



NATURE TRAIL STUDY AT LAWACHARA NATIONAL PARK





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International Resources Group (IRG)

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1. Introduction

Lawachara National Park (NP) is one of the pilot sites under Nishorgo Support Project (NSP). Although, NSP is primarily concerned with the biodiversity conservation of five Protected Areas (PAs) of Bangladesh, the project also aims at promoting ecotourism in those pilot PAs with a view that Bangladeshi citizens begin increasingly recognize the importance of local biodiversity and its aesthetic values and benefit from it. Importance and benefit from eco-tourism is worldwide recognized and is being considered as an important element in any resource /biodiversity conservation program. Development of ecotourism is also seen as means of partnership building with local people for sustainable management of forest resources. As envisaged in IRG project proposal, development of ecotourism in these PAs is seen as a source for deriving tangible benefit for local people living in and around it.

While there is potential for ecotourism development targeting the local Bangladeshi people in the PAs, unfortunately, at this time, a visitor to the five PAs under NSP would have little guidance on where to go or what to see. Even if they did look around the PA, they would have little idea what they are seeing.

Trails are walkways that could be used by the visitors, nature lovers and others for hiking or outings while they visit a forest or any other landscapes. Trailing is considered as an important tool for nature watch that helps awareness building and other conservation efforts.

Considering the above, Forest Department (FD) has taken an initiative through the NSP to develop a few initial simple and easy trails within each pilot site of the NSP. From the project implementation perspective, development of these initial trails is also seen as a means for demonstrating the importance of biodiversity conservation of the PAs to the policy makers of the country. The policy makers could be taken to inside of these PAs and show them the beauty.

It may be further mentioned that these trails would be of initial trails. A more complete development and mapping of hiking trails will be completed in the context of approved management plans at a later date.

2. Objectives

The overall purpose of the activity is to promote and develop ecotourism in Lawachara NP for as part of strengthening conservation effort. The specific objectives of the study were:

- To identify a short, a medium and a long existing trails within the NP for outings and/or hiking to be used by targeted visitors
- To describe each identified trails including its physiography and attractions (ecological and cultural), and produce maps with a view to provide guidance to the visitors

- To initiate the involvement of the local people with ecotourism activity so that they can derive tangible benefit from this
- To make recommendations and suggestions for the development and improvement of the identified trails

