

PHASE 2 OF
A CAPACITY-BUILDING CURRICULUM ON FOREST MANAGEMENT AND RESTORATION FOR KAWTHOOLEI FORESTRY DEPARTMENT (KFD) STAFF

Project Title:	A Capacity-Building Curriculum on Forest Management and Restoration for Kawthoolei Forestry Department (KFD) Staff – PHASE 11
Project Duration:	1/6/2022 – 31/8/2023
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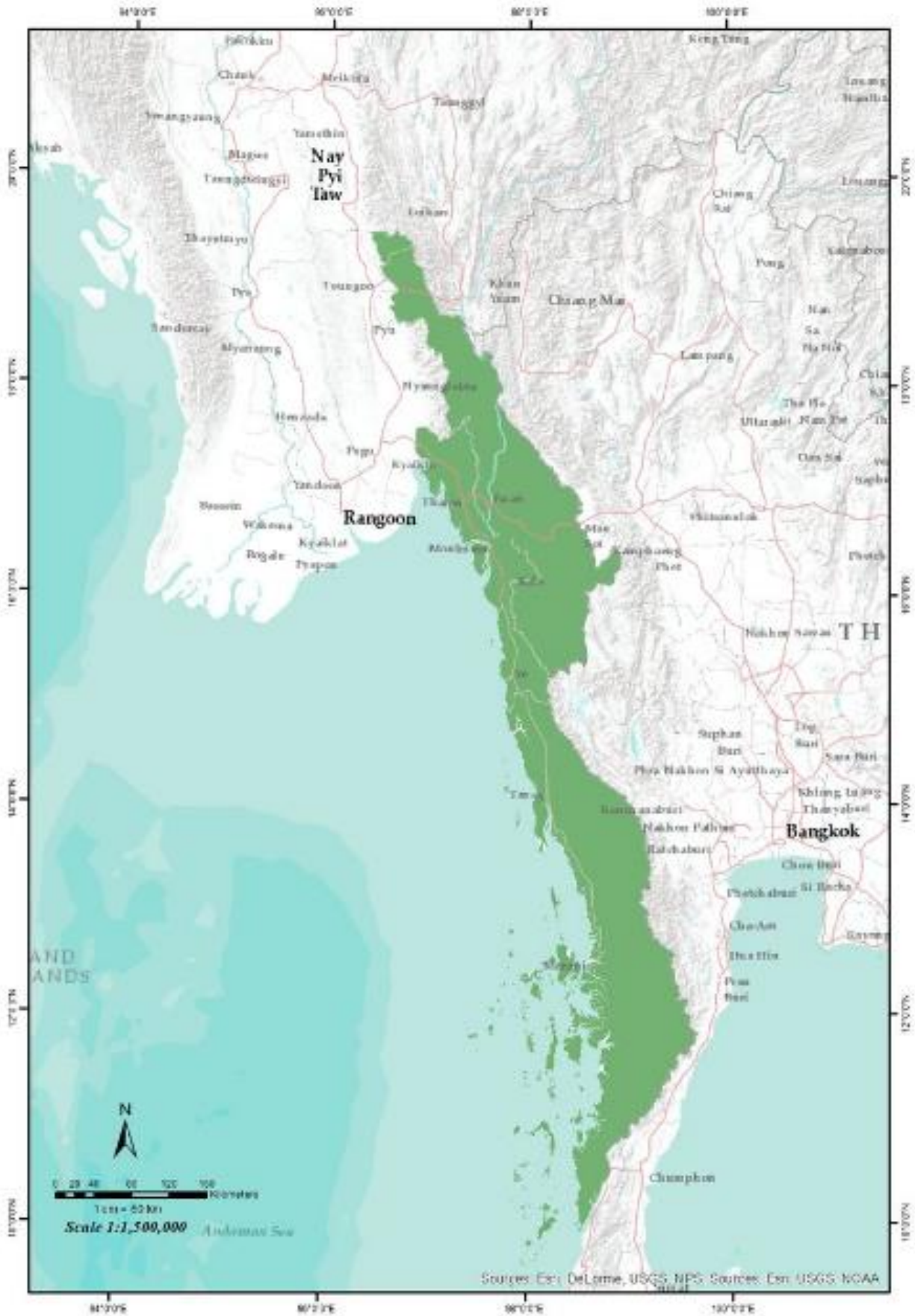
Background and rationale

