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A Strategy for Nature Tourism Management in Sri Lanka



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List of Abbreviations

CCD	Coast Conservation Department
CEA	Central Environmental Authority
CTB	Ceylon Tourist Board
DAP	Department of Agriculture, Peradeniya
DNZG	Department of National Zoological Gardens
DWLC	Department of Wildlife Conservation
FD	Forest Department
NGO	Non-Governmental Organization
SDA	Southern Development Authority

Executive Summary

1. ***Nature tourism is defined for the purposes of this paper primarily as travel involving certain activities including wildlife viewing, rainforest trekking, birdwatching and marine snorkling and diving.*** *To a lesser extent, nature tourism can include water sports, visits to botanical parks and capture wildlife (eg. Pinnawela Elephant Sanctuary, Peradeniya Botanical Gardens and the Kosgoda turtle hatcheries), white water rafting and mountain biking. However, general beach tourism where sun-bathing is the main activity, is not included in this definition.*

2 ***Nature based tourism can be defined narrowly or more broadly depending on the purpose of travel.*** *The narrow definition covers only those tourists whose main purpose of travel is to enjoy a nature tourism experience, or more broadly to include tourists for whom nature tourism is just one of the purposes of a trip.*

3. ***Already an estimated 1% of the population, visit a national park each year.*** *Taking the broad definition of nature tourism, it is estimated that in 1995 over 300,000 visits were made by national tourists to the 5 main Department of Wildlife Conservation (DWLC) national parks of Yala, Horton Plains, Bundala, Uda Walawe and Wasgomuwa. About 10,000 national tourists visited the two main Forest Department (FD) parks of Sinharaja and Udawattakale. Assuming that some people visit parks more than once in a year, it could be estimated that as much as 1 per cent of the 18.1 million population may visit a protected area each year. If nature sites such as the Pinnawela Elephant Sanctuary are included, then 343,000 national tourists visit the orphanage every year.*

4. ***Domestic nature tourism has shown rapid growth over the last five years.*** *This interest should be harnessed to increase visitor awareness of biodiversity conservation. This requires investment in Visitors centers, nature trails, water holes and other facilities to improve wildlife viewing and the provision of educational material. The parks also require basic amenities such as toilet facilities at all park entrances and at the rest areas inside the parks, which will improve the quality of the experience.*

5. ***Among foreign tourists, there are an estimated 2000 specialist bird watchers each year, and there were in 1995 more foreigners visiting Bundala and Sinharaja than nationals.*** *This suggests that as much as 0.5 per cent of arrivals are specialist nature tourists, These bird watchers are a lucrative niche market catered to by at least 5 specialist tour companies. Other bird watching areas such as Kalametiya should be developed with high price facilities for bird watchers.*

6. ***An estimated 10-15 per cent of foreign tourists visit at least one national park.*** *73,000 foreign tourists visited the 5 main protected areas of the DWLC in 1995. In addition, about 7000 foreign tourists visited the main FD parks of Sinharaja and Udawattakale in 1995. After allowing for the fact, that some visitors may visit more than one park, it is estimated that about 15 per cent of the 403,000 tourist arrivals in 1995 visited a protected area in Sri Lanka. In addition, 164,600 or 40% of the foreign tourists in 1995 visited the Elephant Orphanage at Pinnawela.*

7. ***This demand by foreign tourists for nature tourism is growing rapidly.*** *From 1994 to 1995, the number of foreign tourists to the 5 main DWLC parks increased by 10,000 or*

15%, although the total number of tourist arrivals to Sri Lanka declined slightly from 407,000 to 403,000 in the same period. This nature visitation rate has declined slightly during 1996 due to the ongoing war, with 20,000 foreign visitors to the 5 main DWLC parks in the first 6 months of 1996. However, the 1996 DWLC visitation rate is still likely to exceed the 1993 visitation rate of 62,000.

8. ***The large numbers going to wildlife areas require careful management to minimise negative impacts on the flora and fauna.*** *Yala Block 1 and Horton Plains had in 1995, the highest visitor density of about 15 visitors and 29 visitors per hectare per year, compared to Wasgomuwa, Uda Walawe and Bundala which had a visitor density of less than 6 visitors per hectare per year. These problems can be reduced by diversifying visitation away from Yala and Horton Plains by upgrading other protected areas. The Hikkaduwa Marine Sanctuary and the coral reef at Unawatuna also require careful management to reduce pressure.*

9. ***Nature tourism should be promoted by the Ceylon Tourist Board to increase the number of tourists visiting Sri Lanka.*** *Despite Sri Lanka having the highest biodiversity per unit of area in Asia, there is very little marketing by the Ceylon Tourist Board and other agencies. Many countries, such as Nepal, Kenya, Ecuador, and Costa Rica have successfully promoted nature tourism to increase visitor arrivals. Costa Rica and Nepal had, by the late 1980s, over 25% and 36% of foreign tourists respectively, visiting a national park. Most tourists arriving in Sri Lanka are unaware of the natural beauty of the country. Sri Lanka's growth potential includes its high density of bird and to a lesser extent wildlife, its great variety of natural landscape (rain-forests, coral reefs, savanna landscapes, tropical wetlands) and easy accessibility as most sites can be reached within 3-5 hours from Colombo.*

10. ***The country can benefit environmentally from this foreign tourism by investing some of the revenue earned in biodiversity management.*** *This requires that some revenue is kept by the relevant authorities and invested in biodiversity management. This scheme currently operates at the DWLC, but not yet at the Forest Department or Peradeniya Gardens, although it is under discussion. At the DWLC, about 85% of this revenue is sent to the Treasury, but about 15% or Rs. 8 million in 1995 was kept by the DWLC in the Wildlife Fund. However, the DWLC has yet to fully invest this revenue and the Wildlife Fund has a large surplus.*

11. ***The revenue from protected areas could be increased significantly if the Ceylon Tourist Board (CTB), DWLC and FD assist the private sector to promote "value added" activities around protected areas.*** *This would include hotels and tourist attractions such as elephant safaris. This also requires that the private sector tourist industry is environmentally responsible and is able to provide benefits to the DWLC and to local people. At the moment, there is no forum in which the tour companies can meet with the DWLC and FD and discuss their mutual concerns.*

12. ***Nature tourism generates annual economic benefits of over Rs. 770 million through income earned and employment generated by hotels near protected areas and other nature tourism sites, nature tour operators and other services, such as jeep hire and elephant rides (see Table).***

13. ***Foreign visitors make up only 20% of the total 320,000 annual visitors to the DWLC parks, but they generate more than 60% of the DWLC annual revenue.*** *The country can economically benefit from foreign nature tourists by charging high entrance fees to maximise the revenue earned. Already foreigners are charged higher rates than locals, and the DWLC and Peradeniya Botanical Gardens have recently increased their entrance fees leading to significant growth in entrance fee revenue. The revenue from the DWLC in 1995 was over Rs. 56 million, a considerable increase from the 1993 figure of Rs. 47 million. However, 'the Forest Department has yet to raise their entrance fees, which are 12 times lower than the DWLC fees (Rs. 50 as against Rs. 630). In addition, the FD has to invest in staff and facilities to collect entrance fees at the other parks. At Ritigala, it is estimated that the FD is losing from the estimated 2000 foreign tourists at least Rs. 100,000 a year, while at Knuckles a minimum estimated annual visitation of 1000, means a lost revenue of Rs. 50,000. Finally, the level of visitation must be carefully recorded by the main offices at DWLC and FD as it is a key management tool.*

Table: Summary of Estimated Economic Benefits from Nature Tourism (1995)

Source of revenue	***Revenue (Rs. million)***
Dept of Wildlife Conservation (charges and fees)	*56.0*
Forest Department (charges and fees)	*0.8*
Pinnawela Elephant Orphanage (entrance fee)	*14.0*
Peradeniya Botanical Gardens (entrance fee)	*30.0*
Accommodation: Yala	*5.0*
Accommodation: Horton Plains	*2.0*
Accommodation: Sinharaja and Uda walawe (Embilipitiya)	*17.0*
Accommodation: Bundala (Hambantota)	*41.0*
Jeep Hire	*9.7*
Water Sports	*3.3*
Diving	*1.3*
Elephant rides	*9.9*
Specialised tour operators	*150.0*
Conventional tour operators	*22.0*
Nature tourism hotels (Kandalama, Culture Club, Lodge and Village at Habarana and Hunas Falls)	*362.0*
Total	***770.0***

Source: *DWLC, FD, DNZG and author's survey.*

14. ***In less developed rural areas, nature tourism can be particularly useful in providing employment possibilities and should be promoted by organizations such as the Mahaweli Authority and the Southern Development Authority.*** *For example, at Rekawa, Koggala, Unawatuna and Muthurajawala nature tourism is being promoted as a way of providing jobs in less developed regions. Tourist Accommodation in particular has a high labour intensity, with almost 2 jobs created per hotel room.*

15. ***The nature tourist market is a particularly attractive niche market as there is some evidence that nature tourists have higher incomes than the average tourist, stay longer and spend more on locally produced products and services.*** *With the problems of the tourist industry due to the war, nature tourism represents a niche*

market which can command a premium. Many private tour operators feel that nature tourism has considerable growth potential. Promotion of nature tourism would also accord with the three main objectives of the Tourism Master Plan prepared by the Ceylon Tourist Board (CTB) of moving away from low budget mass beach tourism by selecting activities that:

i. *Upgrade existing attractions and product*
ii. *Diversify the product mix and its capacity*
iii *Develop new circuits and product packages inland, including new tourist areas.*

This requires the Ceylon Tourist Board taking an active role in promoting nature tourism.

16. ***In some cases, the profits from nature tourism are reduced by the nature tourism operators undercutting each other.*** *This also has negative environmental effects when it causes overcrowding. This is evident in many areas such as among jeep operators to national parks, boat operators to Hikkaduwa, coral divers at various locations, water sports operators at Bentota and amongst the tour operators. This problem of cut-throat competition is common to the whole travel industry, but is particularly prevalent in the nature tourism industry as the "attraction" (nature) is often an open access resource. This can be avoided by creating incentives for cooperation, such as forming associations (eg. Hikkaduwa Glass Bottom Association), licensing out concessions (eg. concession for providing jeeps, water sports or diving services), agreeing minimum price levels, or physical rationing of entry (enforced by the state). The state authorities must take action against illegal entrants, in exchange for which the private sector must agree to and maintain an agreed price range and environmental standards.*

17. ***From the explanation above, three environmental and economic objectives of a nature tourism management strategy have emerged.***

i. *Improve marketing and promotion of nature tourism to assist the tourist industry*
ii. *Increase environmental benefits of nature tourism*
iii. *Increase economic and employment benefits from nature tourism*

A thirty three point Nature Tourism Management Strategy to increase the benefits of nature tourism is given below. This strategy needs to be developed by the local community and relevant NGOs with:

1. *Private stakeholders: nature tourism hotels, tour operators, and providers of ancillary services (eg. jeeps and water sports),*

2. *Government stakeholders: Ceylon Tourist Board (CTB), Department of Wildlife Conservation (DWLC), Forest Department (FD), Coast Conservation Department (CCD), Mahaweli Authority and Southern Development Authority (SDA).*

1. Introduction[1]

Nature tourism is defined as visiting a natural site such as a coral reef, rainforest, wetland, or savanna to enjoy the natural beauty. This does not include conventional beach tourism. However, "nature tourism" is broader than the definition of "ecotourism" which requires that the travel is in an "environmentally friendly fashion".