3. Methodology

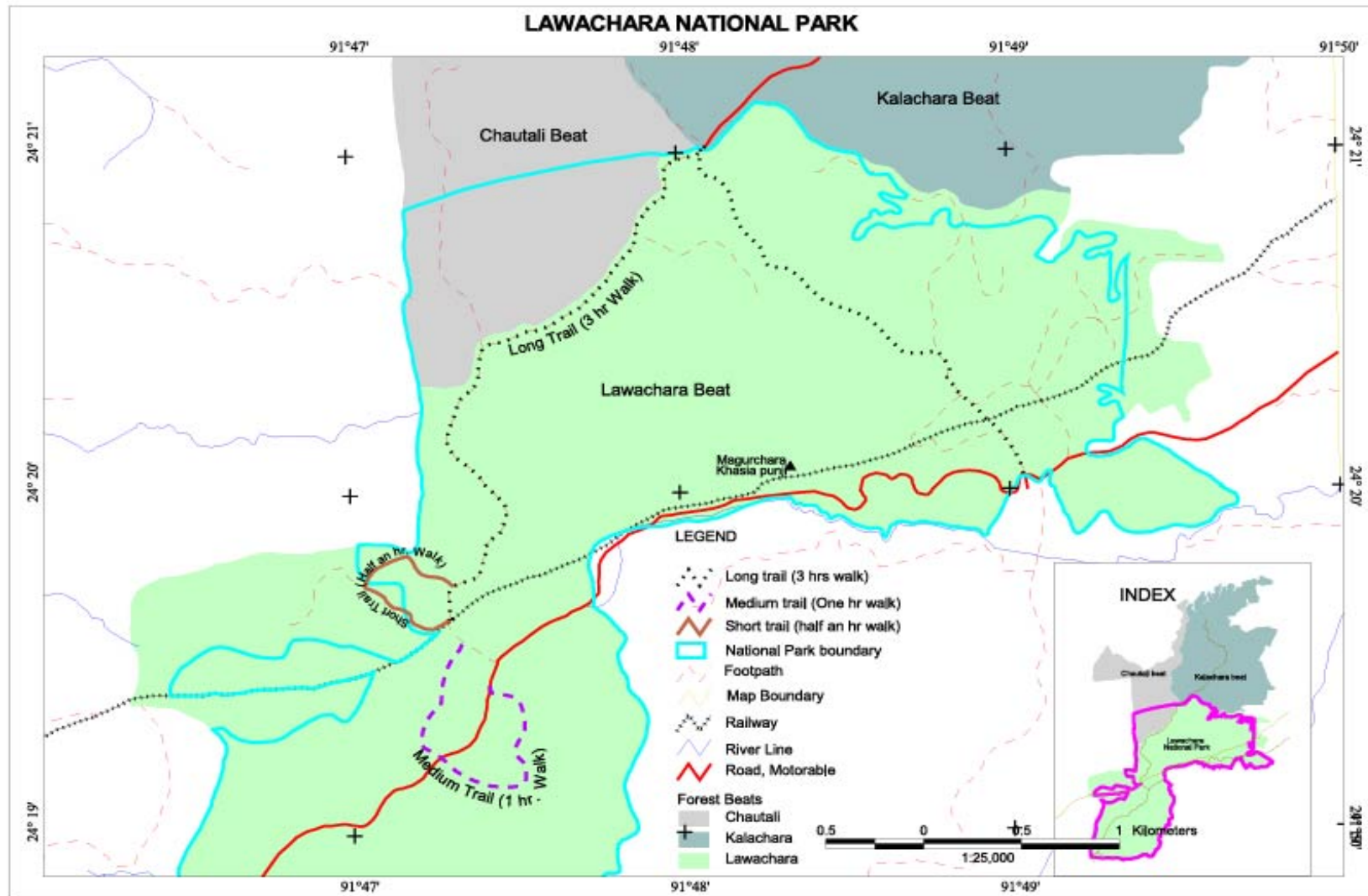
The trail study was carried out by Nature Conservation Management (NACOM) with participation of the FD staff, local tourist guides, local and indigenous community members and Rangpur Dinajpur Rural Service (RDRS) staff (Table 1) during 15 October to 17 October 2004 and 31 October 01 November 2004. Initial discussions were held at Lawachara Beat office involving the local people, tourist guide, FD staff and other field staff of RDRS and NACOM to know regarding the possible walking trails of the Lawachara NP. A forest map of Lawachara NP was shown to them and possible trails were roughly sketched on the map after detailed discussions regarding the NP's ecological and cultural features. Various participants shared their experiences while walking along the different trails as identified initially.

Table 1: **Participants of the Lawachara Trail Study**

Name	Designation	Organization/address
Shiba Prasad Kar	Team Leader of the Study	NACOM
Dhruba Kanta Kundu	Field Monitoring and Research Specialist	NACOM, srinagal
Ataur Rahman	Master Trainer-Microfinance	RDRS
Sudhir Chakraborty	Beat Officer, Lawachara	FD
Muhit Mia (one day)	Forest Guard, Lawachara	FD
Md Farid (one day)	Forest Guard, Lawachara	FD
Al Amin (one day)	Forest Guard, Lawachara	FD
Shamol Debborma	Local villager (indigenous community)	Debrabari, Srimanagal
Kazi Shamsul Huque	Local Tuourist Guide	Srimanagal
Md Rashed	Local Tuourist Guide	Srimanagal

All of us walked through the various trails of the Lawachara NP for five days and identified many ecological and cultural attractions of the trails at different points of the trails. A format was used to note the field descriptions including at different points of the trails. GPS coordinates (way points) were noted in each trail while walking along the trails, depending on special attractions of the particular trail. Sometime, it was difficult to take GPS reading because of close forest canopy. Three trails were identified finally named as Short trail (half an hour walk), Medium trail (one hour walk) and Long trail (three hours walk). The GPS coordinates were later plotted at *Banbhaban* on the GIS map of FD for the preparation of trail mapping of Lawachara NP (Map 1).