This project addressed the need for capacity building, to improve management and restoration of forest ecosystems and resources, in the region currently controlled by the Karen National Union, in eastern Myanmar, known locally as Kawthoolei. It fulfilled one of the goals of the Kawthoolei Forestry Department’s [\(KFD\) forest policy](#) “...the Karen Forestry Department shall be responsible for building capacity among its staff”. It also supported other KFD forest policy goals to i) improve local livelihoods and ii) human security, iii) conserve biodiversity, iv) promote ecosystem services, v) encourage sustainable development vi) empower local participation in decision making and vii) promote public awareness of environmental issues in forest areas.

After Burma gained independence from Britain (1948), the Karen Agriculture and Forestry Department was created (1949), to manage and administer forest land across 7 administrative areas, controlled by the KNU, as a governing entity. In 1980, agriculture and forestry were assigned to separate departments and the KFD was founded to manage forest resources. The department operates at 3 administrative levels: central, district and township. The central level, comprises 5 units focused on: i) awareness, ii) survey, iii) protection & demarcation, iv) restoration and v) projects. At district and township levels, there are 5 units namely: i) awareness, ii) tax & revenue, iii) protection & demarcation, iv) restoration and v) project.

One of the major problems facing KFD staff, has been lack of access to forestry education since, before the Nationwide Ceasefire Agreement (NCA) of 2015, many of them were involved in defending Karen lands against the Myanmar armed forces. Following the implementation of the NCA, KFD staff have experienced difficulty in carrying out their duties in line with the KFD policies outlined above, due to lack of skills, knowledge and experience.

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Recognizing the need for easy access to forestry education, the KFD proposes to establish a formal forestry school, to educate and build capacity of its existing staff, as well as the younger generation, who have a passion and commitment to contribute towards forest restoration and wildlife conservation across Kawthoolei (Karen Land).

Forest restoration is central to the achievement of several of the KFD policies listed above, with the immediate goal of restoring at least 2 sq km of forest across 7 KNU districts over the next 5 years. Restoration will involve not only planting teak, but also diverse mixes of native forest tree species, for recovery of biodiversity and watershed functions, and to contribute towards climate change mitigation. Achievement of this goal will depend on KFD having the skills and knowledge to run tree nurseries and make sensible decisions about species choices plantation design, maintenance of planted trees, nurturing of natural regeneration and monitoring results for adaptive management.

Consequently, this project dealt with implementation of curricula (already drafted under Phase I), which combine both scientific and indigenous knowledge, to provide a practical framework for forestry education and training of KFD staff and the younger generation of college students in the fields of forest restoration and management. It covered the creation of training materials and the training of teachers, to implement the newly developed curricula in classrooms.

Achievements under Phase I

Phase I of the [project](#) was completed on Jan 31st 2022. A survey of stakeholder needs-assessment was performed and a [needs-assessment report](#) compiled, defining the level and type of education required and the subject matter to include in the proposed curriculum. Subsequent online stakeholder workshops were held, to discuss the assessment, resulting in the drafting of *two* curricula: [i\) a one semester Junior college course and ii\) a 10-day intensive practical course for KFD junior staff](#), both focused on forest restoration and sustainable management. The draft curricula were refined and approved during the final online stakeholders' workshop, when future needs, to implement them, were identified. Technical and financial reports were submitted to the donor by Jan 31st 2022. It was decided to continue with phase 2 of the project.

General Aim of Whole Project

To enhance capacity of KFD staff enabling them to implement improved forest restoration and sustainable forest management of the forest lands under their control.

Specific Objectives of Phase II

1. Produce written and online teaching and support materials, needed to implement the curricula.
2. Provide training to key KFD and Junior College staff, responsible for teaching the curricula.