Several earlier studies have identified the potential for nature tourism in Sri Lanka, including reports by Baldwin (1993), Wickramanayake (1992) and Vidanage (1995). These studies focus on the potential for nature tourism, and proposals for expanding nature tourism. This study seeks to build on this earlier work through being more specific both in quantifying the economic benefits of nature tourism and in giving precise recommendations to assist the existing nature tourist industry in Sri Lanka. The issue of economic benefits is vital to demonstrate to policy makers that nature tourism can provide a source of foreign exchange for the government and employment for local people. About 28% of Sri Lankan land is now a protected area despite severe land scarcity and the imperative for economic growth. Unless the protected areas can be shown to have economic benefits, then either other government agencies or the local people themselves will shift the land to more productive uses (Steele, Kathiravelu, 1995).

The need for concrete recommendations to help the existing tour industry became apparent following detailed interviews with private tour operators. While it is certain that there is potential for greater nature tourism, the first priority should be to assist the existing nature tourist developers in Sri Lanka. At present the industry is receiving very little support, and often active resistance from state agencies.

A third goal of the study is to demonstrate how well managed nature tourism can also provide environmental benefits. These environmental benefits can include greater funds for conservation, reduced damage from tourists and educational opportunities which make the public aware of the importance of biodiversity conservation.

Section 2 of the study identifies existing nature tourism and nature tourism activities. Section 3 presents a detailed summary of the main nature tourism sites managed by the DWLC, FD, Agriculture Department and the private sector. Section 4 presents the environmental and economic objectives of planning a strategy to increase the benefits of nature tourism. Section 5 presents the economic benefits of nature tourism to the Treasury, DWLC and FD, the private sector and to local people in terms of employment. Section 6 identifies future areas for nature tourism and nature tourism activities.

2. The Existing Market for Nature Tourism

2.1 The Existing General Tourist Market

The **national tourism market** is growing in Sri Lanka. This is both as a result of growing per capita incomes, and a long tradition of travelling for recreation. The main structure of national tourism is short trips over public holidays, particularly to the shrines at Kataragama and to a lesser extent to Anuradhapura, Polonnaruwa and Sri Pada (Adams Peak).

However, the value of this national tourist market is currently low for the tourist industry, as generally people obtain their own transport and tour operators are not required; and most trips are

1 The authors wish to acknowledge assistance from the staff of the Department of Wildlife Conservation and support from the USAID/NAREPP Project.

day trips and hence accommodation is not needed. If accommodation is required it will generally be at pilgrim halls and religious places, rest houses or with friends/relatives. Even so, in 1991, domestic bed nights accounted for 16% of demand (CTB, 1993). In addition, with the decline in foreign arrivals, the domestic market is now being explored by many hotel companies which are offering special deals for nationals.

The existing **foreign tourism market** in Sri Lanka is characterized by low budget, mass beach tourism. As the Tourism Masterplan acknowledges : "In its major European markets, Sri Lanka is now predominantly known as a relatively inexpensive beach destination". Most tourists come either to stay at one of the hotels on the South east coast, or to do the round trip staying at several hotels. The standard round trip includes Colombo, the ancient cities (Polonnaruwa, Sigiriya and Annuradhapura), the hill country (Kandy and Nuwara Eliya) and a beach on the south coast. About one quarter of the round trips also include a visit to a national park.

In 1994, over 50% of foreign tourists were from Europe (with 23% from Germany), while 16% was from Asia (India, Japan and Malaysia). Tourist arrivals are sharply seasonal with most arrivals from December to May. In 1997, the average tourist stay was 10.4 nights, with average receipts of $58.6 per day (CTB, 1998).

The structure of the foreign tourist market is that a foreign travel operator will arrange a tour package with a local tour operator (in the case of a round trip) or with a local hotel company (in the case of a beach stay). The foreign tour company will make 15-25% profit on the cost of a package (which includes the airfare), while the local tour operator will make about 10% profit on the package cost (which will not include the airfare).

In 1995, the national gross revenue from tourism was estimated to be Rs. 12.5 billion (US$ 212 million).

In Sri Lanka, there are now about 286 tour companies (Pace, 1995), 364 hotels, and about 55 paying guest houses (CTB, 1996). In some cases, both tour companies and hotels are owned by the same parent company, such as Aitken Spence Tours and Hotels, Jetwing Travels and Hotels, and John Keels Hotels with Walkers Tour Company. These three companies dominate the industry with over 10 hotels each and take over 50% of the total tourist arrivals. The tourist industry in Sri Lanka grew steadily from 1967 to 1982, reaching just over 407,000 arrivals in 1982. The civil disturbances in 1983 reduced tourism significantly and arrivals continued to drop until 1988/89 to a low of about 182,600 in 1988. In 1990 tourism started to pick up again and grew steadily reaching its original 1982 level of 407,000 arrivals again in 1994. However in 1996, arrivals again declined to 302,260, but had risen slightly to an estimated 366,165 in 1997.

The five good years between 1990 and 1995, produced significant expansion in hotel capacity. In 1995, there were, 10,748 registered rooms available and 20,929 beds. Some of these new hotels were in 1996 running at a loss with below 50% and even 40% occupancy. This is in contrast to 1995 when occupancy was an average of 52%. By 1997, average occupancy of graded rooms had picked up to 49%. In general, tour companies have suffered less from the recent decline in foreign arrivals as they have much lower fixed costs than the hotel companies, many of whom have put up new hotels.

In order to move away from low budget, mass beach tourism the Tourism Master Plan identifies the need to:

1. Upgrade existing attractions and product,
2. Diversify the product mix and its capacity,

3. Develop new circuits and product packages inland, including new tourist areas.

Central to all three of these recommendations is **nature tourism** as it requires upgrading existing facilities which are lacking, presents an important way to diversify product mix and is a way of developing new circuits.

2.2 The Existing Nature Tourism Market

Nature tourism is defined as visiting sites of natural beauty or interest for pleasure. This term is preferred to ecotourism as ecotourism is more limited, referring generally to small scale tourism with concern for the environment.

Nature tourism can be viewed at as a marketed "experience" in the way that films, or books provide entertainment. Tourists, both nationals and foreigners are the consumers that demand these experiences. The nature tourism "experience" is supplied by the tourist industry, which includes both private and public organizations.

2.2.1 Nature tourism sites

In terms of nature tourism "experience", 11 categories of experience are available in Sri Lanka. These are given in Table 2.1, listed in order of the importance of nature to the experience. The later items focus on sports where enjoyment of natural beauty is combined with physical exercise and excitement.

1. Rainforest trekking
2. Wildlife viewing (mainly mammals)
3. Birdwatching (from boats or from land)
4. Marine snorkling and diving
5. Fishing
6. Captive nature (eg. Pinnawela Elephant Sanctuary)
7. Botanical gardens
8. Other: Blow Hole and Madol Duwa island trip
9. White water rafting
10. Mountain biking
11. Water sports (eg. water skiing and windsurfing)

Thus the definition of "nature tourism" is based on the type of activities, rather than "eco tourism" which also focuses on the extent to which these activities are conducted in an environmentally friendly fashion.

Table 2.1 shows the type of nature tourism with examples, including ownership of the site, approximate entry price, location, suitable season and potential for expansion of site. Ownership of site gives the organization control of the site, or if there no organization in "control", then this is known as "open access". For example access to the reef at Unawatuna, or bird watching at Kalametiya are not regulated by an agency, hence these are open access.

2.2.2 Conclusions from a review of nature tourism sites

As table 2.1 illustrates there is a wide range of potential nature sites located all over the country. The industry combines both private and public sectors. Most of the wildlife sites in the dry zone are managed by the DWLC, while most of the rainforest sites are controlled by the Forest Department. Marine sites are generally open access.

The entry price to a site (if there is one), is generally lower for nationals than for foreigners. The DWLC has a higher tariff than the Forest Department. The diving and mountain biking activities tend to be prohibitively expensive for the national market. However, water sports are not very expensive.

The seasonality of the attraction is generally a problem for rainforest trekking, bird watching and snorkling and diving. Rainforest trekking can be treacherous during the wet season due to leeches. Snorkling and diving is difficult during the monsoons as the sea conditions are too rough. Bird watching is best from November to April when the migratory birds fly to Sri Lanka from temperate countries.

Table 2.1: Nature Tourism Market Categorization

Type	Example	Owner-ship of site	Approx entry price (1996) N = nationals, F = foreigners	Main location and season	Potential for expansion
Rainforest trekking	Knuckles, Sinharaja, Peak Wilderness (Randenigala), Ritigala, Horton Plains	Mostly FD, (except Horton Plains)	N: Rs. 20 F: Rs. 50	Wet zone (south west), Non monsoon	High
Wildlife viewing	Yala, Uda Walawe, Wasgomuwa, Mineriya tank, Sigiriya	Mostly DWLC	N: Rs.50 F: $12 (DWLC fees)	Dry zone (south east and north), Non monsoon	Medium except Yala, which is congested
Birdwatching (Boats and Land)	Bundala,Kalametiya, Muthurajawela Debara Wewa, Bentota	DWLC andopen access	N: Rs. 50 (DWLC) F: $ 12(DWLC)	South west coast, migrant birds from November - April	High
Marine snorkling and diving	Hikkaduwa, Unawatuna, Tangalle, Bentota, Kirinda (Great Basses)	Open access	Rs. 200 for snorkel, Rs. 2,000/hour for diving	South coast Non-monsoon	High
Sport fishing	Negombo, Bentota	Open access	Rs. 450-3,500 per hour	Negombo	Medium
Captive wildlife	Elephant sanctuary (Pinnawela),	State.	N: Rs. 3-10 F: Rs. 40-75	Kegalle	Low
	Turtle hatcheries, Kosgoda	Private	N: Rs. 5 F: Rs. 50	Kosgoda	Low
Botanical gardens	Peradeniya, Haggala	Dept. of Agriculture	N: Rs. 12 F: Rs. 65	Hill Country	Low
Other	Blow Hole at Kadewella, Boat trip at Madul Oya	Open access	Rs. 25 for a boat ride at Madul Oya	South coast	Low
River rafting	Kelani	Open access	Rs. 1,000-3,000 per day	Kelani	Medium
Mountain biking	Throughout the Island	Open access	Rs. 3,500 per day	Various	Medium
Water sports	Negombo, Bentota,	Open access	Rs. 200/hour for water skiing, Rs. 150/hour wind surfs	South coast	Medium

Source: DWLC, FD, DAP and author's survey.

Table 2.2: Estimated Demand for Nature Tourism (1995)

National Park	Total Number of Visitors (local and foreign)	% Local	% Foreign
Yala	212,000	81	19
Bundala	26,394	47	53
Horton Plains	102,188	91	9
Wasgomuwa	302	?	?
Udawalawe	30,992	76	24
Total DWLC	372,000	80	20
Sinharaja (1994)	7,450	38	62
Udawattakale	10,376	66	34
Pinnawela	508,047	68	32
Kosgoda turtle hatchery	33,000	59	41
Peradeniya Botanical Garden	1,096,324	na	na

Note: na = not available.
Source: DWLC, FD and author's survey.

