Conservation of two Ficus species with local community participation in Pindaya region, Southern Shan State, Myanmar

Final Report

Submitted to the Rufford Small Grants Foundation, UK

By

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Acknowledgments

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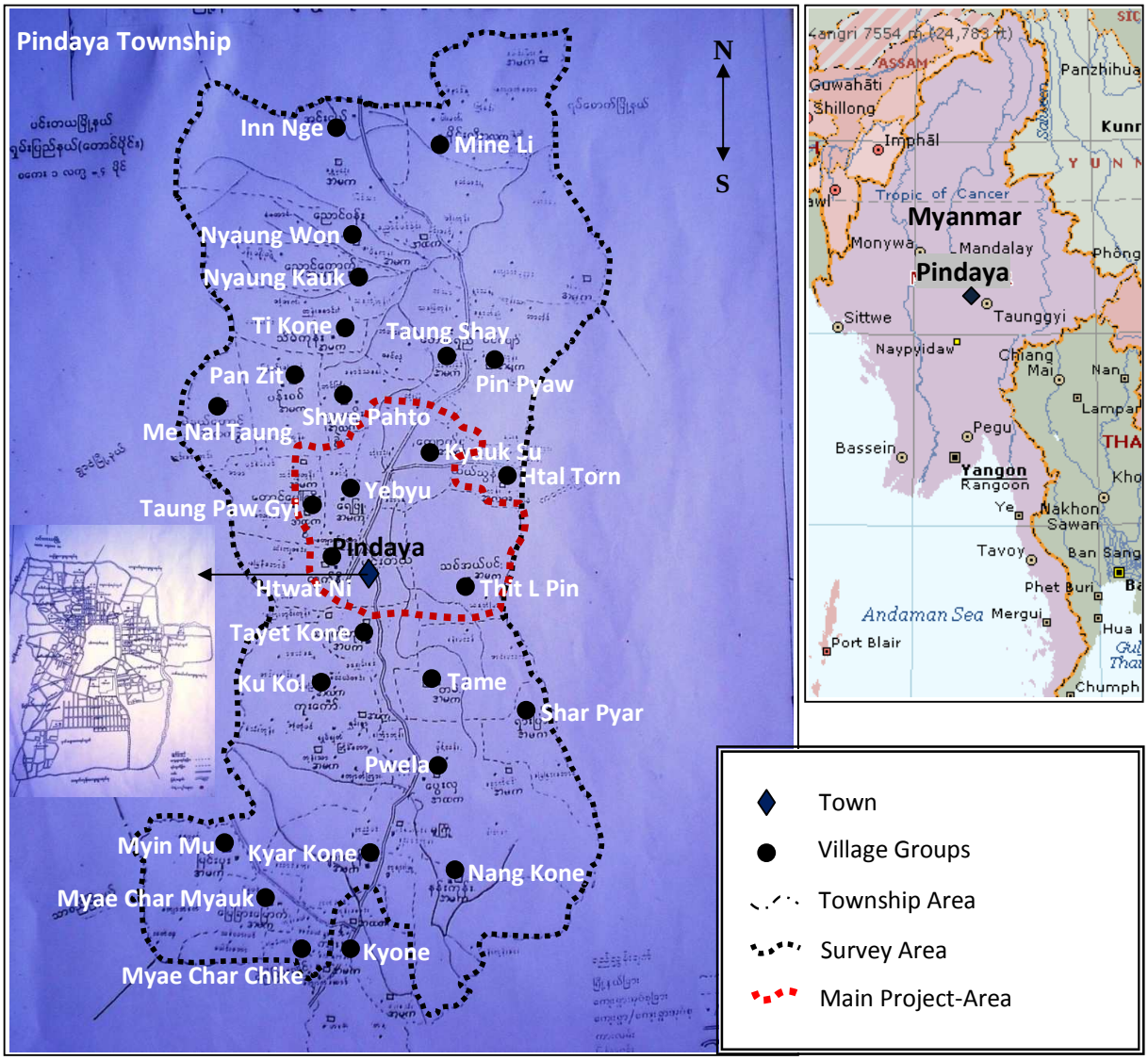
Introduction