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Actions (Phase II)

1. Firstly, the trainers' manual for the practical training course for KFD junior staff was drafted in English. **"Best Practices for Restoring Forest Ecosystems"** consists of 10 modules (89 pages), designed to be taught fulltime over 10 days in both classroom, nursery and field settings. Drafting was completed on January 17th 2023, and sent to the donor for feedback.
2. An online stakeholders' meeting was held on 1st February 2023 to review the material. The result was that little needed to be changed and to proceed with drafting the teaching manual for the Junior College (JC) course.
3. Preparation of the manual for JC teachers' **"Forest Restoration and Sustainable Management"** proceeded March to April. It enables teachers to implement a 3-credit undergraduate course. It replicated much of the subject matter of the KFD practical course, but added more academic materials on the ecological processes that lie behind restoration, to provide 18 weeks of college-level classes and field exercises (2h lectures and 3h practical /week). Sections on human rights and community forestry were also added, as requested by the donor. The draft (148 pages) was submitted to the donor on 4th April 2023. Both manuals contain frequent QR code links to context-specific online support materials that were added to the [advice section of forru.org](https://www.forru.org).
4. It was agreed to shift the teachers' workshop to July and to extend the contract to August 31st, due to delays in drafting and translating the teachers' manuals and confirming workshop participants. A contract amendment was signed to that effect on 23rd April.
5. An online meeting with the donor was held on 25th April to discuss translation issues, workshop organization and some adjustments of the project administration.
6. Translation of the teaching materials into Burmese was completed by May 31st (in Myanmar), but layout and design required considerable further attention. Therefore, FORRU-CMU employed two native Burmese speakers (Environmental Science students) to complete the layout of the manuals at CMU.
7. It was agreed to shift responsibility to FORRU-CMU for the following actions: 1) printing Burmese versions of the books, 2) oral translation from English to Burmese during the workshop and 3) reimbursing workshop participants for travel to/from Chiang Mai. A supplementary budget was calculated for these items and transferred to FORRU-CMU on July 3rd. A second contract amendment to that effect was signed on 23/6/23.
8. On June 30th, Stephen Elliott met with a donor representative in person in Chiang Mai to finalize workshop organization and deal with other project matters.
9. Twenty copies of each of the two English manuals were printed on 22nd June and 50 copiers of each of the two Burmese manuals were printed on 30th June.
10. Furthermore, FORRU-CMU's cartoon book **"Grow a Forest with Lin and Sai"** was translated into Burmese and sufficient copies printed for the workshop.
11. All printed materials were made available as free PDF downloads through the download panel of the project page on FORRU-CMU's website. <https://www.forru.org/projects/capacity-building-curriculum-forest-management-and-restoration-karen-communities>
12. The 8-day workshop was run on 5-13th July (with free day on Sunday) – attended by 9 participants (6 JC and 3 KFD) – the logistics and schedule are appended (page 7). At the end of the workshop, participants were presented with i) tree labelling equipment, ii)

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nursery production-schedule posters, iii) Vernier calipers and iv) PDFs of bird identification books. We also arranged for a donation of binoculars for birdwatching (coming soon). The participants transported all remaining copies of the teachers’ manuals to Myanmar at the end of the workshop.

13. The workshop was generally appreciated and well received by the participants. It was evaluated by a standard satisfaction survey, the results of which are appended (page 13).

Outputs (Phase II):

1. Trainers’ handbook to support a 10-day intensive training course for KFD junior staff (89 pages): 20 English copies, 50 Burmese and provided as free [PDF download](#).
2. Teaching notes and lab/field exercise instruction sheets for the Junior College course (148 pages). 20 English copies, 50 Burmese and provided as free [PDF download](#).
3. Online learning-support pages, hosted by forru.org.
4. “Grow a Forest with Lin and Sai” [graphic story in Burmese](#).
5. Zoom stakeholder meetings to approve materials and plan the workshop.
6. Eight-day workshop using the teaching materials produced during the project.
7. Three KFD staff and 6 Junior College staff trained to implement the curricula.