Map 1: Walking Trails in Lawachara National Park



4. Description of the identified trails

Three major types of trails were identified in the Lawachara NP (Map 1) for developing ecotourism. One was of half an hour walk, another was of one hour walk and the other one of three hours walk.

4.1 Short Trail (half an hour walk)

4.1.1 Specific information of the short trail

Location: starting point 24.32799 N and 91.78514m E (from the base of the Chloroform tree (locally called) near to Lawachara Forest Bungalow and ends at the same point after a loop).

Length: about 1 Km

Width: 0.5 m to 2 m

Type of path: Brick soling at the beginning for about 50 metre and the rest of the path is *kacha* (Photo 1).

Type of soil: Sandy to sandy clay

Topography: Almost plain along the trail but there are high elevated land on both side of the trail irregularly. There is a stream (*chara*) across the trail after 500 m walk but it is a small one and anyone can cross by a moderate jump.

Vegetation: There are dense three storeyed forests on both side of the trail. Although these are plantation area of Lohakat (*Xylia dolabriformes*), Chapalish (*Artocarpus chaplasha*), Kadam (*Kadamba chinensis*), Jarul (*Lagerstroimea speciosa*), Teak (*Tectona grandis*) etc. the forest has got the natural form of its structure. This is because these are very old plantation area beginning from 1925. There are many bamboo bushes and cane plantation to some extent along the trail.

Wildlife: When walking along the trail some macaques appeared on the surrounding tree branches of the trail. Birds are frequently observed along the trail with charming chirping sound all around the trail. Some of hollook (Gibbon) species may also be observed when walking along the trail.



Photo 1: A partial view of short trail at Lawachara NP

4.1.2 Description of the short trail sights

Start from the base of the chloroform tree near to Forest bungalow along the soling road towards northwest direction. It is a bit elevated slope towards bungalow. After a few steps, cross the gate of Silvicultural station and enter into the area. When moving forward, observe the amazing tall high volume trees of *Lohakat* and *Chapalish* at your right side and if you look at the left there are some Gamari trees planted adjacent to the trail and some bamboo bushes are also seen a bit far away.

Walk along the brick soling path, you will find the office of Silvicultural Station of Bangladesh Forest Research Institute at your right and nursery at your left side. Seedlings are raised in this nursery for new species trial and for plantation purposes as well. The small green seedlings in nursery beds look very beautiful (Photo 2). You also can learn there how these seedlings are raised from the seeds by the silvicultural staff there. Beside the nursery, there are palm trees plantation area which are under trial for observing whether the trees bear fruits in this environment to go for mass plantation and also if palm oil could be produced from the seeds of the palms (Photo 3).



Photo 2: A partial view of nursery at Silvicultural Station near Lawachara NP



Photo 3: View of Palm trees planted at Silviculture Station near Lawachara NP

There is a small culvert on the trail and the brick soling path ends there. On your right, there are large Chapalish trees on the *tila* (a bit elevated land), and to your left there is a nursery office and some bamboo bushes adjacent to that office.

After the brick-soling road, the walking path is slightly sandy to sandy clay. You will gradually enter into a close canopy area of mixed forest (Photo 4). You will find various species of bamboo bush at your left and dense mixed forest at your right. The dominant species of the forest side are *Chapalish* and Teak. There are many herbs and shrubs as undergrowth at the site. Among the wildlife, you may often observe the macaque s jumping from one tree to another at this point. Different birds are often seen here chirping with melodious sound.



Photo 4: A partial view of dense vegetation along the short trail at Lawachara NP

After a while, you have to enter into a narrower trail at your right. This trail width is 2-3 feet and the walking path is undulating with irregular ups and downs (Photo 5). On both side of the trail, you will find the thrill and beauty of the dense forest with three to four storied plant species. Birds such as dove, cuckoo, myna are common in the area, look at the trail ground for the reptiles. Lizards and snakes may be seen if you look around the ground. Look for macaques and hollok in the trees. Slow loris may also appear at your front if you are lucky!