Most of Ficus species are widely distributed all over Myanmar. However, the two Ficus species (Nyaung Painn Nell and Nyaung Chyin, Vernacular Name) can be found only on the mountain regions but their population is quite low. Pindaya region is the only one place where most of these two species thrive well. The big trees are valuable, and represent to this region. To date, the species are facing regeneration problems, and are threatened as rare species because the young plants grow rarely and are destroyed by cattle, goat and also human being. Moreover, edible young shoot of certain Ficus species are excessively picked by the local people. There is no careful attention for these trees to conserve and to plant due to lack of nature conservation knowledge. The existent trees are too old, and the young plants or seedlings are destroyed and neglected. Without active conservation and protection of the region now, the survival of these species is questionable. Hence, active conservation activity and careful transplanting of young plants and or seedlings with local community are needed for the next generations.

This project will be tremendous importance for the local community and biodiversity of the region as well as biodiversity of the world. The Ficus species are highly useful for the local ecology since they are the nesting sites for many birds, bats and squirrels. The trees can absorb large amount of carbon dioxide, then give oxygen, and provide good shade for man2jj0(iN-T-B6--06h5z(,NB-0’520(iNq2T6BzB0(lNq2T6hzT66j5-B(eNqQT5Q’j0

Project site



Pindaya - Location - 20°56' N latitude and 96°39' E longitude
- Southern Shan State, Myanmar

Township Area - 254.89 sq. miles

1) Survey and protection of the trees with local community

Field survey on the tree population status of the two Ficus species were carried out first in the town area, in twelve wards with the participation of local nature conservation committee, regional women welfare association and volunteers. At the same time, the protection of the trees had been conducted, which include protection of hanging roots, fencing some young plants in their natural environment, collection of saplings and or young plants close to public buildings.

Fences were made for 45 saplings in their habitats. 400 trees (both species) and some of its hanging roots were adopted for protection. These were applied in the main project-area. Cacti are more effective to protect from animal hazard because of its spines and unpleasant odor, but it is more laborious than split bamboo. We used both.

Fence with split bamboo and spinous shrubs

Cacti fences

3-4 years old young plant

With the participation of local community and villagers, field survey was carried out in the 26 village groups consisting of 116 small villages. Each local leader from the respective village-groups involved and worked together with team members and volunteers. The data are listed in the table below.

a) Meetings with local leaders

Meetings with local community especially with Pindaya township peace and development council, nature conservation committee and regional women welfare association were frequently made at the start of the project period. Meetings with team members and local volunteers were often arranged to implement the various tasks.

b) Meetings with religious leaders and local elders

A talk with Sayardaw (local Monk)

With U Swe Pu, local conservationist

Meetings with religious leaders and local elders were very important and helpful for the activity. Their talks and experiences in conserving the trees were valuable for future generation. Local people obeyed them, and accepted their positive attitudes.

c) Training

Seven educated local youths were appointed as local volunteers. My team explained the objectives and the great importance and the ecological role of the Ficus trees. They were trained how to mobilize the local community to involve in the conservation activity. We also trained and demonstrated them for protection of hanging roots, caring of nursery and management after transplanting. They were also capable of speaking different local languages; Shan, Danu, Paoh and Palaung.

Their allotted duties are;

- Ensuring the erection and condition of the protective fences,
- Preventing animal grazing near the adopted trees and transplanted saplings,
- Arranging local and school meetings for community awareness,
- Distributing information posters and leaflets among local community,
- Caring nursery and transplanted saplings.

d) Nursery

The collected saplings were transferred to nursery to attain proper growth (for new saplings, this require 6 to 10 months to keep in nursery). About 300 saplings were collected until the end of 2008 monsoon although we expect more about 500. Nature conservation committee supported 200 pots for potting collected saplings. Potting soil was prepared by mixing cow dung, humus and soil. Watering was done if necessary. We also used thinned-bamboo baskets for potting.