A Capacity-Building Curriculum on Forest Management and Restoration for Kawthoolei Forestry Department (KFD) Staff (Phase II) - Draft Schedule	2022							2023							
	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
Action															
Draft teaching materials in English				X	X	X	X	X		X	X				
Translate teaching materials into Burmese/Karen											X	X	X		
Online stakeholder workshops to review teaching materials									X		X		X		
Training course for KFD/Junior College staff in Chiang Mai														X	
Project report								X							X

Proposed for potential Phase III:

During the final discussion of the workshop the following points were identified for inclusion in a potential Phase 3 of the project

1. Install a water system at the Htolwe Wah Junior College, since lack of a water supply was identified as the major constraint, preventing establishment of a tree nursery there.
2. Provide small equipment items and materials e.g. tree monitoring equipment, nursery tools and materials, binoculars (for bird monitoring) and bird guide books etc. Many items, used during the workshop that are commonly available in Chiang Mai, are unavailable or unaffordable at the Junior College.

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3. FORRU-CMU staff evaluate the effectiveness of course implementation, arranging subsequent follow-up “refresher” training of staff if needed.
4. Modify and adapt the teaching materials in response to the evaluation and taking into account local conditions particularly limited equipment and materials.
5. Expand JC course to other JC’s by enabling the teachers trained in Chiang Mai to run their own workshops in Kawthoolei or in refugee camps on the Thai side of the border. FORRU-CMU staff could help with education events on the Thai side of the border.

Literature Cited

Kawthoolei Forestry Department’s, 1990. [Kaw Htoo Lei Forest Policy – draft.](#)

WORKSHOP: TEACHER TRAINING FOR RESTORING FOREST ECOSYSTEMS IN MYANMAR'S KAWTHOLEI REGION

5-13/7/23

*Hosted by the Forest Restoration Research Unit and
Doi Suthep Nature Study Centre, Chiang Mai University*

LOGISTICS

Accommodation

Budget has been allocated to FORRU-CMU to cover costs of accommodation (check in 4/7 check out 14/7) on a twin share basis. The accommodation selected is [Get Zleep](#), close to the main workshop venue, The Doi Suthep Nature Study Centre. Please note that the budget covers only those dates and room rate. Participants are responsible for paying *any other charges* or for extending their stay.

Arriving at the airport

Exiting arrivals, turn left and walk to the far end exit from the airport. There will be staff with clip boards co-ordinating passengers with airport taxis – the price is usually 160-200 THB – pay driver on arrival.

Workshop venues

The workshop will be run out of the Doi Suthep Nature Study Centre (DSNSC), at the end of Huay Kaew Road (near Chiang Mai Zoo).

<https://goo.gl/maps/NS53AZmmnh2SrtjU9>

Practical sessions will be at field locations and nurseries on the appended map. Please be at the DSNSC at 08:45 on 4th July for registration.

Transport around Chiang Mai

The taxi apps in Chiang Mai are GRAB and BOLT. Local tuk-tuks and sorngtaews (red shared pickups) still operate – negotiate price with driver.

Provisions

7/11 convenience stores are found at frequent intervals all over the city (the nearest one is in front of CMU main entrance). There is a large supermarket in the basement of Maya Shopping Centre.

Nearby places to go in free time

The Nimmanhaeminda area and Maya complex nearby, provide a range of restaurants and bars for evening sustenance and entertainment. At the weekend try the “walking streets” for exotic foods, crafts and shopping. Wua Lai Walking Street (**Saturday** Walking Street). Tha Phae Walking Street (**Sunday** Walking Street). For other after-dinner suggestions please go here: <https://www.hotels.com/go/thailand/best-nightlife-chiang-mai>.

Please note that, apart from the welcome dinner, the budget does not cover participants’ evening meals.

Communicating and sharing information

Please add the LINE app to your phone and join this chat group.



We will use this LINE group to troubleshoot problems and share information, as the workshop date approaches and during the workshop to inform all participants of changes in the schedule.

