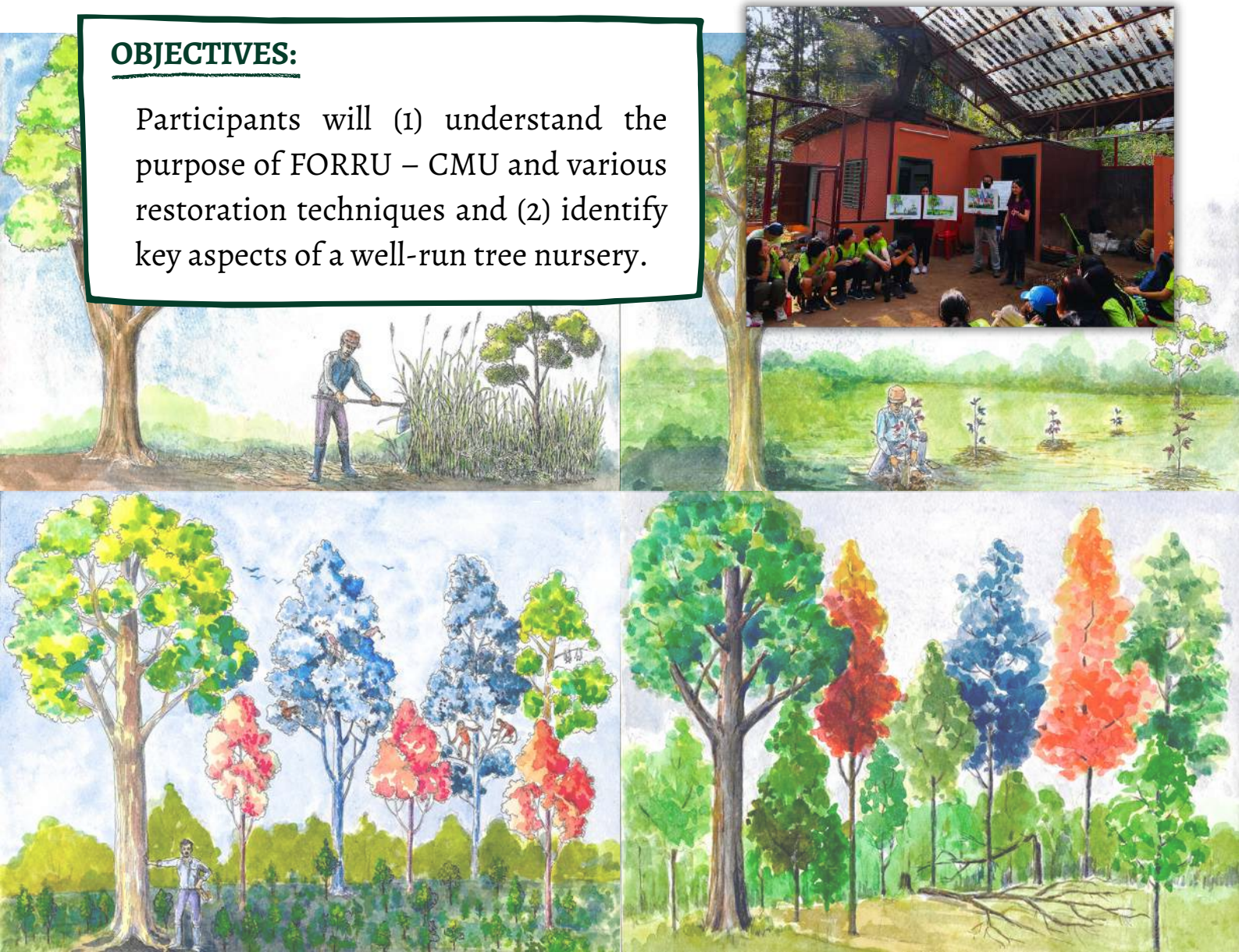
INTRODUCTION TO FORRU & FRAMEWORK TREE SPECIES METHOD

DESCRIPTION:

Participants will hear a brief introduction of FORRU - CMU's mission and the essential features of a well-run native tree nursery. They will also learn about restoration techniques which enhance both natural forest regeneration and seed dispersal. Both techniques accelerate biodiversity recovery in deforested and degraded sites.