2.2.3 Nature Tourism Demand: the current size of the market

In terms of tourist demand, there are two main groups: local and foreign tourists. Both markets are growing in terms of interest in nature tourism.

Within these groups it is possible to separate "pure nature tourists" whose main purpose of travelling is to see nature, and "general nature tourists" for whom nature tourism is one of the attractions of a trip. Pure nature tourists include bird watchers and those whose itinerary is only nature tourism. General nature tourists include national tourists who, for example, are en route to Kataragama and will make stop overs at Hikkaduwa for the boat ride, the Blow Hole and Yala. Similarly, most tour companies catering to foreigners have a general round trip tour of Sri Lanka that includes a stop over at a national park, such as Yala or Bundala.

Estimates of the demand for nature tourism in Sri Lanka have not been compiled. Table 2.2 below shows an attempt to do so. As Table 2.2 shows national tourists make up about 80% of visitors to National Parks. Only for Bundala and Sinharaja are there more foreign visitors than nationals, showing the high interest by specialist foreign visitors in birdwatching. Table 2.2 also shows that an estimated 84% of DWLC visitation rates are focused on Yala (57%) and Horton Plains (27%).

For nationals, Table 2.2 shows that about 320,000 visitors went to the most popular parks of Yala, Udawalawe, Bundala, Horton Plains, Udawattakale and Sinharaja. The extent of demand can be estimated by finding the proportion of the 18.1 mn. population who visited a protected area. Assuming that some people visit parks more than once in a year, this suggests that as much as 1% of the population may visit a protected area each year. This is still a relatively high figure, especially as 2.64 million population in the north and east will find it difficult to visit a protected area. If nature sites such as the Pinnawela Elephant Sanctuary are considered, then as much as 343,000 visit this location each year. This figure also includes a

high proportion of school children, which is positive in terms of promoting awareness of biodiversity.

For foreigners, Table 2.2 shows that about 77,000 foreign tourists visited the main national parks of Yala, Udawalawe, Bundala, Horton Plains, Udawattakale and Sinharaja. The extent of demand can be estimated by finding the proportion of the 407,000 arrivals in 1994 who visited a protected area. Of the 400,000 tourist arrivals in 1995, allowing for the fact that some tourists may visit more than one park, this suggests that between 10-15% of the foreign tourists to Sri Lanka visit a protected area during their stay.

A broader definition of nature tourism would also include sites such as the Pinnawela Elephant Orphanage, and the Botanical Gardens. It is estimated that about 164,000 tourists visited Pinnawela in 1995, and over 100,000 tourists visited the Peradeniya Gardens. From this information it is possible to estimate that almost 40% of tourists have visited these attractions.

A more narrow definition of nature tourism would focus not on tourists who simply visited nature tourism sites but also those whose main purpose of travel to Sri Lanka was nature tourism. This would include the specialist bird watching tours organized by a number of tour companies. From a survey of tour companies offering this service, it is estimated that about 1000-2000 tourists each year travel solely for nature tourism. This would be about 0.5% of total tourist arrivals. However, this figure could be much higher with better marketing of Sri Lanka's rich natural beauty.

Another estimate of this segment of the tourist market is from a survey in 1994 of the main purpose of travel for 81 foreign tourists (Vidanage, 1995). 8.6% of the sample gave information of Sri Lanka's protected areas and cultural/native history as their main reason for coming to Sri Lanka. Focusing just on nature tourism, it was found that 3.7% of the sample gave natural history as the reason for coming to Sri Lanka.

This suggests that the current market for pure nature tourists is currently about 1-4% of foreign tourists, and the existing market for general nature tourists is about 10-40% of foreign tourists.

3. Survey of Existing Nature Tourism Sites

The following section reviews the main existing tourist sites of the DWLC (Yala West, Uda Walawe, Bundala, Wasgomuwa and Horton Plains); the FD (Sinharaja and Udawattakale), other government agencies (Peradeniya, Pinnawela Elephant Orphanage and the Muthurajawela Visitors Center) and the private sector (Kosgoda Turtle hatcheries).

Each of these 10 sites is identified in terms of a brief description of the site, data of the current visitation rate and the existing and proposed tourist facilities.

Section 6 will identify sites with future potential, including the Knuckles, Ritigala, Mutherajawela, Rekawa, and Kalametiya.

At present the main manager of nature tourism sites is the DWLC and Table 3.1 presents some of the latest visitor numbers for the DWLC. Table 3.2 presents a summary of entrance numbers to all of the 10 nature sites reviewed in this chapter.

3.1. Yala West (Ruhuna) National Park:

Yala West National Park is located at the south-east corner of Sri Lanka and has an area of about 127,000 ha. However, only Block 1 with an area of about 14,000 ha is fully open to the

public. The major activities are bird and game watching, especially elephant which are best seen from October to December. It is 305 km away from Colombo and access to the park is via Tissamaharama or Ratnapura. Park visitation peaked in 1994 before declining slightly in 1995 to 212,000 visitors, but Yala remained by far the most popular national park receiving about 57% of all DWLC visitors. The park was then closed for security reasons until mid 1998, and it is expected that visitation will increase again. The park had nine bungalows in 1995, but a number were damaged and are now being restored.

Table3.1: Visitation Rate of National Parks of Department of Wildlife Conservation (01.01.1996 to 30.06.1996).

National Park	Total Visitors					Wildlife Fund (Rs.)	National Revenue (Rs.)	Total Revenue (Rs.)
	Local		Foreign		Total			
	No.	%	No.	%	No.			
Yala	53,816	84	10,402	16	64,218	3,288,077	11,696,463	14,984,540
Udawalawe	11,279	86	1,787	14	13,066	799,314	2,072,637	2,871,951
Bundula	3,780	55	3,109	45	6,889	305,210	1,903,473	2,208,683
Horton Plains	51,177	93	3,981	07	55,158	19,328	2,963,844	2,983,172
Wasgomuwa	3,803	93	294	07	4,097	228,739	477,031	705,770

Source: DWLC.

Table 3.2: Comparison of Local and Foreign Tourists During 1993-1995

National Park	1993		1994		1995	
	Foreign	Local	Foreign	Local	Foreign	Local
Yala	43,223	150,876	45,986	199,751	41,135	170,865
Bundala	na	na	12,937	8,429	16,350	18,212(e)
Horton Plains	6,389	33,104	4,638	na	8,182	85,838(e)
Wasgomuwa	na	na	94	na	302	na
Udawalawe	5,103	5,449(e)	11,764	37,253(e)	7,438	23,554(e)
Total DWLC	na	na	62,482	na	73,407	na
Sinharaja	923	13,273	4,407	3,043	na	na
Udawattakale	1,412	4,709	2,749	6,534	3,524	6,852
Total FD	3,875	22,009	7,156	9,577	na	na
Pinnawela	na	na	na	na	164,611	343,436
Kosgoda	na	na	na	na	13,688	19,500
Peradeniya Botanical Garden	961,992(e)	180,590(e)	923,207(e)	162,919(e)	931,875(e)	164,449(e)
Total	na	na	na	na	na	na

Source: DWLC, FD, DNZG, DAP and author's survey.
na = not available.
e = Estimated based on DWLC data.
* = Assumption is that 85% revenue from foreigners and 15% from locals.

3.2 Uda Walawe National Park:

Uda Walawe National Park is located in the south of the central hills of the island, surrounding the man made reservoir of the Uda Walawe which is part of the park. This area lies in the Moneragala and Ratnapura Districts and has an area of about 31,000 ha. The major activities are game watching and camping (elephant and deer) and bird watching. Tourist visitation to Uda Walawe was 49,000 tourists in 1994, of whom 23% were foreign tourists. This declined in 1995, but increased in 1997 due to the problems at Yala.

3.3 Bundala National Park:

Bundala National Park is located in the low country wet zone in between the town of Hambantota and the Kirindi oya. The total area of the park is 6,216 ha which consists of 5 brackish water lagoons of an area of 2,250 ha. It is the only wetland in the country listed under the RAMSAR Convention as it hosts over 20,000 shorebirds. From September to February, the park contains 149 species (45% of Sri Lanka's avifauna) of resident and migratory birds. The visitation has been increasing each year and reached in 1995 about 26,000, of whom 44% were foreign tourists. As a result of the problems at Yala, visitation increased significantly in 1997.

3.4 Wasgomuwa National Park

Wasgomuwa is located in the north central area of the country with an area of 36,948 ha divided into three "Lots". It is about 200 km from Colombo. It was gazetted as a national park only in 1980 and 1984. In 1995, visitation to Wasgomuwa was very low at less than 500 per year, but it continued to increase. However, due to problems in the other parks and even at Yala, the DWLC is promoting this park. It has been assisted in this task by the interest of Aitken Spence, whose Kandalama Hotel is about 1.5 hours drive from the park.

3.5 Horton Plains

Horton Plains is located in the south central Hill Country in the Nuwara Eliya District and covers an area of only 3159 ha. The area was the newest national park being gazetted only in 1988. It is also of importance as the only DWLC National Park in the wet zone. The forest includes unusual vegetation due to the height of the park at over 2000m. The park has a well known viewpoint at World's End. Sambur can be seen grazing at dawn and dusk. Tourist arrivals have been growing each year and in 1995 had reached an estimated 101,000, of whom an estimated 91% were national tourists.

3.6. Sinharaja Forest

Sinharaja forest reserve is a unique, low land rain forest comprising about 11,187 ha, spreading across several administrative districts. It is one of the least disturbed and biologically unique forests in Sri Lanka. During the 1970's, Sinharaja forest was subjected to threat from selective logging for the plywood industry. Then the forest was declared a Man and Biosphere Reserve by UNESCO in 1978 and subsequently identified as a World Heritage Site in 1989. Due to difficult access, visitors to the forest mainly comprise of people such as students, researchers and conservationists, who visit for educational purposes. Sinharaja is the park where the percentage of foreign visitors is highest. Foreign visitors are attracted by the diverse multi-story vegetation and bird watching. Visitation in 1994 was 3000 national tourists and 4,400 foreign tourists.

3.7. Udawattakale Protected Natural Reserve:

Udawattakale Natural reserve of about 118 hectares close to Kandy town contains natural and semi natural tropical evergreen forest. It has

a long history being declared a national reserve in 1856, and as a sanctuary in 1938. It was gazetted as a strictly protected national forest reserve from May 1955. As it lies within the municipality of Kandy, adjacent to the Temple of the Tooth Relic, it is easily accessed by two main roads radiating from the city. Visitation was about 10,000 in 1995.

3.8. Peradeniya Botanical Garden:

Peradeniya Botanical Garden was established in 1821 during the British colonial period. The extent of area is 67 ha and consists of around 1,000 trees (400 labelled species) over 100 years old. Presently this garden is managed by the Department of Agriculture. It is located on the Peradeniya - Kandy road about 7.5 km from Kandy.

3.9. Pinnawela Elephant Orphanage

Pinnawela Elephant Orphanage is located in Kegalle District on the Kegalle Rambukkana route, 85 km away from Colombo. The site has 53 elephants. The orphanage was established in 1975 with 8 elephants in 11 ha of land belonging to the DWLC. In 1982 responsibility for the orphanage was shifted to the Zoological Gardens, Dehiwela. There has only been one elephant death recorded in its history.