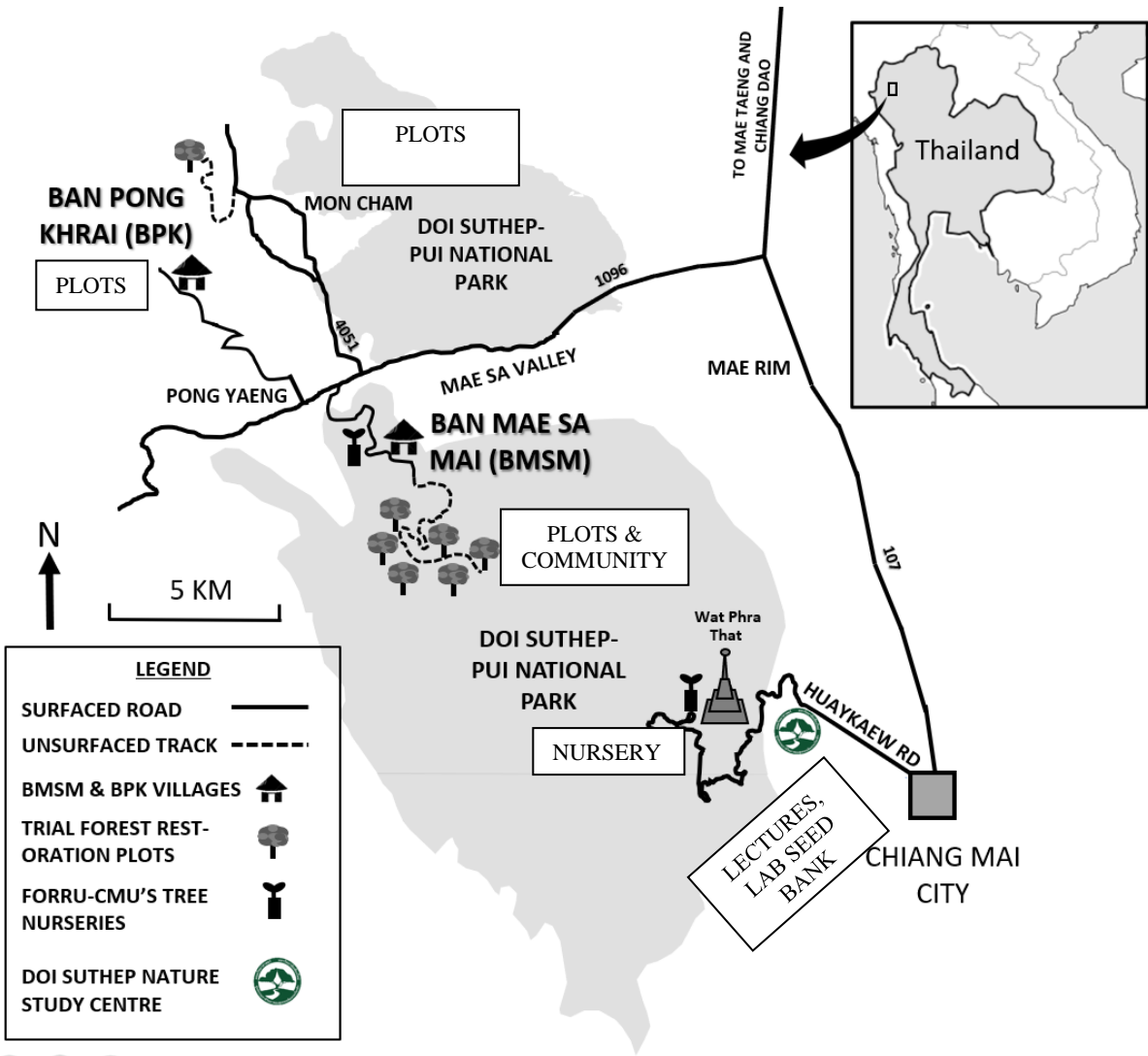
Computers and software

If participants would like to take advantage of opportunities to practice hands-on data processing during the workshop please, **bring your laptops** with MS Office (particularly Excel).