OBJECTIVES:

Participants will (1) understand the purpose of FORRU – CMU and various restoration techniques and (2) identify key aspects of a well-run tree nursery.



MODULE TWO

ESTIMATED TIME:

30 MIN - 1 HR

SEEDS (EXTRACTION, TREATMENTS, SOWING AND GERMINATION)

DESCRIPTION:

Participants will learn about different fruit and seed structures and manipulate native tree species seeds using a process called seed scarification and extraction. Once manipulated, they will sow seeds into germination trays filled with fertile soil.

OBJECTIVES:

Participants will (1) identify the different structures of fruit and seeds (2) understand the purpose of treatments and (3) demonstrate how to sow seeds into germination trays.

MODULE THREE

ESTIMATED TIME:

30 MIN – 1 HR

SEEDLINGS (POTTING AND CARING)

DESCRIPTION:

Participants will select vigorous seedlings from germination trays and transfer them to individual seedling bags. They will also care for nursery seedlings by weeding, watering, applying fertilizer, pruning, and implementing weed and/or pest control.

OBJECTIVES:

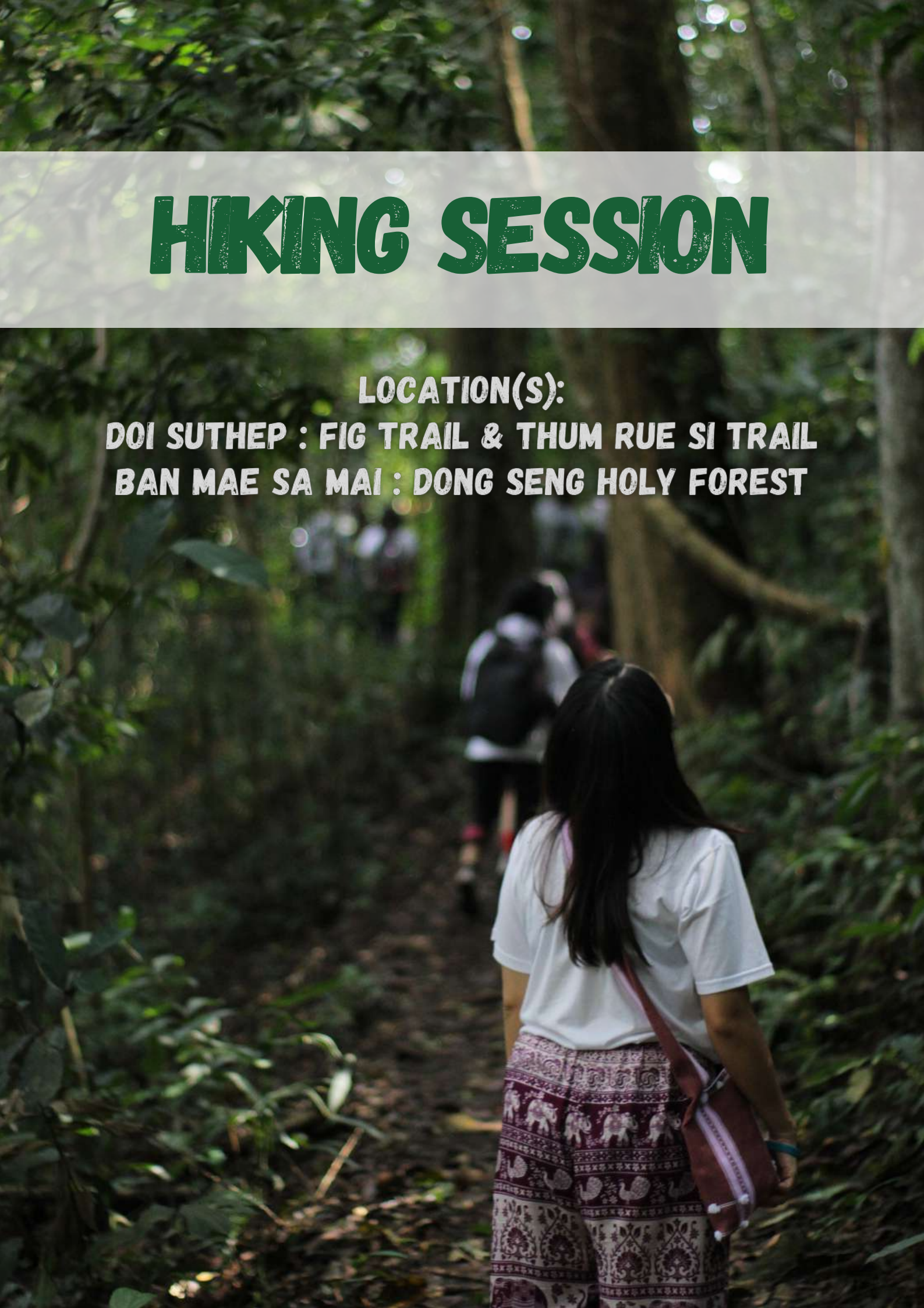
At the end of this module, participants will (1) understand, (2) identify and (3) demonstrate methods to care for seedlings within a tree nursery.