Photo 5: The narrow portion of the short trail with dense vegetation on both sides

Move along the trail, you will find that both sides of the trail are elevated (*Tila*) with dense forest. Keep quiet to enjoy the sound of the dry forest leaves falling onto the ground. This point of the trail is very silent and thus you can enjoy the thrill of rain forest.

After a few foot steps, get ready to jump into a stream across the trail. It is a small stream of three feet width and clear cool water flows from north to south. Observe the dense forest on the both side of the stream.

Just after few meters walk, you will reach a intersection of four trails. Turn right to take the right trail to walk through. The size of the trail is a bit wider (1-2 meter). From the intersection if you take the left trail you can enjoy the view of tea garden and lemon garden.

However, if you walk along the right trail you will find plantation area of large *Chapalish* trees on right side of the trail on the *tila*. At the left of the trail, the dense forest in the flat area consists of *Jarul*, *Chapalish*, *Dewa* etc as major tree species with mixture of

bamboo. Hollok and macaques are often seen in this area. Birds are common to keep you pleased with charming sounds.

As you walk along, there are high forest on both side of the trail with multi storey of trees such as Kadam, Dewa, Chapalish and other types of trees, herbs and shrubs species. At left, there are flat valley with different herbs and shrubs after which there are dense forests with multi storey of tree species such as *Jarul*, *Gamari*, *Kadam*, *Chapalish* etc.

If you proceed further, the trail enters into a wider trail to the right and finally to return to the forest bungalow. There is a medium size *Kadam* tree at the intersection of the trails. On both side, there are mixed forests but not so much dense.

After 20 meters walk, you will find that the trail enters in between two up *tillas* with close canopy forest. This point is of real forest thrill. You will find many large sized Chapalish trees on the right side up the *tilla*. At left as well, there are dense plantation areas, which have developed the shape of natural vegetation. After crossing the elevated portion, the trail slopes down and you will find the place from where you started the trail.

4.2 Medium Trail (one hour walk)

4.2.1 Specific Information of the medium trail

Location: starting point 24.32462 N and 91.78717 E (from the Forest Beat Office of Lawachara NP and ends at the same point after a loop)

Length: about 2 km

Width: 0.5 m to 2 m

Type of path: Entire trail is *kacha*, sometimes muddy and wet at places

Type of soil: Sandy to sandy clay, sometimes very wet and sticky at places

Topography: Entire trail is almost plain except the down slopes for streams and one elevated tilla along the trail.

Vegetation: At the beginning of the trail, there are nice roadside plantations of Lohakat (*Xylia dolabriformes*), Raktan (*Lophopetalum fimbriatum*), Teak (*Tectona grandis*) etc. These trees are very tall with unique feature at straight lines along the entrance road of the Lawachara NP. The trails then moves through different plantation areas of Teak, Jarul, Chapalish, Lohakat and others. There are many herbs and shrubs within this mixed plantation sites of the Lawachara NP.

Wildlife: Macaques are common even near to the FD Beat Office from where this trail starts. Holloos can also be observed near to this point. Birds are frequently observed along the trail specially in the dense forests and near to the bamboo bushes. Reptiles are seen irregularly along the trail.

4.2.2 Description of the medium trail sights

The trail starts from the Lawachara Forest Beat Office and goes to the southeast direction and reach the metallic road after about 50 meter. After the starting point, if you walk along the trail there is nice plantation of Lohakat and Raktan on both sides of the trail. On both sides, there are nice dense forests. To the left, the forest is natural and to the right the old plantations have attained natural form. There are two culverts along the trail over two natural streams, which pass through. After a while the trail crosses the metallic road over goes to Srimanagal. After crossing the road turn right and move about 10 meter, again turn left and enter into the forests through a small trail. There is a forked Chapalish tree and at the right Shegun, Gamar and other tree species are found.