Emergency numbers

FORRU staff – Steve 081 531 0894 (emergency advice in English)
Emergency medical – 1669
Chiang Mai Ram Hospital 053 920 330
Tourist Police (English) – 1155 or 1699

WORKSHOP VENUES



Doi Suthep Nature Study Centre
 4.4 ★★★★★ 5 reviews
 Learning center

Directions Save Nearby Send to phone Share

RW6X+4C8, Suthep, Mueang Chiang Mai District, Chiang Mai 50200

<https://goo.gl/maps/NS53AZmmnh2>

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Schedule			
	Topic	Teacher	Location
5/7/23	Wednesday - Conceptual Basis		CLASS ROOM
08:45	Registration	Phai/Som	DSNC
09:00	Welcoming - group photo	Prasit	"
09:15	Forest Loss and Ecological Succession Forest-Ecosystem Restoration Defined	Steve	"
10:30	Break	NC staff	"
10:45	Forest degradation and succession—matching restoration approach with stage of degradation	Steve	"
12:00	Lunch		
13:00	Costs and benefits of forest restoration—ecological and social	Prasit	"
14:15	Break	NC staff	"
14:30	Drivers of deforestation and incentives for forest restoration	Prasit	
16:00	Close		
18:30	Welcome Dinner	Ben	Huen Suthep
6/7/23	Thursday - Reference Forest	Nan/Ben	FIELD - DS
08:30	Pick up at accommodation and travel to Doi Suthep deciduous forest	Nan/Ben	
09:00	Getting to know the reference forest - deciduous and evergreen forest	Steve	Observatory and Fig trail
10:30	Break	Ben	"
11:00	Phenology	Nan/Ben	Fig Trail
12:00	Lunch	Ben/DS staff	
13:00	Seed collection and herbarium specimen collection	DS staff	DS Accom Centre
14:00	Break	Ben	"
14:15	Seed extraction and processing	Yoi, Thonglaw	"
15:00	Visit Doi Suthep Temple	Nan/Ben	DS Temple
16:30	Travel back to Chiang Mai		

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7/7/23	Friday - nursery practices	Phai	FIELD - DS
08:30	Pick up at accommodation and travel to DS nursery	Phai	
09:00	Nursery design	Steve	DS nursery
09:45	Seeds and germination experiments	Dia, Phai, Yoi	"
10:30	Break	Phai	"
10:45	Potting and seedling growth experiments: treatments, experimental design	Dia, Phai, Yoi	"
12:00	Lunch	Pha/DS staff	
13:00	Care of trees in nurseries	Dia, Phai, Yoi	"
13:45	Cuttings and wildlings	Dia, Phai, Yoi	"
14:15	Break		"
14:30	Production scheduling	Dia/Steve	"
16:00	Travel back to Chiang Mai	FORRU staff	
8/7/23	Saturday - Restoration Sites	Nan/Jarik	FIELD - BMSM
08:00	Pick up at Accommodation and go to Ban Pong Krai		
09:00	Monitoring planted trees	Nan/Jarik	BPK
10:30	Break	Nan	"
10:45	Maintenance - fertilizer weeding	Nan/Jarik	"
12:00	Lunch	Nan/BMSM	BMSM nursery
12:45	Visit community tree nursery	BMSM nursery staff	"
13:30	Go to upper plot		"
14:00	Observe results of forest restoration at various ages	Steve	Plot 2000.3
14:45	Break	Nan	"
15:00	Rapid site assessment	Nan	Plot 98.2
16:30	Drive back to Chiang Mai	FORRU staff	
9/7/23	Sunday - REST DAY		
10/7/23	Monday - Data		CLASSROOM
09:00	Data Analysis - Germination Tests	Steve	DSNC
10:30	Break	DSNC Staff	"
10:45	Data Analysis - Tree Survival/ Growth	Steve	"
12:00	Lunch	DSNC Staff	"
13:00	Designing an effective strategy	Steve	"
14:30	Break	DSNC Staff	"
14:45	Planning	Nan	"
16:00	Close		