3.10 Muthurajawela

The Muthurajawela Visitors Center is one of the most innovative examples of nature tourism currently in existence. The Muthurajawela marshes and Negombo lagoon form one large wetland of 7,000 ha between Colombo and Negombo. According to current plans, some 2,000 ha of this wetland will be conserved in its present state, mainly because of its rich plant and animal life and flood detention. The Muthurajawela Visitor Center was established by the Central Environmental Authority in late 1996. Its main aim is to provide information on the natural environment and raise funds for conservation management activities. The Center is run as a non-profit organization with excess funds used for conservation of the center. The long term plan is to convert the Center into a company with CEA as a member of the Board. The current visitation is about 400 per month, which does not include additional school groups. About 25% of visitors were foreigners.

4. Environmental and Economic Objectives of a Nature Tourism Management Strategy

Nature tourism has the potential to be both environmentally and economically beneficial (Boo, 1995; Steele, 1994; IRG, 1993). This is recognized in the Forestry Sector Master Plan (MAL&F, 1995) which states: "Clearly there is already significant financial benefits from visitors to protected areas, but there is much scope to increase this support, particularly in the forest sector. Also more attention must be paid to the distribution of benefits, so that incentives for conservation will be created, especially for the local people and communities."

In order to maximise the environmental and economic benefits of nature tourism, there is an urgent need for the various stakeholders to agree on a Nature Tourism Management Strategy.

Nature tourism involves many stakeholders, including:

1. The visiting public, including both national and foreign visitors,
2. Private tour operators and hoteliers,
3. The government agencies of the Ceylon Tourist Board,Department of Wildlife Conservation, Forest Department, Coast Conservation Department and Central Environmental Authority,
4. Local people.

At the moment, the local people and DWLC/FD do not generally feel as stakeholders in the nature tourism industry. In many cases hostility arises due to resentment over the profits generated by the tourist industry. This does not have to be the case. In some cases the tourist industry is willing to provide the DWLC with higher revenues if they feel they get an acceptable service provided by the park. In other cases, tourist developers are prepared to work with local communities. For example, a developer wanting to build a hotel and water sports complex at Rekawa lagoon agreed to shift to a cabana type design after consultation with the local community.

Thus the DWLC can benefit from nature tourism by:

a. Being involved in tourist planning with the private sector so they can encourage environmentally sensitive tourism.
b. Providing an improved service at a premium to the tour industry (eg. guaranteed bungalow booking).
c. By receiving additional funds for infrastructure improvement through co-financing by the private sector.

The local people can benefit from nature tourism through:

a. Policy by tourist industry of preferential recruitment of local people with necessary training provided.
b. Tourist developers including local people in planning nature tourism development so that they feel stakeholders in the process.
c. Access to low cost loans for promoting nature tourism (eg. loans for buying diving, boating equipment) from NGOs and government agencies.

In exchange for a more responsible and receptive tourist industry, the DWLC and other government authorities must see the nature tourist industry as partners and not enemies in biodiversity management. A number of specialist hotels and tour operators are genuinely interested in promoting tourism that does not damage the environment. However, often their development proposals and requests for an improved level of service meet with resistance from the government authorities. Similarly, a number of high profile private companies such as Baurs and Delmege have sought to provide financial and managerial assistance to the DWLC, but have been rebuffed.

The Nature Tourism Strategy could be based on the following three objectives:

i. Increase marketing and promotion of nature tourism
ii. Increase environmental benefits of nature tourism
iii. Increase economic and employment benefits of nature tourism

These are discussed in greater detail in the following sections.

4.1 Increase Marketing and Promotion of Nature Tourism

Positive information about Sri Lanka's nature tourism is what economists call a "public good" since the benefits of this information will accrue to all tour operators. Since competitors will also benefit from this general promotional material, no single tour operator is keen to spend money on this material. In cases of such "market failure" there is a need for government agencies such as the Ceylon Tourist Board to step in.

This information is required in CTB offices abroad, and should be available in Colombo, where many tourists plan their itineraries and at the nature tourist sites themselves.

4.2 Increase Environmental Benefits of Nature Tourism

At present the DWLC perceives its main function as wildlife management, for which tourists are seen as having a generally negative effect. For local tourists, there clearly are some environmental benefits if people learn to appreciate their natural heritage. However, it is important to understand the there are many additional, but less obvious environmental benefits from well managed nature tourism. These include the following:

i. Proper management of nature tourism will reduce negative impacts of tourism. This will help achieve the prime objective of the DWLC in protecting wildlife. The effects of poorly managed tourism are abundantly clear in Yala, where the overcrowding has affected the animals.

ii. Proper management of nature tourism which creates employment for communities living near the park may help to reduce negative impacts by the local communities into the park. This again will help to achieve the primary objective of wildlife protection.

iii. The DWLC currently controls 11% of the country's land area - one of the highest percentage shares in the world. As population growth and development continues the DWLC will come under increasing pressure to justify keeping such a large share of the country protected. If the DWLC can show that through tourism, they can generate a high revenue from the land there will be less pressure to convert the land to other higher value activities, such as agriculture. This conflict is already beginning in the controversy over salt pans and aquaculture around Bundala National Park.

Visitors to a nature tourism site, by definition learn about biodiversity and the natural environment. Given the large numbers of nationals visiting local areas this bodes well for a growing awareness of biodiversity. However to ensure the maximum gain in biodiversity understanding, the parks can promote certain educational activities and provide facilities such as Visitors Centers, nature trails and improved signposting. Two Visitors Centers are now planned at Horton Plains and Bundala by the DWLC.

The Muthurajawela Visitors Center, run by the CEA has developed an innovative organised programme to teach schoolchildren about biodiversity. Such schemeS should be introduced in other nature tourism sites as well.

Nature tourism can, in large numbers and if not managed properly, have negative consequences for the environment. The main examples are:

i. litter (eg. at Horton Plains),
ii. disturbing the wildlife and habitat (eg. at Yala and Hikkaduwa Marine Sanctuary),
iii. an increase in poaching to supply tourist establishments (eg. Bundala, Yala and Horton Plains),
iv. Not conforming to basic environmental standards (eg. some turtle hatcheries keep the baby turtles for too long to survive in the sea).

Many of the negative effects of tourism are associated with overcrowding. Concern with crowding has led to the development of the carrying capacity concept, which defines the number of tourists that can be sustained by a given area. Since no calculations exist for the carrying capacity of Sri Lanka's protected areas, this can be roughly estimated from the number of visitors per year relative to the size of the area. This is illustrated in Table 4.1. The Table shows that of the habitat areas, Udawattakale has the

highest density followed by Horton Plains (30), Yala (15) and Bundala (5). In fact, the actual visitor density is much higher than these figures suggest since many of these areas have only limited passable tracks, hence visitors are not dispersed evenly over the full area. However, Table 4.1 does illustrate which areas require the most management interventions, in particular, ways to disperse visitors to less crowded areas and if necessary, restrictions on visitor numbers.
This density calculation also needs to take account of fluctuations through time, which is why it might be more representative to calculate an estimate of visitor density per park for the month with the maximum visitation. This is done in Table 4.2.

In order to reduce this overcrowding pressure, it is possible to improve the management of the protected areas. This requires the following steps:

a. altering the flow of visitors through time
b. altering the flow of visitors through space.

To alter the flow of visitors through space in a particular park, parks can redistribute visitors to other areas of the park. To alter the pattern of visitor through time to a particular park, the DWLC can provide cheaper tariffs for off peak visitation. To alter pressure on a particular park, the authorities can promote other parks as the DWLC is doing by developing Wasgomuwa and Bundala.

Table 4.1: Annual Visitor Density (1995)

Nature Tourist Site	Visitor Density (No./ha./yr.)
Yala	15
Udawalawe	1
Bundala	5
Horton plains	30
Wasgomuwa	negligible
Sinharaja	0.7
Udawattakale	88
Knuckles range	1
Pinnawela	46,091
Peradeniya Botanical Garden	16,360

Source: DWLC, FD, DNZG, DAP.

Table 4.2 : Maximum Monthly Visitor Density with Month (1995)

Nature Tourist Site	Month	Visitor Density (No./ha./month)
Udawalawe	September	0.1
Bundala	September	1
Udawattakale	March	12
Pinnawela	March	5744
Peradeniya Botanical Garden	March	1625

Source: DWLC, DNZG, DAP.

Another protected area, which is currently swamped by over-visitation is the Marine Sanctuary at Hikkaduwa. Here, conditions are different as the resource is a marine park. This makes regulation on entrance harder.

4.3 Increase Economic and Employment Benefits from Nature Tourism

The economic benefits of nature tourism are estimated in chapter 5 at about Rs. 770 million. This is more than 6% of total annual tourist receipts. However, these economic benefits could be substantially increased by:

i. The industry winning the support of DWLC and other agencies by demonstrating that it can be environmentally responsible.

   The DWLC and other agencies generally were unable to distinguish between the general tour industry and those who are genuinely interested in promoting nature tourism. The latter could improve relations with the government authorities by inviting them to visit some of their development sites or even to experience the nature tourism excursions at a concesionary rate.

   An example of a genuinely environmentally sensitive development project is the TASKS (Trans Asia Kamp Services) Kuda Oya Safari Camp. This is a special type of safari designed for nature tourists, located along the Wirawila - Wellawaya road, after the small town of Tanamalwila in the Monaragala district. The camping site is formed by tents under Nuga trees and chairs made out of branches. All materials blend with the forest and nothing is built out of concrete. For bathing there is a choice of a plastic bag slung from a tree which contains sun-heated water, a simple shower, or the river. Food is served in clay pots. There is an afternoon safari by jeep and the morning safari includes walking to enjoy views of the scenery and the rich birdlife. This tour is arranged by Hemtours (Pvt) Ltd.

ii. The industry working with government and each other to develop mechanisms to stop the undercutting of profits.

   This was identified as a major problem by a number of tour operators, and some would only provide information on the basis that it was not released. The main reason for this is that nature tourism sites are often open access and hence it is easy for other operators to enter the industry and undercut profits (Steele, 1995).

   This was graphically illustrated at Unawatuna were there was violence between rival diving operators in their competition to control access to the reef. The same kind of competition between marine glass bottom boat operators at Hikkaduwa has led to severe overcrowding and damage to the reef. In principle this open access problem is always most common at marine sites where physical control of access is difficult. However, even at terrestrial nature sites, although control on entry is easier it requires enforcement. Thus, only Yala, Bundala, Horton Plains, Udawattakale and Sinharaja currently have any formal visitor entry point. At Knuckles, Wasgomuwa, Ritigala, and Kalametiya there is no formal entry point. Even where there is an entry point there is currently very few restrictions on entry numbers.

   The best way to prevent open access driving profits to zero is by the private sector operators themselves agreeing on some minimum price levels and limits on numbers. Thus jeep operators for natural parks generally have an agreed fixed

fare. The Glass Bottom Boat owners of Hikkaduwa have managed to form an association, but have failed in agreeing limits on numbers. There are now over 80 boats and each year the number continues to rise.

iii. The government agencies being more receptive to the needs of the private sector.

During discussions with private tour operators there was great dissatisfaction with the unhelpful often hostile attitude of the authorities. The tour operators often receive complaints from foreign tourists about the poor quality of services and overcrowding, particularly at Yala and this means that they will not encourage others to visit Sri Lanka. In the long run, this is very detrimental to the tourist industry and thus to the country's economy. At present the industry has no forum in which to voice these problems to the DWLC and other authorities.