About 200 saplings were left for transplantation at the end of the project period. The remaining saplings are being kept in nursery to attain transplantable age. Local nature conservation committee and volunteers look after the nursery for further planting.

2) Conservation talks to school children and public

We explained our project goal, the great importance and the ecological role of the Ficus trees to school children and local people. Interviews and discussions were made. It included protection of the hanging roots or prop roots, sustainable picking of edible young shoots (Nyaung Chyin) and motivation to local community for saplings replantation.

Edible shoot of Nyaung Chyin tree

Prop roots/ hanging roots for support

Table. List of activities held

No.	Name	Program	Participants
1.	Zaw Gyi Oo Hall, Sin Kaung Quarter	Public meeting	100
2.	Aw Yaw	Public meeting	50
3.	Hngex Pyaw Taw	Public meeting	55
4.	Ho Kone	Public meeting	40
5.	Hsu Bo Kone	Public meeting	28
6.	Pauk Taw	Public meeting	35
7.	Pyi Taw Tar	Public meeting	40
8.	Ywa Nge	Public meeting	32
9.	Ywa Thit	Public meeting	30
10.	Htwat Ni Village groups	Public meeting & interview	30
11.	Kyauk Su	Public meeting & interview	20
12.	Taung Paw gyi	Public meeting & interview	20
13.	Thit L Pin	Public meeting & interview	23
14.	Yebyu	Public meeting & interview	25
15.	No.(1) Post-Primary School	School meeting	70
16.	No.(2) Primary School	School meeting	40
17.	No.(3) Primary School	School meeting	55
18.	No.(4) Primary School	School meeting	30
19.	No.(5) Primary School	School meeting	40
20.	No.(6) Primary School	School meeting	35
21.	No.(6) Basic Education Middle School	School meeting	70
22.	Primary School, Kyauk Su	School meeting	50
23.	Primary School, Tawya	School meeting	60

Community activities

Public talk at Zaw Gyi Oo Hall (5.6.2008)

With school teachers and children

With school teachers and children

Participation of school teachers in activity

Participation of school teachers in activity

Participation of school teachers in activity

With school teachers and children

Meeting with local community

3) Replantation with local community

A total of 100 saplings were transplanted to the suitable sites (road, some villages and schools) during the project period. The spacing (50 ft between plants and at least 10 ft distance from the road) was applied. Holes for transplanting were dug, and measurement of each hole is 2x2 ft^2 and 1 ft depth. One hundred fences were made to protect young plants from cattle. Transplantation was done during monsoon and end of monsoon, 2008 with the involvement of volunteers and villagers. The remaining saplings are managed by the local volunteers and leaders to replant with the participation of schools and local communities at the end of monsoon or Arbor Day, 2009.

Transplanting by a local volunteer

Fencing a sapling

Watering by a local volunteer

5 months after transplanting

Results

Level of achievement of the project's original objectives

Objective	Not achieved	Partially achieved	Fully achieved	Comments
a. Survey of tree populations status in Pindaya region			***	The objective is fully achieved due to the interest and voluntary participation of villages' leaders and local volunteers
b. Conservation of existing trees and hanging roots		**		This activity has been done in town area (twelve wards) and a few nearby villages (not all villages under Pindaya region). Fences were difficult to make in place like down-town area to protect the hanging roots.
c. sharing of nature conservation knowledge to local people and community			***	Local people and community (especially school teachers and children) accept our extension talks as well as the great importance of the trees for the local environment. They warmly invite our activities to continue more and more in the future.
d. local community involvement and their interests in the activities			***	In making community awareness, well trained local volunteers are important because they know the culture of the local community, and time and circumstance. So, this is valuable for achieving meaningful outcomes.
e. replantation of saplings		**		Only about 300 saplings were collected until the end of 2008 monsoon although we expect more, about 500. Only 100 young plants were transplanted to suitable site during project period. The remaining saplings are still being kept in the nursery to attain proper growth and age for transplanting.