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11/7/23	Tuesday - Biodiversity		FIELD HTT & CLASS
06:00	Pick up at accommodation and go to Huay Thung Tao		
06:30	Biodiversity Monitoring – Bird Community Field Exercise	Nut/Aom/Steve/Nattani t	Huay Thung Tao
09:30	Go to DSNC		
10:00	Data Analysis - Bird Species Richness	Steve	DSNC
12:00	Lunch		
Afternoon	Relax		
12/7/23	Wednesday - social issues		CLASSROOM
09:00	Traditional uses of forest products	Prasit	DSNC
10:30	Break		DSNC Staff
09:00	Community Forestry	Steve	"
12:00	Lunch		DSNC Staff
	Human Rights	Steve	"
14:30	Break		DSNC Staff
14:45	Educational facilities of the Natures Centre and seed bank	DSNC Staff	"
16:00	Close		
13/7/23	Thursday - Species selection		CLASSROOM
09:00	Species selection exercise	Steve & Prasit	DSNC
10:30	Break		NC staff
10:45	Open Forum - Discussion group. How to move forward with implementing the courses?	All	"
16:00	Certificate ceremony	Prasit and Steve	"
12:00	Lunch		
13:00 - onwards	Free time - or early leavers depart for airport?		"
*DSNC = Doi Suthep Nature Study Centre; BMSM Ban Mae Sa Mai; HTT = Huay Thung Tao, BPK = Ban Pong Krai			

TRAINING SATISFACTION SURVEY – KFD Workshop (9 participants)

Your satisfaction about:	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfy	N.A.
Information before arriving.	3	6	0	0	0	0
The general organization and facilities of the event?	9	0	0	0	0	0
How the objectives of the training were introduced?	3	6	0	0	0	0
Preparation/quality /knowledge of trainer(s)?	8	1	0	0	0	0
The support materials provided during the event?	3	6	0	0	0	0
The balance between theory, practice and analysis	4	5	0	0	0	0
Communication/interaction among participants	6	3	0	0	0	0

Activity outcomes. How much you agree/disagree with the sentences	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	N.A.
The activities helped to achieved the expected outcomes	2	7	0	0	0	0
The content of the event fulfilled my expectations	6	3	0	0	0	0
I will incorporate tools/methods learnt into my own teaching	2	7	0	0	0	0
I will incorporate tools/methods learnt into my own research	4	5	0	0	0	0
The tools/methods learnt <i>don't fit</i> into my field of teaching/research	2	4	2	1	0	0
I will recommend this training to my colleagues	6	3	0	0	0	0

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Comments/recommendations on the organization of the event or implementation of activities

- Very effective even in short period.
- The training is very systematic.
- All the trainers are kind to us, especially the professors.
- Everything I have learned is very good, because I have known many things after learning.
- Perfect.
- Thank you for teaching me more practical than I thought. I want to try and do my best. I want to implement it as soon as possible.
- Everything is perfect for me on this training. I got many things about forest and tree species of the training. So, thank you everyone for support and teaching us.
- I would like to say that it is a really good event, but I could not follow some of the more difficult lessons.
- The lectures we learned from the workshop were fascinating and inspiring. However, it can be challenging to initiate certain field studies in our region. Moreover, we still lack the basic needs for forest reservation.
- Although we can apply the studies in our region, there might be transportation problems.
- Transporting the plants will be challenging if we can construct a nursery where we have access to enough water.
- Due to our region geography, it is not easy to build only one nursery.

Comments on event outcomes and relevance of tools/methods to your professional life

- I have learnt many, many new things. For example, more knowledge about the environment, detail about environment.
- There is one thing that we don't have all the materials to implement all the details. The information and practical activities related to this lesson were very interesting for my professional life.
- The tools and methods provided in the course are really useful. I am sure that I will not be able to give or provide as much as you gave to us now. However, in the future, we will try to have all.
- I gained a lot of knowledge after the workshop. I want to do the same thing as the Professors taught us, but because of the regional differences, it can't be the same.
- Although we won't be able to teach in the same way as professors have, I think we will be able to do so by adapting our methods to the local environment.