The main complaints highlighted in a survey of 10 tour operators are given in Table 4.3.

v. Better infrastructure at nature tourism sites. Most sites are lacking in terms of toilets for visitors and cafe/restaurant facilities near the park. If toilet facilities are available, they are primarily intended for the DWLC and FD staff. The only eating facilities available are at local hotels. No parks have followed the example of the Peradeniya Botanical gardens which has a scenic restaurant inside the grounds.

Up market accommodation outside the park is good only at Yala, Bundala and Ritigala. Uda Walawe, Wasgomuwa and Sinharaja have almost no up market accommodation.

Table 4.3: Main Complaints Regarding Protected Areas by Private Tour Operators

Concern	No. indicating this as a priority	Notes
Better promotion and information	80%	Better info on nature sites to be made available in Sri Lanka and abroad (eg. at trade fairs)
Improved condition of jeeps	20%	
Better accommodation in park and easier booking	70%	Main issues were lack of water and toilet facilities, long queues for bungalows
More accommodation available outside park	70%	Need for low and high cost accommodation particularly near Sinharaja
Improved training for DWLC guides	20%	
Improved roads	30%	
Better management of congestion at Yala	50%	Main concern was that noise and congestion was detrimental

Source: Interviews with tour operators.

Table 4.4.: Visitor Amenities at Selected Sites

Nature tourism sites	Km from Colombo	Toilet/ cafe	Roads in park	Accommodation in park	Accommodation outside park	Visitor information
Sinharaja (FD)		none	good	2 camp sites and bunk beds	poor (Martins Lodge basic, or Embilipittiya 3-4 hours drive)	signpost, no guides
Ritigala (FD)		none	good	camp site planned	good (Habarana Lodge, Habarana Village)	signboard
Knuckles (FD)	200	none	poor	8 beds	poor (only at Kandy 100km away)	none
Ruhuna or Yala (West) (DWLC)	355	none	good	7 lodges, 2 camp sites	good up-market (eg. Yala Safari) low cost lacking	mandatory guide
Yala East (DWLC)	387	none	good	2 lodges, 1 camp site	good (see above)	mandatory guide
Bundala (DWLC)	246	none	good	1 camp site	moderate at Hambanotota (Rest House, Peacock Hotel)	none
Horton Plains (DWLC)	210	none	good	1 lodge (under repair), 3 camp sites	moderate (Farr Inn and Worlds End Lodge only)	limited
Uda Walawe (DWLC)	185	none	good	1 camp site, 2 bungalows	poor	mandatory guide
Wasgomuwa (DWLC)	220	none	poor	1 bungalow, 2 camp sites (just opened)	good at Polounaruwa, Giritale and Habarana	none
Gal Oya (DWLC)	379	none	poor	1 lodge	Inginiyagala & Ampara hotel	closed
Lahugala (DWLC)	314	none	-	1 lodge	14 miles away	closed
Wilpattu (DWLC)	177	-	good	7 lodges, little lodges (cabana)	Closed for now	closed

Source: DWLC, FD.

Accommodation in the park is very limited and of a very basic nature at all sites. Most campsites have no piped or well water or toilet facilities. The lodges in most parks are poorly maintained. However, the DWLC has embarked on programmes to improve the existing facilities.

Information is generally lacking at all parks. Only a few parks have a signpost providing information on flora and fauna. There are no visitors Centers, and no publications on wildlife available for sale. Mandatory guides are required for vehicles entering Yala and Uda Walawe, but their service is of varying quality.

The conditions of the roads in the parks vary. In most parks the roads are motorable, but they are poor in Knuckles and Wasgomuwa.

A summary of available amenities are given in Table 4.4.

5. Quantifying the Economic Benefits from Nature Tourism

This section seeks to quantify the economic benefits from nature tourism to the country, including both revenues and employment. The following items are covered:

i. entrance fees and other charges by the DWLC and FD for protected areas
ii. accommodation provided for visitors to protected areas
iii. charges by tour operators
iv. ancillary services provided to tourists, including jeep hire, elephant rides, diving etc.
v. nature tourism resorts (eg. Kandalama and Hunas Falls).

More details on each group are given in the sections below.

5.1 Economic Benefits of Nature Tourism to the Department of Wildlife Conservation and Forest Department

Both the Department of Wildlife Conservation and Forest Department are directly involved as managers of nature tourism sites. The DWLC receives high revenues from this, increasing from Rs. 47.5 million in 1993 to more than Rs. 56 million by 1995. This increase is due both to the large number of tourists and the high entrance fees, which were increased in August 1993. More detailed estimates of the income received by the Department of Wildlife Conservation are given in Tables 5.1, 5.2 and 5.3.

Table 5.1: DWLC Total Revenue in 1991, 1992, 1993 (Rs. Million)

	1991	1992	1993
Entrance Fees	2.7	9.7	37.7
Visitor Fees	0.9	1.3	-
Bungalow Fees	1.0	1.2	1.6
Permits and Miscellaneous	-	-	2.0
Wildlife Preservation Fund	-	-	6.3
Total	4.6	12.2	47.5

Source: MAL&F, FSMP, 1995.

Table 5.2: DWLC Revenue in 1995 (Rs. Million)

	Total Revenue (1995)	Revenue from foreign tourist entrance fees only	Revenue in Wildlife Fund
Yala	33.12	21.6	6.7
Bundala	8.58	8.58	na
Horton Plains	6.33	4.3	0.12
Uda walawe	7.44	3.9	1.7
Wasgomuwa	0.75	0.75	na
Total	56.22	39	

Note: na = not available.
Source: DWLC, 1996.

Table: 5.3 DWLC Total Number of Foreign Visitors and Revenue from Foreign Tourists in 1994, 1995, and First Six Months of 1996

National Park	Total Foreign Visitors			Total Revenue Rs.		
	1994	1995	01-01-1996 to 30-06-1996	1994	1995	01-01-1996 to 30-06-1996
Yala	45,986	41,135	10,402	21,613,420	21,595,875	189,246
Udawalawe	11,764	7,438	1,787	5,529,080	3,901,950	36,103
Bundala	4,638	8,182	3,109	2,179,860	4,295,590	23,846
Horton Plains	--	16,350	3,981	--	8,583,750	157,663
Wasgomuwa	94	302	294	44,180	158,550	--
Total	62,482	73,407	19,573	29,366,540	38,538,675	406,858

Source: DWLC.

By contrast, the Forest Department earns much lower revenues with an estimated Rs. 230,000 from Sinharaja, and about Rs. 242,000 from Udawattakale. This is partly due to the lower number of visitors, but primarily to the much lower entrance fees. The DWLC average entrance fee for foreign adults is Rs. 630, while for the FD it is Rs. 50.

While these revenue figures presented in the tables above are significant, at present the revenues earned mainly go to the Treasury. The DWLC keeps about 20-30% of the money earned by the parks in the Wildlife Trust Fund, while the remainder is sent to the Treasury. This is primarily due to the fact that the Treasury receives all the foreign tourist entrance fees and accommodation fees as shown in Table 5.4.

Table 5.4 Allocation of Revenue from DWCL Charges and Fines

National Revenue (Treasury)	Wildlife Trust Fund (DWLC)
Entry fees	Court Fines
Licences	Vehicle entry fees
Accommodation fees	Guide charges
Camping fees	Donations
Fuel charges	Revenue from posters, shirts, leaflets, cards, souvenirs
Laundry charges	Animal export licences
Special fee	Fuelwood fees
	Domesticated elephant registration fees
	Revenue from sale of dead animals, honey etc.

Source: DWLC.

5.2 Economic Benefits from Entrance Fees to Alternative Sites.

Pinnawela

In 1995, Pinnawela earned **Rs. 14 million** from entrance fees. The costs of the orphanage include 7,800 kg of feed per day costing Rs. 0.35 million for a month. Other cost items are medicines, lactogen milk packets, salaries and incidental expenses. Total cost in 1995 was Rs. 11.4 million. The 1995 profit was Rs. 2.7 million.

The employment generated by Pinnawela Orphanage is about 25, including 15 mahouts, 3 watchers, 3 officers, 2 drivers and 2 labourers. In 1994 a new orphanage was established in Uda Walawe under the purview of the DWLC, where elephants will only be kept for a short time before being released to the wild. Since more elephants are currently being given to the new sanctuary by the DWLC, the number of elephants brought to Pinnawela Orphanage has declined.

Peradeniya Botanical Gardens

Revenue earned from the entrance fees in 1993, 1994, 1995 are Rs. 14.3, Rs. 27.15, and **Rs. 30.25 million** respectively. The park also generates revenue from spot fines from those who pick the plants, and from the sale of plants. The cost of operation of the Garden is around Rs. 10 million, with a maintenance cost of about Rs. 8 million. There is a cafeteria inside the garden run by the management. One director, one superintendent, two curators, four field assistants and many guards are employed. The private handicraft businesses at the entrance to the park also provide employment.

Table 5.5: Tour Operators and Number of Tourists in 1995

	Address	Total No. of Tourists	No. of Tourists to National Park
Gemini Tours and Travels	160/2, Bauddhaloka Mawatha, Colombo 4	5000	1000
Prime Destinations (Hemtours)	24, Sir Ernest de Silva Mawatha, Colombo 3	350	350
Adventure Lanka (Pvt)	No. 12A, Simon Hewavitharana Road, Colombo 3	5000	5000
JF Tours	189,New Buller's Road, Colombo 4	250	na
Aitken Spence Travel	305, Vauxhall Street, Colombo 2	25,000	5,000
Baurs	5, Upper Chatham Street, Colombo 1	900	350
Delmege Forsyth Tours	101 Vinayalankara Mawatha, Colombo 10	75	75
Toureast	46/38, Nawam Mawatha, Colombo 2	na	1000
Jetwing Travels	46/26, Nawam Mawatha, Colombo 2	na	450
Travel Air (Pvt) Ltd	100 1/3, Galle Road, Colombo 4	25	25

Note: na = not available
Source: Author's survey.

Table 5.6: Estimated Tourists for Selected Nature Tourism Activities (1995)

Activities	JF Tour	Adventure Lanka	Gemini	Jetwing Travels	Tour East	Aitken Spence	Baurs	Travel Air (Pvt) Ltd.
Wildlife viewing	240	1200	1000	450	900	5000	350	50-100
Rainforest trekking	360	100-150	200	10-15	25	0		25
Birdwatching	120	800	300	200	15	0	350-400	25
Snorkling/diving	90	1300	0	600	10-15	0	0	15
Captive wildlife (eg. turtle hatchery, elephant orphanage)		8500	3000	600	1300	15000	500	100-150
Botanical gardens		5000	3000	600	10-15	10000	500	300

Source: Author's survey.

5.3 Benefits of Nature Tourism to Tour Operators

Tour operators generate revenues from nature tourism by providing nature tours. Such tours are provided by both specialised nature travel operators and general tour operators. A detailed survey was conducted with 10 tour operators listed in Table 5.5 below. Some of the results are shown in Tables 5.5 and 5.6 with the number of tourist clients in 1995 and the number who were taken to national parks. From this data it can be estimated that about 20% of tourists transported by tour operators visit a national park.