Discussion

Most of these trees especially Ficus species, Nyaung Painn Nell can be found throughout the town area since these trees have been conserved as ornamental trees, and revered as holy trees by the residents, mostly religious monks and elders. Ficus species, Nyaung Chyin has been found and used its edible shoots mostly in the nearby villages. Other Ficus species, banyan trees (Nyaung) and Bo trees (Nyaung) have been observed throughout the region. A great degradation of both kinds (Nyaung Painn Nell and Nyaung Chyin) has been observed in this region. It is due to anthropogenic activities which include extending of agricultural land, use a

Total tree population in Pindaya region.

No.	Survey region	no. of Ficus (Nyaung Painn Nell) trees	no. of Ficus (Nyaung Chyin) trees
1.	**Pindaya Township**	**1302**	**576**

Tree population (Ficus spp.) status in twelve wards, Pindaya.

No.	Name	no. of Ficus (Nyaung Painn Nell) trees	no. of Ficus (Nyaung Chyin) trees
1.	A Nauk	-	9
2.	Aw Yaw	110	-
3.	Hngex Pyaw Taw	134	1
4.	Ho Kone	46	2
5.	Hsu Bo Kone	10	-
6.	Pauk Taw	15	-
7.	Pyi Taw Tar	29	-
8.	Shan	6	-
9.	Sin Kaung	39	-
10.	Ywa Nge	16	-
11.	Ywa Thit	11	-
12.	Zae Tan	7	-
	Total	**423**	**12**

Tree population (Ficus spp.) status in Village tracts and Villages, Pindaya Township.

No.	Name of Village tracts/groups	Name of Villages	no. of Ficus (Nyaung Painn Nell) trees	no. of Ficus (Nyaung Chyin) trees
1.	Htal Torn (8)*	Hpayar Ni	4	5
		Pyin Tar	2	12
		Shan Su	4	4
		Tal Kone	-	1
		Tamel	1	1
		Taung Gyar	1	7
		Way Pin	4	5
		Ye Oo	3	13
		Total	**19**	**48**
2.	Htwat Ni (4)*	Htwat Ni	50	25
		(See Kya Inn, Pa Me, Myae Ni Taung)	-	-

		Total	**50**	**25**
3.	Inn Nge (4)*	Inn Nge	10	4
		Nyaung Pin Wine	2	1
		Pyin Thar	3	1
		Shwe Puhto	4	2
		Total	**19**	**8**
4.	Ku Kol (8)*	Dayal Inn	3	-
		Kjein Taw	8	-
		Kone Tar	1	-
		Ku Kol	1	-
		Kyauk Kyar	4	-
		Kyoke Kyet	3	-
		San Tee Kone	2	-
		Wa Pyar	1	-
		Total	**23**	**-**
5.	Kyar Kone (4)*	Hpayar Phyu	5	-
		Kyar Kone	3	-
		Tal Pin Apaw	3	-
		Tal Pin Auk	8	-
		Total	**19**	**-**
6.	Kyauk Su (3)*	Ko Lone	53	6
		Kyauk Su	27	1
		Tawya	9	-
		Total	**89**	**7**
7.	Me Nal Taung (3)*	Lin Lay Inn	1	-
		Me Nal Taung	4	-
		Myae Pyo	-	-
		Total	**5**	**-**
8.	Mine Li (16)*	Kyauktalone	1	-
		Mine In Danu	5	-
		Mine In Nepaul	1	-
		Mine Li	1	-
		Mong Pyar	1	-
		Nat Inn	1	-
		Okone	2	-
		Taung Pu	1	-
		Ye Te	1	-
		(Ein Pu, Kyauk Pulin, Par Met, Ma Gyi Kone, Naung Ye, Kyan Khin, Kyauk Taw)	-	-
		Total	**14**	**-**
9.	Myae Char Chike (4)*	Elnin	15	3
		Kan Pe	7	2
		Kyauk Saung	1	-
		Myae Char Chike	-	10
		Total	**23**	**15**
10.	Myae Char Myauk (4)*	Myae Char Ywar	2	-
		Painn Nell Pin	1	-