HIKING SESSION

LOCATION(S):

DOI SUTHEP : FIG TRAIL & THUM RUE SI TRAIL

BAN MAE SA MAI : DONG SENG HOLY FOREST



MODULE FOUR

ESTIMATED TIME:

1 ½ - 2 HR

***depending on the trail*

NATURE TRAILS

DESCRIPTION:

Participants will learn to recognize local plant species and existing ecosystem processes while trekking through natural forest ecosystem.

OBJECTIVES:

Participants will (1) increase their understanding of forest ecology and (2) relationships between humans and forest.

MODULE FIVE

ESTIMATED TIME:

30 MIN - 1 HR

PHENOLOGY & SEED COLLECTION

DESCRIPTION:

Participants will learn about a tree's structure by its leaves, fruit and flower and how it relates to a tropical forest and collect seeds when fruits are fully ripe (changing color, starting to split open)

OBJECTIVES:

Participants will (1) understand plant's life cycle and (2) identify tree species by its fruit and seeds

FOREST RESTORATION PLOTS SESSION

MODULE FIVE

ESTIMATED TIME:

30 MIN - 1 HR

FOREST PLOT VISITS

DESCRIPTION:

Participants will trek to FORRU - CMU's experimental plot and survey potential planting sites. They will also observe different levels of forest recovery and discuss key concepts of forest landscape restoration. The concept integrates forestry into multifunctional landscapes and community forest use.

OBJECTIVES:

Participants will (1) observe a results of establishing restoration plot and (2) understand the application of forest landscape restoration techniques.

MODULE SIX

ESTIMATED TIME:

1 HR – 2 HR

TREE MAINTENANCE
FOREST RESTORATION PLOTS

DESCRIPTION:

Participants will weed and apply fertilizer to increase tree survival and growth rate. It enables the trees to grow above the weeds rapidly and shade them out, thus reducing weeding costs.

OBJECTIVES:

Participants will (1) understand the importance of caring for planted trees and (2) demonstrate their understanding to recently planted trees.