The 10 tour operators in Table 5.5 include four specialist nature tour operators. These are shown in bold and are Prime Destinations, Adventure Lanka, Baurs and Delmege Forsyth Tours.

Prime Destinations of Hemtours: This was set up in 1993 as a subsidiary of Hemtours to focus on bird watching, rainforest trekking and white water rafting. The company had 350-350 foreign clients in 1995 and the company is now experimenting with the local market. The company acts as a representative of several foreign nature tourism companies, including Icharus of Germany, Worldwide Journeys of UK and Explore Asia of UK. The company has about 40 guides on its roster of guides.

Adventure Lanka Safari: This is by far the largest nature tour operator with over 70% of the total market. The company offers bird watching, forest trekking and adventure sports (cycling, diving etc.) through an affiliated company Adventure Sports Lanka. This is a representative of Exodus and a number of other UK nature tour operators. The company also operates the only example of elephant back safaris, although so far these are mainly confined to short trips near three hotels.

Baurs Company: This company offers specialized bird tours mainly to UK customers, with a few Germans. Their itineraries are for 10 days, 2 weeks and 3 weeks. Most people choose the 2 week tour

priced at $750. Guides are mostly University Lecturers. The company has been in existence for 20 years and employs about 50 people. Turnover from bird tours was about Rs. 13 million in 1995.

Delmege Forsyth Tours: This company provides only specialist tours, including nature tours. The company had about 75 nature tourist customers in 1995.

Details of nature tour operators

The data in Table 5.7 indicates that the average price per day for a nature tour visit by a foreigner is about Rs. 2500.

The five nature tour operators had an estimated 6000 customers in 1995. It is assumed that the average tourist went on a 10 day tour at an average price of Rs. 2500 per day. This gives a total annual revenue of **Rs. 150 million** for the four specialist nature tour operators.

In addition, there are the conventional tour operators, who take about 20% of their visitors to national parks. It is estimated that 60% of the

Table 5.7: Prices for Different Nature Based Tourist Activities 1996

Example Tour (N = Nights, D = Days)	Price (Rs. /day)
Rainforest Trekking	
(Hem Tours Ltd)	1,583
***For Locals** - Sinharaja & River Rafting (2 N / 3 D)	1,833
- Sinharaja/Task Campsite (2 N / 3 D)	2,844 - 3,188
***For Foreigners**- Wild and Civilized Sri Lanka (7 N / 8 D)	2,200 - 2,500
- Adventure in the Sun (14 N / 15 D)	2,813 - 3,188
- Sri Lanka Explorer (7 N / 8 D)	2,500 - 2,781
- Experience Nature (7 N / 8 D)	2,625 - 2,969
- Essence of Sri Lanka (7 N / 8 D)	
Bird Watching	
A. Baur & Co., (Travel) Ltd. - 21 day Bird Watching Tour	2,857
- 14 day Bird Watching Tour (No. 1)	2,643
- 14 day Bird Watching Tour (No. 2)	2,643
- 10 day Bird Watching Tour	2,750
Toureast - Watching Tour (16 days/15 nights)	2,344
Sports	
(Adventure Sports Lanka)	3,536
Mountain Biking (7 D / 6 N)	3,714
Mountain Biking, Trekking, Safari (7 D / 6 N)	3,840
Mountain Biking, Jeep Safari (5 D / 4 N)	2,673
Mountain Biking, Rafting, Trekking, Jeep Safari (13 D / 12 N)	3,500
Mountain Biking, Rafting, Trekking (5 D / 4 N)	3,500
Mountain Biking (3 D / 2 N)	2,750
Mountain Biking, Trekking, Wildlife Safari (3 D / 2 N)	3,625
White Water Rafting (2 D / 2 N)	

Source: Interviews with tour operators.

73,000 foreign visitors who went to a protected area in 1995 used a tour operator. The cost of the visit to the national park is hard to calculate as often it is part of a round trip of the island. However, assuming that the trip to a national park costs an additional Rs. 500, then the revenue of the tour companies as a result of the national parks would be about **Rs. 22 million** (43,800 x 500).

5.4 Accommodation at Nature Tourism Sites

The economic benefits of providing accommodation for nature tourism is surveyed at four locations and presented in Tables 5.8 and 5.9. It is assumed that all the visitors to the hotels are "nature tourist", but in these locations this is not unlikely. In addition, this assumption is balanced out by the very conservative assumption that the hotels have only 50% annual occupancy rate. In fact actual revenue from these hotels was considerably higher in 1995.

Table 5.8: Estimated Nature Tourist Revenue of Accommodation in the Vicinity of Yala National Park 1995

Yala accommodation	No. of Rooms	Rate Rs.	Revenue/ day* Rs.	Revenue/ year (Rs. million)
Lake Side Tourist Inn, Tissamaharama	25	750	9375	3.42
Tissamaharama Rest House	62	1,100	34,100	12.44
Yala Safari Beach Hotel	60	2,500	75,000	27.37
Singha Tourist Inn, Tissamaharama	15	550	4,125	1.5
Tissa Inn	8	800	3,200	1.2
Priyankara Hotels (Ptv) Ltd	26	1,150	14,950	5.45
Total				51.38

* The revenue is calculated at a minimum based on 50% occupancy.
Source: Author's survey.

Table 5.9: Estimated Nature Tourist Revenue from Accommodation Near to Selected National Parks 1995

Accommodation for Sinharaja and Uda walawe	Number of rooms	Room/rate p/d Rs.	Estimated Revenue/day Rs.	Estimated Revenue/year (Rs. Million)
Centauria Tourist Hotel "A" in Embilipitiya	40	700	14,000	5.11
Rathnaloka Tour Inns, Ratnapura	53	1,250	33,125	12.1
Accommodation for Bundala				
Hambantota Rest House	10	600	3,000	1.1
Peacock Beach Hotel	109	2,000	109,000	39.8
Horton Plains				
Farr Inn	08	550	2,200	0.8
Worlds End Lodge	10	550	2,750	1.0

* The revenue is calculated at a minimum based on 50% occupancy.
Source: Author's survey.

The Tables shows that the total economic benefits are almost **Rs. 110 million** divided amongst the following areas:

Yala (Tissamaharma etc): Rs. 51 million
Bundala (Hambantota etc): Rs. 41 million`
Uda Walawe and Singharaja (Embilipitiya): Rs. 17 million
Horton Plains: Rs. 2 million

Using an estimate from the Tourism Master Plan it is estimated that there about 1.6 employees per room. This would suggest that the 200 or so rooms available in Yala would generate about 320 jobs.

5.5 Ancillary Services: water sports, jeeps, elephant rides and diving

Nature tourism ancillary services include water sports/boating facilities, jeep services around the parks, elephant rides available at three hotels, and diving. The sections below show that very approximately revenue per year from these activities can be estimated as Rs. 23.75 million:

Water sports:	Rs. 3.3 million
Jeeps:	Rs. 9.7 million
Elephant rides:	Rs. 9.9 million
Diving:	Rs. 1.25 million

Water sports: The main area for these activities is Bentota-Beruwela, where there are an estimated 18 water sports companies operating. However, only the 3 larger companies are officially registered with the CTB. In a good month the larger water sports companies generate Rs. 100,000 in income. Thus, in a year it is conservatively assumed that a large company will generate Rs. 500,000, and a small company Rs. 100,000. Thus, the 3 large companies at Bentota will generate about Rs. 1.5 million and the 18 or so small companies about Rs. 1.8 million, making a total of about **Rs. 3.3 million.**

Jeeps: These are available for hire at four of the main national parks. The revenue from these jeeps is estimated in Table 5.10 to be about Rs. 9.7 million assuming that half of the 73,000 foreign tourists who visited the DWLC last year used a jeep (with an average of 4 people to a jeep and a cost of Rs. 1400 per jeep hire).

Table 5.10: Estimated Annual Revenue from Jeep Hire (1995)

National Park	Estimated Revenue in 1995 (Rs. million)*
Yala	7
Bundala	1.4
Wasgomuwa	0.005
Udawalawe	1.3
Total	9.7

Source: DWLC.

- Assuming 4 tourists per vehicle, half of all foreign tourists hire a vehicle, and the cost of vehicle is Rs. 1400 per jeep.

Table 5.11: Estimated Nature Tourist Revenue from Selected Nature Tourism Hotels, 1996

Accommodation in Giritale	No. of Rooms	Average Room Rate Rs.	Revenue/ Day Rs.	Revenue/ year (Rs. Million)
Culture Club	92	3,850	177,000	64
Kandalama	162	3,850	312,000	113
The Lodge, Habarana	150	3,250	244,000	89
Tree of Life, near Kandy	38	3,850	73,000	27
The Village, Habarana	106	2,500	132,000	48
Hunas Falls, Kandy	31	3,850	60,000	21

Source: CTB, 1996 and author's calculations (assuming 50% occupancy)

Elephant rides: The existing elephant safaris run by Adventure Lanka Safari Limited are available for short trips around Habarana, Sigiriya and Kandalama. These 15 or so elephants transport about 30 persons each day at a price of $40 (Rs. 2200) per person for 100 days, bringing in an estimated annual revenue of **Rs. 9.9 million**.

Diving: There are diving facilities available at Unawatuna, Hikkaduwa, Weligama, Mount Lavinia and elsewhere. It was not possible to estimate the full economic benefits from these operations. However, it is estimated that the average cost per one hour drive is Rs. 2500. Assuming that about 500 people pay to go diving in Sri Lanka each year, this would be about **Rs. 1.25 million**.

5.6 Nature Tourism Hotels

There are a number of hotels in the island, which market themselves primarily on their beautiful natural location (excluding beach hotels). These can be described as "nature tourism" hotels. The five main hotels in this category have been included as economic benefits generated by Sri Lanka's natural beauty. They are given in Table 5.11 below:

Perhaps the most famous of these new breed of hotels to make use of nature tourism as its main asset is the Kandalama Hotel near Dambulla. The hotel makes much of its location overlooking a main tank. Opened in 1994, the hotel employs 300 people including 5 guides recruited from the surrounding villages. Turnover in 1995 was approximately Rs. 200 million (showing that the numbers given the in Table above are considerable under-estimates). Occupancy was 63% in 1995 and 40% in 1996. Kandalama markets itself using the natural environment and a number of tours can be organized from the hotel including the Knuckles and Wasgomuwa National Park. In order to provide access to the park, the hotel assisted in building a new road to the park, which reduced the travel time by about 1 hour and 15 minutes. About 20% of the visitors to Kandalama or about 10,000 visitors from the hotel in 1995 went to Wasgomua on the hotel excursion at a cost of $12 per person, including the $8 entrance fee.

Habarana Lodge and Village similarly overlook a Tank and offer excursions around the area. Hunas Falls, as the name describes is situated right next to a waterfall, while Tree of Life is located in a former tea estate near Kandy.

5.7 Summary of Economic Benefits of Nature Tourism

Table 5.12 shows that the economic benefits of nature tourism were estimated to be about Rs. 7700 million in 1995. This is a large figure and is over 7% of the total Rs. 11 billion economic contribution of tourism to the economy in 1995.