If you walk along the small trail through the forest, on both side there are large planted trees specially of Lohakat, Chapalish, Gamari, Teak and others (Photo 6). Birds are commonly seen and their sweet voices are frequently heard in this area of the forest. The trail is very narrow and the adjacent area of the trail is open and covered with grasses.



Photo 6: A partial view of vegetation along the medium trail at Lawachara NP

After a few minutes walk, there is a stream across the trail. The water is transparent and flows gently from right to left. After crossing the stream, there are plantation areas

of bamboo and cane along with other tree species. Some high volume Chapalish trees are observed here. This forest area is the true representative of the rain forest characteristics. If you walk along the trail you will really enjoy the scenery and charm of the rain forests. Macaques are sometimes seen in this forest area.

The trail then turns right to a smaller walking path which is not well defined and developed. Some of the portions of this trail that goes towards Jarul plantations are in fact muddy and wet. Once you enter there, you will enjoy the silence of the forest and sweet voices of the birds. The forest is dense here mainly with undergrowth and some planted tree species.



Photo 7: A partial view of Jarul plantation along the Medium trail at Lawachara NP

Afterwards, the trail passes through a hilly forest area as a small narrow path and reach the Jarul plantations (Photo 7). There are many well shaped big Jarul trees there. Some of the plantation area is mixed with Jarul and Teak with other undergrowth including bamboo.

After the Jarul plantation area, the trail reaches the metallic road towards Srimangal. Cross the road and walk about 10 meter towards left and then again enter into the forest through a small narrow trail. Walk along for 50 meters, you will find that another small trail turns into right towards forest beat office. This intersection of two trails is a nice point to stand for a while and enjoy the beauty of good forests of Chapalish, Lohakat, Kadam and Teak.

Turning right if you move through the trail (take several left and right), you may observe some of the birds and monkeys that are jumping around the trees. Hollook gibbon may also be observed in this less disturbed area of the NP. There are some bamboo and

cane plantations around the trail particularly near to the streams. Be careful while passing through cane plantations because the thorns of cane are very sharp to cut your skin.

To reach the Beat Office you have to cross the stream which is about 10 meter wider. It may not be possible and it may not be possible during rainy season to cross the stream unless a bamboo made culvert is developed there to catch the entrance road that ultimately goes to FD office. This trail basically merges with entrance road of the FD office near to a big culvert (2nd one) and then you have to turn left to reach FD office.

4.3 Long Trail (Three hours walk)

4.3.1 Specific Information of the long trail

Location: starting point 24.334667 N and 91.814722 E (from the entrance road of Bagmara camp and ends at the Lawachara Forest Bungalow).

Length: about 5.5 km

Width: 1m to 3 m

Type of path: The entire trail is earthy (kacha), sometimes muddy and sticky (Photo 8)

Type of soil: Sandy to sandy clay



Photo 8: Study team walking along Long trail

Topography: Most of the portion of the trail is plain but there are several high elevated portion of the trail. The topography of the both sides of this trail is of undulating terrain with vegetation cover. There are many streams across the trail and small culverts are placed across several streams along this trail.

Vegetation: There is dense multilayered forest on both side of the trail. Except a little patch of natural vegetation of about 200 acre area, the entire forest area is covered with plantations of Teak, Jarul, Gamari, Chapalish, Kadam and many exotics such as Eucalyptus, Acacia and Malacana. However, most of the planatation areas have developed natural form of forest structure.

Wildlife: Macaques are commonly seen while walking along the forest trail. Birds such as Dove (Ghughu) and Myna are frequently observed along the trail. Sometimes another endangered bird named Dhanesh may also be observed along this trail. There is some specific portion of this trail where hollook (gibbon) are usually observed while walking along the trail.