EXAMPLE PROGRAMS

FEEL FREE TO SELECT A MODULE

Duration: ***Half Day***

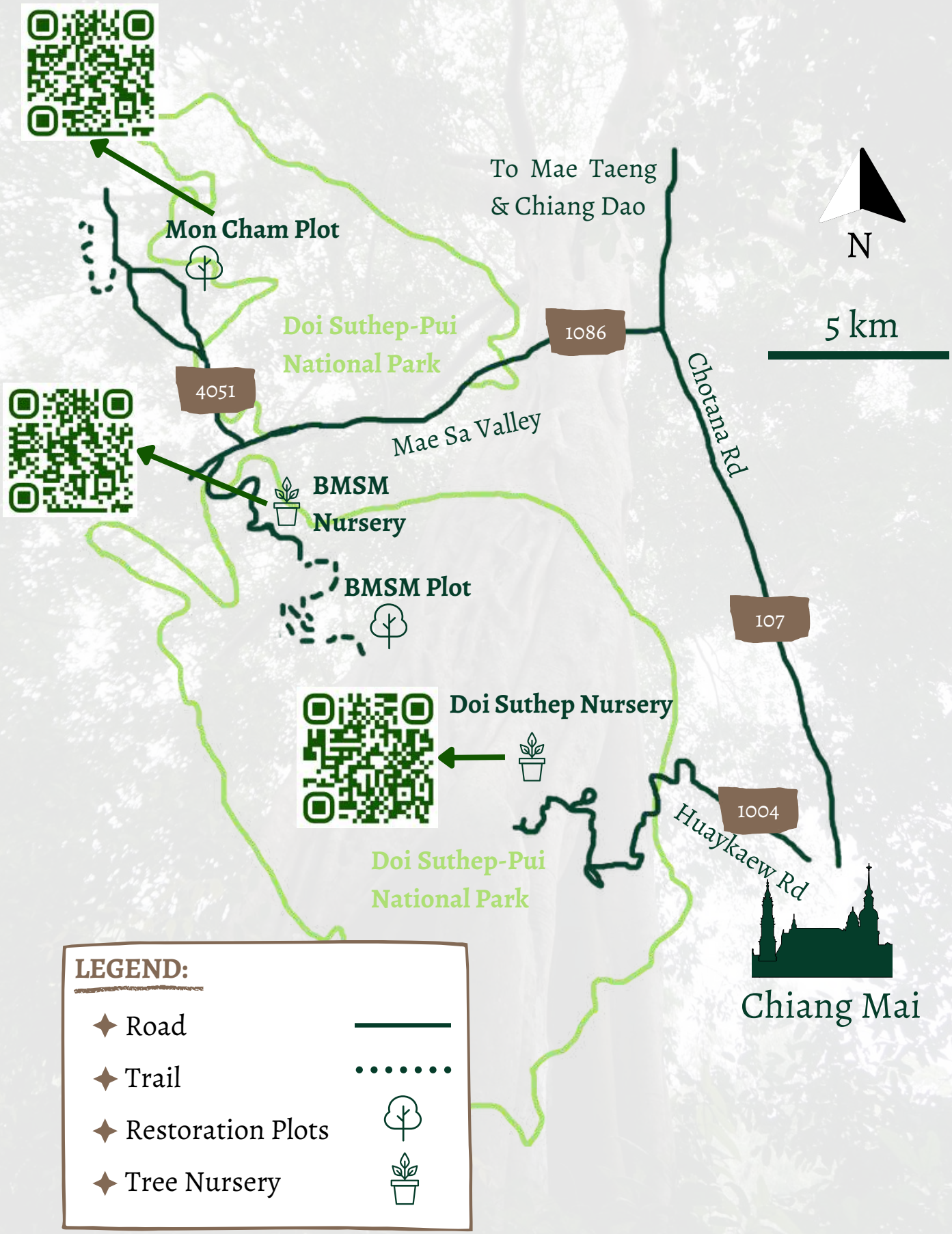
TIME:	ACTIVITIES:
Morning (9.00-12.00) or Afternoon (13.00-16.00)	✦ Introduction to FORRU & Framework Tree Species Method ✦ Seeds (Sowing and Germination) ✦ Seedlings (Potting) Nature trail: Fig trail

Duration: ***Full Day***

TIME:	ACTIVITIES:
Morning (9.30-12.00)	✦ Introduction to FORRU & Framework Tree Species Method ✦ Nature trail: Fig trail or Thum Rue Si trail
Afternoon (13.00-15.30)	✦ Seeds (Extraction, Treatments, Sowing and Germination) ✦ Seedlings (Potting and Caring)

MAP

FORRU'S EDUCATIONAL VENUES



COST

Charges include event operating costs **(i.e. FORRU staff time, transport for FORRU staff, snacks/drinks for morning and/or afternoon breaks, materials and equipment)** and a donation per student, towards FORRU's education fund. This fund enables FORRU to provide free education/outreach activities to Thai and hill tribe community schools, living in degraded forest areas.

Not Included: Visitors' transportation to the event location and lunch.

The cost (THB)/student depends on group size, according to the table below:

GROUP SIZE:	HALF DAY:	FULL DAY:
10-15	690	900
16-20	520	730
21-25	450	660
26-30	470	680
31-35	440	650