The following conclusions can be drawn from the Table:

i. The main item of economic benefit is the hotels situated near protected areas or at nature tourism sites. This shows the economic benefits to be gained from the country if government authorities facilitate environmentally sound hotel developments.

ii. The second largest item of benefit is the profits earned by tour operators, both conventional and the small but growing number of tour operators specializing in nature tourism.

iii. The third largest item is the entrance fees and other charges levied by various nature tourist sites in particular the DWLC.

6. Activities and Sites for Diversifying and Expanding Nature Tourism

This section compares Sri Lanka's nature tourism with other countries and then suggests activities and sites which could have the nature tourism potential increased.

6.1 Nature Tourist Visitation in Other Countries Compared to Sri Lanka

Some countries, such as Nepal, Kenya, Costa Rica and Ecuador, have actively promoted their nature tourism as a source of foreign exchange. As Table 6.1 below illustrates, these countries have been able to attract between 15-35% of all foreign tourists to visit their national parks, and

Table 5.12: Summary of Estimated Economic Benefits from Nature Tourism (1995)

Source of revenue	Revenue (Rs. million)
Dept of Wildlife Conservation (charges and fees)	56
Forest Department (charges and fees)	0.8
Pinnawela Elephant Orphanage (entrance fee)	14
Peradeniya Botanical Gardens (entrance fee)	30
Accommodation: Yala	51
Accommodation: Horton Plains	2
Accommodation: Sinharaja and Uda walawe (Embilipitiya)	17
Accommodation: Bundala (Hambantota)	41
Jeep Hire	9.7
Water Sports	3.3
Diving	1.25
Elephant rides	9.9
Specialised tour operators	150
Conventional tour operators	22
Nature tourism hotels (Kandalama, Culture Club, Lodge and Village at Habarana and Hunas Falls)	362
Total	770

Source: DWLC, FD, DNZG, DAP and author's survey.

Between 9-20% of all foreign tourists to visit their most popular national park. Table 6.1 may slightly overstate the percentages as it assumes that all tourists each visit different parks, but in practice one tourist may visit several parks.

By contrast with these countries, Sri Lanka has not fully exploited nature tourism as a source of foreign exchange. As shown in Table 6.1 about 15% of foreign tourists visit the national parks, and about 10% of tourists visited Yala in 1995. These figures are fairly impressive given the relative lack of marketing, and could be much higher if a concerted advertising and publicity campaign was sustained.

6.2 Advantages of Sri Lankan Nature Tourism

Sri Lanka has three main advantages in terms of nature tourism:

i. The high density of wildlife, particularly birds and elephants, which makes the wildlife very easy to see.

ii The natural variety so that visitors can experience many different types of natural habitats: rainforests, coral reefs, savanna landscapes, tropical wetlands etc.

iv. The smallness of the island and the accessibility of the sites from Colombo so that most sites can be reached within 3-5 hours driving.

These three characteristics mean that the Sri Lanka can take advantage of the growing interest in nature tourism by the general traveller.

Table 6.1: Estimated Foreigners' Visitation Rate to Selected National Parks in Asia

Country	No of national parks	Total no. of foreigner visitors (1995)	Visitors to all national parks	% of For. to national parks	Name of main national park and no. of foreign visitors	% of For. to main park
Kenya		1,076,000			Amboseli: 200,000 (1992)	20%
Costa Rica	15	273,000	For. only: 70,0000 (1986)	25%	Volcans Poas: For: 24,640 (1986)	9%
Ecuador	12	266,761	For. only: 41,000 (approx)	15%	Cotacachi: 95,000 (1987)	
Thailand			all: 4 million; For. only: 400,000 (1985)		Khao Yai: all: 401,000 (1987)	
Nepal		240,000 (1989)	For. only: 88,000 (1989)	36%	Annapurna: 40,000 (1989)	16%
Sri Lanka	7 operational* (11 in total)	403,000	For. only: 73,000 (1995)	15-17%	Yala: 41,000 (1995)	10%

* Main seven operational parks are Yala, Uda Walawe, Bundala, Horton Plains, Wasgomuwa

Sources: Authors' own survey

Due to these clear advantages over other countries, a number of reports have identified the potential for ecotourism in Sri Lanka. These include Vidanage (1995) and Wickramanayake (1992).

While all tourism has been affected by the war, it would be expected however that nature tourism being more of a niche market is less susceptible to drops than other tourist markets.

6.3 Potential Types of Nature Activities to Promote

6.3.1 Bird watching:

Over 1000 bird watching tourist specialists currently visit Sri Lanka each year. The main arrivals are currently from the UK and German market. Most bird watchers are very satisfied by experience and see all the species they wish to. This market could be increased by about tenfold by encouraging birdwatchers from other countries such as Japan and Australia.

6.3.2. Elephant safaris:

The existing elephant safaris are available for short trips around Habarana, Sigiriya and Kandalama. These 15 or so elephants transport about 30 persons each day for a cost of about $40 (Rs 2200). However, this service could be expanded in other areas, and combined with a visit to a national park. This approach is used in India and it has proved very lucrative.

6.3.3. Diving and water sports:

Diving is developing in Sri Lanka, but has been limited by the fierce violence with which the primarily small operators protect their areas. This ultimately proves detrimental to the whole industry. The Ceylon Tourist Board and Coast Conservation Department should assist in the formation of a Diving Association with agreed rules for diving, agreement over the physical area for particular diving concessions and the provision of low interest loans and training for the small scale operators.

6.3.4. Water sports:

Water sports are still largely unknown among Sri Lankans. There has been some promotion for example at the Airport Garden Hotel, which has an annual wind surfing competition. These activities should be expanded as water sports is a relatively low cost and exciting form of entertainment.

6.4 Particular Nature Sites to Develop

6.4.1 Knuckles Range

The Knuckles Range extends from the northern part of Kandy district to the southern part of Matale district, covering 16,000 ha. including the buffer zone of 3,600 ha. The perennial streams and rivers that drain the forest, make it an important watershed area for the Mahaweli. This forest extends over three ecological regions in the country namely, wet, intermediate, and dry zone, resulting in high biodiversity, both in fauna and flora. Cardamom cultivators and other villagers encroaching the area are now being relocated. At present road access to the forest is limited and there are few clear paths.

6.4.2. Ritigala

Ritigala is a strict natural forest on a high hill 766 metres above sea level. The area is administered by the DWLC. It is located in Anuradhapura district, 27 km north of Dambulla and 36 km south of Anuradhapura. The area is famous for its medicinal plants with about 409 taxa of higher order plants recorded. The lower part of the mountain contains rich archeological remains, which can be explored on foot. The site is very close to Habarana where two large hotels, Habarana Lodge and Habarana Village are located. However, the road to the site entrance is poor and difficult to follow.

6.4.3 Kalametiya and Lunama Kalapuwa

Kalametiya and Lunama Kalapuwa are two out of a series of lagoons, that are situated on the south-eastern coast, between the town of Tangalla and Yala national park. The lagoons are important for wildlife, and in particularly for birds such as waders, ducks and water birds. The lagoons regularly support 20,000 waterfowl. In 1938, both lagoons and their environs were declared a wildlife sanctuary with an area of 2,500 ha. The protected status was however abolished in 1946, due to the opposition of local residents. A much smaller section, about 700 ha, was again renotified as a sanctuary in 1984. This area has the potential for wildlife watching, bird watching and boating. At present there are no tourist facilities available in this area.

6.4.4 Rekawa Lagoon

Rekawa is situated about 200 km south of Colombo in the Tangalle Secretariat Division. The area of Rekawa is about 950 ha, consisting of 500 ha inactive paddy farming and 200 ha mangrove and scrub forest. It has potential for boating, bird watching and wildlife watching. At present there are no tourist facilities available. The beach is also famous for the giant turtles which come to lay their eggs at night.

6.4.5 Koggala Lagoon

Koggala lagoon is located on Sri Lanka's southern coast, 15 km east of the town of Galle. The total extent of the lagoon is around 727 ha. The area is popular with national tourists as the setting for the novel "Madol Duwa" by Martin Wickremasinghe. However, the nature tourism potential of the large lagoon is under-developed. The area provides good bird watching opportunities.

6.4.6 Randenigala Sanctuary

Randenigala sanctuary is located in the intermediate zone, between the wet and dry zones, and thus containing floral and faunal diversity of both. Tourists can easily assess the Knuckles range of hills from this sanctuary. This sanctuary is administered by the DWLC which has established a training facility called the Randenigala Tree Center. This site is already utilized for research activities and animal watching at night time.

6.4.7 Kenneliya Forest Reserve:

Kenneliya forest reserve is a wetzone, lowland to mid-montane tropical rainforest, covering 3,064 ha in extent. It is adjacent to the Sinharaja forest. The forest contains 65% of Sri Lanka's endemic plant species and has many species of endemic fauna. It is administered by the Forest Department, as a forest reserve. However it was, until 1986, selectively logged for plywood. The logged areas are now regenerating.

7. Nature Tourism Management Strategy: Key recommendations

7.1 Increase Marketing and Promotion of Nature Tourism to Assist the Tourist Industry

1. CTB to use natural beauty of Sri Lanka (eg. elephant, Sinharaja forest) as a key marketing strategy in upcoming tourist campaign, following the examples of Thailand, Nepal etc.
2. Government agencies (eg. CTB, DWLC, FD, CEA and CCD) to assist tour industry to promote tourism by agreeing on the economic importance of nature tourism sector and institutional arrangements to assist the sector. At present there is no

forum for the industry to meet DWLC and FD officials and this has led to considerable frustration.

3. DWLC, FD and CCD to hold regular meetings with the private sector tour operators and the NGO community.
4. Involve the tour industry in the preparation of the management plans for each protected area.
5. CTB to promote nature tourism in promotion campaigns abroad and provide more information abroad on nature tourism sites and facilities available for tourists.
6. Special attention to be paid to promote birdwatching, turtle watching, coral diving which are key tourist attractions that are currently underpromoted.
7. CTB, CEA, CCD, DWLC and FD to support and develop alternative nature tourism sites where work is already underway, in particular Mutherajewela, Kalametiya, Koggala, Rekawa, Ritigala, Knuckles, and Randenigala.

7.2 Increase the Environmental Benefits of Nature Tourism

8. DWLC and FD to construct Visitor Centers in each park with NGO and private sector participation.
9. FD and DWLC to develop nature trails to enable maximum appreciation of the biodiversity.
10. DWLC and FD with the assistance of NGOs, and private sector to train staff at parks to provide environmental information.
11. DWLC and FD to develop with NGOs an educational pack on each park and to develop an outreach programme with schools near the protected areas (with organised visits/discussions on the importance of the park).
12. DWLC, FD, Peradeniya Gardens to make greater use of funds collected from entrance fees etc. for biodiversity management. This will require DWLC to draw up a clear strategy for allocating the surplus funds in the Wildlife Trust, and the FD and Peradeniya Gardens to seek Treasury permission to keep some of the entrance revenue for conservation management.
13. DWLC and FD to diversify demand away from Yala and Horton Plains which receive about 57% and 27% of DWLC visitors respectively by developing facilities at Wasgamua, Rittigala, Sinharaja and Knuckles, particularly in improving road access and nature trails to Knuckles and developing a footbridge over the river at Wasgomuwa.
14. DWLC and FD to enforce a ban on illegal poached animals being served in tourist establishments.
15. DWLC to reduce congestion at Yala by considering different management options, in particular setting aside a special section of the park for all vehicles other than jeeps, and only allowing jeeps to the rest of the park.
16. DWLC with NGOs and private sector to conduct a campaign to clean up the tourist pollution at Horton Plains.
17. DWLC with NGOs and private sector to manage tourism at Hikkaduwa Marine Sanctuary. This should include a charge on all boat trips to the coral, and a no-charge alternative trip away from the corals for

those who just want the boat ride "experience".