4.3.2 Description of the long trail sights

This trail starts from the *Bagmara* Camp of the *Lawachara* NP. After getting of from car/ bus near to the camp at the beginning of entrance path to the camp, follow the trail through planted forest. There are plantations of *Champa*, *Chikrassi* and *Mehegony* trees around the trail especially to the right. If you move along the trail you will find plantations of various trees at your right and Agar plantation at your left after the camp. The trail is about 3 meter wide at this portion and a bit elevated. After a certain distance, there is a railway line (Photo 9) crossing through the forest. Cross the railway line very carefully as there is no established rail crossing. After crossing the railway line, there is a small earthy path enters into the forest. The forest at this point mainly consists of plantations of different tree species.



Photo 9: A partial view of Railway line crossing through Lawachara NP

Move along the trail, you will find Teak, Jarul and Bamboo at your left and bamboo alone at your right. There is moderately dense undergrowth on both sides of the forest. After this part of the forest, there is an intersection of the trails. You need to follow the straight one to maintain the track. There are *Chambal*, *Jaur*, *Chapalish*, *Neur*, *Garjan*, and Teak around the intersection. If you move along, the trail is a bit sandy. To your right, the forest is dense and elevated and to your left there is betel leaf cultivation area of different tree species. After a certain distance there is nice view of nature. After a few ups and downs of the trail, you will find *Pan punji* (*Buti jam*, *Chatian* etc.) at left and Teak plantation at your right. Move along, there are *Chaur*, *Kadam* plantations to your right and *Pan Punji* with *Balaj*, *Ban badam* to your left. Nice chirping sound of the birds will please you.

After a certain distance, there is a small stream that you have to cross. You will find some big Chapalish trees adjacent to Pan punji to your left and bamboo plantation to your right. There is another stream after a while at the end of bamboo plantation. After the stream, there is Teak Plantation to your right and *pan punji* to your left. Then you will reach a temporary patrolling resting place within the Teak forest. There is a trail that goes to *khasia punji* through *Pan punji* (betel leaf cultivation area). If you are interested to have a look of betel leaf cultivation and to know more about life style and culture of the Khasia people, follow the left trail and return to this point again.

If you follow the left trail, there is a beautiful betel cultivation area (*Pan punji*) where the planted trees (such as *Jarul*, *Ratta*, *Hinga*, *Chapalish*, *Kadam* etc.) are managed to support the betel leaf plants. The *Khasia* people know how to clear and prune the tree branches and how to nurse the betel plant for better production (Photo 10).



Photo 10: A partial view of betel leaf cultivation area of Khasia

The Magurchara Khasia punji is situated above the hill (tila) near to Pan punji after a certain distance. To reach the Khasia village you have to move forward to cross several elevated *tillas* along the trail and move towards down slope to reach a wider stream through the Pan punji. During the rainy season, the stream is full of water but during dry season the water flow is very little. After crossing the stream you will reach the Punji with a few minutes walk.

Once you are at the Khasia punji, you will have the opportunity to learn how the Khasia people lead their life with indigenous knowledge and technology. If you are interested, you will also be able to know their lifestyle (Photo 11) and culture and how they manage their surrounding environment in a sustainable manner. Have a look how they sort out the betel leaves for marketing. However, you need to get prior permission from Headman of *Khasia Punji* to visit them.



Photo 11: A partial view of a house of *Khasia* community

Having an idea regarding the Khasia life style and culture, walk down the tila and follow the same path to reach the point from which you turned left to see Khasia life style. After crossing the area, the trail merges with the common trail which connects the forest area with Bagmara camp of FD. When you reach the trail, turn left and move along the trail, which is narrow and goes through the poor density forest. Most of the area is planted by Teak, Jarul, Gamari, Acacia, Malakana etc. Small narrow streams across the trail are worth observing.

This trail merges with another bigger trail which goes to the Forest Bungalow. Take the trail turning left and move along to find a large area of Teak and Jarul plantations. This portion of the trail is muddy and wet, very difficult to walk through on track as there are ups and downs in this muddy trail and thus a bit slippery.

After a while the trail is elevated with dense vegetation on both sides of high *tillas*. The pleasant sound of birds will help remove the tiredness of the trekkers in this area. The

dominant plant species are Jarul, Kadam and Teak with bamboo and cane as under planting. Some of the reptiles may be observed in this area if you keep your footsteps slowly.