		Pong Taw	2	-
		Tityar Pin	1	-
		Total	**6**	**-**
11.	Myin Mu (4)*	Kyauksat	5	2
		Latlell	6	3
		Myin Mu	15	10
		Ye Pote	15	9
		Total	**41**	**24**
12.	Nang Kone (5)*	Nang Kone Auk	5	3
		Nang Kone Paw	5	2
		Nang Kone Way	10	3
		Nyaung Kone	1	1
		Pinsein Pin	1	1
		Total	**22**	**10**
13.	Nyaung Kauk (4)*	Nyaung Kauk	9	4
		Pan O Kwe	5	7
		Phanan	5	6
		Tayet Kone	3	5
		Total	**22**	**22**
14.	Nyaung Won (3)*	Kan Taung	-	3
		Nyaung Won	3	12
		Painn Nell Kone	2	5
		Total	**5**	**20**
15.	Pan Zit (3)*	Kanhla Kone	2	5
		Kyan Khin Myaung	-	3
		Pan Zit	1	5
		Total	**3**	**13**
16.	Pin Pyaw (5)*	Cyauk Cho	1	-
		Kone Tar	5	2
		Lay Htoe Kone	13	-
		Myae Char	3	-
		Tartai	-	2
		Total	**22**	**4**
17.	Shar Pyar (2)*	Myae Cyar Taung Ywar	-	-
		Shar Pyar	4	-
			4	**-**
18.	Shwe Pahto (5)*	Einn Lon	1	-
		Htoepon	3	-
		Naung Takhaw	3	-
		Shwe Pahto	5	-
		Tatgyi	3	-
		Total	**15**	**-**
19.	Tame (3)*	Inn Patlet	11	3
		Nang Palan	3	1
		Tame	15	3
		Total	**29**	**7**
20.	Taung Paw Gyi (4)*	Chaw Pin	1	-
		Htinn Shu Kone	2	-
		Pinsein Pin	3	-

		Taung Paw Gyi	19	-
		Total	**25**	**-**
21.	Taung Shay (4)*	Datar Gyi	1	2
		Kan Tar	-	1
		Lel Pyin	4	-
		Tapyae Kone	2	2
		Total	**7**	**5**
22.	Tayet Kone (3)*	Kyae Twin Kone	6	10
		Tayet Kone	64	50
		Yechan Sin	43	10
		Total	**113**	**70**
23.	Thit L Pin (2)*	Tayet pyar	13	1
		Thit L pin	81	1
		Total	**94**	**2**
24.	Ti Kone (4)*	Eoun At	4	30
		Kone Saung	-	10
		Pinsein Pin	-	10
		Ti Kone	5	25
		Total	**9**	**75**
25.	Yebyu (6)*	Achyae Su	10	4
		Alal Su	3	2
		Alal Ywar	8	5
		Anauk Su	5	2
		Kyauk Taw	8	4
		Zaw Gyi	5	3
		Total	**39**	**20**
26.	Pwela		**162**	**189**
Total			**879**	**564**

Note; (-)* number of villages under a village tract/group. The above data are collected from 116 villages with the help of each village committee members and interested residents.

Budget

Item	Budgeted Amount (£)	Actual Amount (£)	Difference	Comments
Salary of 4 part-time local volunteers (£ 30*4*10 months)	1200	**1000**	+200	Used (£ 25*4*10 months)
Public extension (Posters, reminders and vinyl for local meeting + meeting expenses)	1000	**1200**	-200	Include local meeting and talk, school meeting, meeting with villages' leaders, volunteers
Subsistence allowance (£ 2.5*4 pers*100 days)	1000	**800**	+200	Used (£ 2*4pers *100 days)
Nursery and replantation (cost for saplings, bamboo baskets, nursery management, truck, motorcycles and cart hires, cow dung and humus)	700	**900**	-200	More costly for saplings and management after transplanting than expected.
Travel fees	400	**350**	+50	
Fences and maintenance of plants after transplantation	350	**400**	-50	Used both cacti and bamboo fences
Publishing and reports (include internet access and phone call)	200	**200**	0	
TOTAL	£4850	**£4850**	0	

Exchange rate; **1 £ = 2400 Kyats (local currency),** 31.1.08