Some streams crossing this trail do not have culverts and so be careful when jumping over. The water in these streams is very clean and cool and vegetations are unique and distinct along these streams (Photo 12).



Photo 12: View of a stream that passes across the long trail at Lawachara NP

Move further and you will find that the trail is dry with sandy clay path and well defined. One trail goes rightward towards Lemon garden and Finlay tea garden. If you are interested, you can take the quick overview of the area and return to the original trail.

Subsequent portion of the trail is full of thrill and adventure as you will enjoy the silent impressions of the forest site. If you are lucky, you will hear the sound of hollook (ho...ho...ho...ho....). Macaques and Honumans may start jumping from one tree to another seeing you as newcomer to their territory.

You will find another trail, which goes to Marhill Punji and a Lemon garden. However, if you turn left and walk along the trail, you will find plantations of large Chapalish trees on right side of the trail on the *tila*. On the left, the dense forests in the flat area consist of *Jarul*, *Chapalish*, *Dewa* etc as major tree species with mixture of bamboo. Hollok and Macaques are often seen in this area and birds may keep you pleased with charming

sounds. As you walk along, there are good forests on both side of the trail with multi storey of trees of *Kadam*, *Dewa* and *Chapalish*. On left, there are flat valleys with different herbs and shrubs (Photo 12) after which there are dense forests with multi storeys.



Photo 12: A partial view of cane plantation with other plants at Lawachara

After 50 meters walk, you will find that the trail enters in between two up *tillas* with close canopy forest. This point is of real forest thrill as you will find many large sized Chapalish trees on the right side of the *tilla*. On left, there are dense plantations, which have developed the shape of natural vegetation. After crossing the elevated portion, the trail slopes down and you will find a open place which ends up with Chloroform tree (locally called) in front of you (Photo 13). Then walk along the brick soling path that will lead you to the Forest Bungalow and enjoy the beautiful surrounding of the Bungalow on the *tilla* (Photo 14). The surrounding scenery of the bungalow is very nice and charming. Take a rest at Bungalow and relax.



Photo 13: Base of the Chloroform tree (locally called), entrance road to FD Bungalow



Photo 14: A partial view of FD Bungalow

5. What to do in the NP

- Wear comfortable and field compatible clothes and shoes
- Use sunglass and sunscreen to protect yourself from sun burning
- Take necessary repellents for leech
- Walk silently to observe the wildlife
- Take sufficient drinking water and dry food specially for the long trail
- Take a compass to know the various directions
- Take a camera and a binocular to catch some of the rare scenery of the Lawachara NP
- Take necessary permission to enter into the indigenous Forest Villages

6. What not to do in the NP

- Never throw the litters on to the ground of the NP
- Do not make noise that disturbs the wildlife
- Do not agitate wildlife
- Do not tear or collect any parts of plants
- Do not walk alone and try to form a group to visit the NP
- Do not disturb lifestyle and culture of indigenous people

7. Suggestions and recommendation

- Some of the trails are wet at places and slippery. These portions of the trails can be improved by putting gravel on to the ground so that visitors can easily walk through.
- Leeches frequently catch human body while walking along the trails of the Lawachara NP. Therefore visitors should use leech repellent before start hiking along the trails
- Some of the places of the trails are very remote and less secure for visitors unless FD staff patrol those areas more frequently
- Some of the trails are too narrow to walk freely and therefore future development of the trails will be essential. These trails could be made wider by trimming some of the adjacent undergrowth of the existing trails.
- More FD staff will be needed to strengthen the Beat for patrolling and to assist eco-tourists for secured hiking through the NP.
- Some wooden bridges need to be constructed across a few streams
- Detailed signboards are required to set up along the trails that shows the way to the visitors and provides information concerning the attractions of the trails.
- Brochures describing the attractions of the trails are also important to be prepared for the visitors containing detailed information about the trails. It should

be simple, attractive in design and handy so that nature lovers can easily carry during their hikes.

- Local stakeholders who were involved in trail study could be developed as professional tourist guide for the site through appropriate training and support.