18. CTB and DWLC to license turtle hatcheries and ensure that their activities are environmentally sound, as there is evidence that some hatcheries release turtles too late for them to survive in the sea.
19. Government to promote less developed nature tourism activities among national tourists, such as water sports and diving.
20. DWLC to construct watering holes and hides to make viewing better for both visitors and the animals.
21. DWLC to discuss with Treasury ways to receive a percentage of the profits from foreign entrance fees and accommodation charges. At the moment the DWLC has no incentives to improve the service as all profits go direct to the Treasury.

7.3 Increase Economic and Employment Benefits of Nature Tourism

22. Improve economic returns from the DWLC & FD bungalows. In the short run DWLC and FD should provide tour operators with priority booking at higher rates for certain bungalows. In the longer run, the bungalows should be managed by another agency, although the profits could be kept by the DWLC and FD. This management agency could be state, such as the Hotels Corporation, the private sector, (on a competitive tender) or by an NGO. Alternatively the bungalows could be closed altogether as in India, and current restrictions on environmentally friendly construction in the buffer zone relaxed. By reducing the time spent on bungalow allocation, the DWLC would also have much more time to focus on their core mandate of biodiversity management.
23. FD to consider increasing entrance fees for foreigners and enforce collection at Knuckles and Ritigala (while providing information boards at the entrance on what the fees will be used for).
24. CTB, FD and DWLC to cooperate to promote value added activities around nature tourism sites. One example could be to expand elephant safaris based on the existing limited use of elephant safaris at hotels at Habarana, Kandalama and Sigiriya.
25. Government agencies to assist appropriate tourism development (eg. environmentally friendly "cabanna" accommodation or campsites such as the TASKS site of Hemtours) which is in harmony with the environment, for example by assisting in getting various approvals and finding land.
26. DWLC and FD to improve tourist facilities such as toilets at entrance and rest area, roads, bungalows etc. with additional financing obtained through private sector assistance. An example would be the road constructed to Wasgomuwa with assistance from Aitken Spence Co., or the Information Center funded by Delmege Company.
27. Nature tourism, especially labour intensive accommodation, to be promoted in rural areas, where other economic opportunities are most lacking.
28. DWLC, FD etc. to work with tour industry to develop facilities for birdwatchers as this is the largest and most lucrative niche market. For example, the DWLC could set up and charge for hides for bird watching in Bundala, Sinharaja and Kalametiya.

29. DWLC to encourage the quality of jeeps by leasing out, on an experimental basis, a contract to supply jeeps in Wasgomuwa Park after the construction of footbridges to the park.
30. Private tour operators should train DWLC and FD staff in English and other necessary skills so that they can receive a larger tip for their services.
31 Tour operators to reduce the undercutting of each others' profits by formation of a nature tourism association to agree on industry guidelines (including environmental standards) and minimum prices. State agencies (DWLC, CCD, CTB etc.) should license out concessions to a few private sector operators who must form an association and prevent others from entering: eg. for Hikkaduwa glass bottom boats, for coral diving at Unawatuna and elsewhere, for Bentota water sports, and for jeeps at Yala and other parks, for boat rides to the island at Koggala.
32. Private tourist developers to provide greater employment to local people to reduce environmental pressure on parks by preferential employment opportunities to local people near protected areas, including local people in planning nature tourism development so that they feel stakeholders in the process, and can maximise their employment opportunities.
33. DWLC, FD, NGOs and private sector to develop a guide certificate programme for local people, particularly in parks such as Horton Plains, Knuckles, Sinharaja and Ritigala where walking is necessary.

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Annex 1: List of Persons Consulted

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Annex 2: Major Nature Tourism Sites

This section reviews in detail the 10 sites identified in section 3.

Yala West (Ruhuna) National Park:

Description of Site: Yala West National Park is located at the south-east corner of Sri Lanka and has an area of 126,768 ha. However, only Block 1 with an area of 14,101 ha is fully open to the public. The park is also generally closed in September and sometimes for part of August and October. The major activities are bird and game watching, especially elephant which are best seen from October to December. It is 305 km away from Colombo and access to the park is via Tissamaharama or Ratnapura.

Yala East is divided from Yala West by a strict nature reserve, where visitors are not allowed. It includes the Kumana swamp, with many water birds. Access is via Arugam Bay, but due to the security situation, it has been closed.

Current Visitation: As shown in Table 2A, visitation to Yala Block 1 peaked in 1994 at 245,000, with 25,852 vehicles making an average of almost 10 people per vehicle. This was about 19% foreign tourists. The most popular months were March and August. Visitation declined slightly in 1995 to 212,000 visitors, but Yala remained by far the most popular national park receiving about 57% of all DWLC visitors .

Table 2A: Visitation Rate in Yala West National Park - Block 1

Year	Total Number of Visitors	Number of Vehicles Entered through Main gate
1991	145,000	16,779
1992	180,000	20,706
1993	208,000	23,169
1994	245,737	25,852
1995	212,000	23,471

Source: DWLC.

Table 2B: Entrance Fees to Yala West - Block 1 (Rs.)

Category	Local	Foreign
Adult	18	630
Child	6	315
Service Charge/Vehicle	120	315
Jeep	60	* 120 for all Vehicles. * 360 for Vehicle carrying more than 20 passengers.
Car	30	
Bus/Lorry	90	
Other	180	

Source: DWLC.

Tourist Facilities: The facilities available include bungalows, dormitories and camping sites. There are 9 bungalows, one at Palatupana for officers of the DWLC, one at Buthuwa (new and old) for VIPs (ministers, politicians and their family members). 7 bungalows are available for the public which are at Mahaseelawa, Yala, Thalgasmankada, Heenwewa, Banduwewa and Katagamuwa (just outside of Block I). A maximum of 10 guests or 12 children can stay in one bungalow, but they can book only up to only 3

nights. Except old and new Buthuwa, the other lodges are located near fresh water sources. But while the Yala and Thalgasmankada are near the Manik river, the lodges at Mahaseelawa and Pathanangala are by small reservoirs, which dry up in the dry season.

Dormitories are available for large groups of pilgrims and school children at low cost at Wananivahana. This is an open shed with two parts, therefore 4 groups can stay at one time. Three camping sites are available in Block I, which are Yala, Kosgasmankada and Jamburagala and one camp site in Block II at Weerahana. Booking of bungalows, dormitory and camping sites has to be made through the DWLC. Fees involved in reserving a camp site in a national park are given in table 2C.

Table 2C: Fees for Camping in DWLC National Parks, 1996

	Local	Foreigner
Occupation Fee (Rs./group of 12 persons/day)	50	270
Park Fee (Rs./adults/day)	15	540
Park Fee (Rs./child/day)	5	270
Service Charge (Rs./day)	100	270

Source: DWLC.

Uda Walawe National Park:

Description of Site: Uda Walawe National Park is located in the south of the central hills of the island, surrounding the man made reservoir of the Uda Walawe which is part of the park. This area lies in the Moneragala and Ratnapura Districts and has an area of 30,821 ha. The major activities are game watching and camping (elephant and deer) and bird watching.

Table 2D: Monthly Total Number of Visitors and Revenue Collected at Uda Walawe National Park, 1994

Month	Local Adults	Local Children	Foreign Adults	Foreign Children	Total	Revenue (Rs.)
January	1,237	62	550	08	1,857	380,443
February	1,675	89	846	--	2,610	502,238
March	1,268	202	723	--	2,193	441,806
April	2,120	246	370	03	2,739	187,860
May	1,159	134	261	01	1,555	165,834
June	NA	NA	NA	NA	--	NA
July	1,139	122	494	15	1,770	335,760
August	955	98	516	86	1,655	347,985
September	NA	NA	NA	NA	--	NA
October	1,119	54	617	--	1,790	407,136
November	380	10	627	02	1,019	376,159
December	NA	NA	NA	--	NA	NA

Source: DWLC.

Current Visitation As with Yala, tourist visitation to Uda Walawe was highest in 1994 at 49,000 tourists, of whom 23% were foreign tourists. It is estimated that 30,992 tourists visited Uda Walawe in 1995.

Tourist Facilities: There are 3 bungalows available at Uda Walawe and 2 camp sites. Roads exist only in the eastern part.

Table 2E: Monthly Total Number of Visitors and Revenue Collected at Uda Walawe National Park, 1995

Month	Local Adults	Local Children	Foreign Adults	Foreign Children	Total	Revenue (Rs.)
January	2,074	127	272	19	2,492	603,433
February	1,729	94	946	07	2,776	47,420
March	NA	NA	NA	NA	NA	NA
April	2,089	325	476	15	2,905	366,122
May	962	62	325	07	1,356	250,076
June	985	38	251	01	1,275	216,511
July	1,557	63	750	41	2,411	665,882
August	NA	NA	NA	NA	NA	NA
September	3,129	306	1,150	07	4,592	951,635
October	1,708	102	676	10	2,496	605,023
November	NA	NA	NA	NA	NA	NA
December	NA	NA	NA	NA	NA	NA

Source: DWLC.

Bundala National Park:

Description of Site: Bundala National Park is located in the low country wet zone in between the town of Hambantota and the Kirindi oya. The total area of the park is 6,216 ha which consists of 5 brackish water lagoons of an area of 2,250 ha. The names of the lagoons are Maha lewaya (260 ha), Koholankala lewaya (390 ha), Malala (650 ha), Embilikala kalapuwa (430 ha) and Bundala lewaya (520 ha). Within the national park boundary 184 families live (total 811). It is the only wetland in the country listed under the RAMSAR Convention as it hosts over 20,000 shorebirds. From September to February, the park contains 149 species (45% of Sri Lanka's avifauna) of resident and migratory birds.

Current Visitation: The visitation has been increasing each year and reached in 1995 about 26,000, of whom 44% were foreign tourists. Some of this increase may be as a result of overcrowding at Yala. The highest visitation is from September till February, when the migratory birds are present. The nesting season for marine turtles also coincides with the tourist season. Night-time excursions to the beaches are organised to observe nesting turtles. Pony treks can be arranged for travel within the sanctuary.

Tourist Facilities: The park currently has two camp sites at Pansadara and Aliwadiya. A visitors center has been designed and construction is planned for January 1997. The Rs. 500,000 cost will be paid by DWLC.

Wasgomuwa National Park

Description of Site: Wasgomuwa is located in the north central area of the country with an area of 36,948 ha divided into three "Lots". It is about 200 km from Colombo. It was gazetted as a national park only in 1980 and 1984.

Current Visitation: At present visitation to Wasgomua is still very low at less than 500 per year in 1995. However, due to problems in the other parks and even at Yala, the DWLC is promoting this park. It has been assisted in this task by the interest of Aitken Spence, whose Kandalama Hotel is about 1.5 hours drive from the park.

Table 2F: Monthly Total of Visitors and Revenue at Bundala National Park, 1995.

Month	Local Adults	Local Children	Foreign Adults	Foreign Children	Total	Revenue (Rs.)
January	NA	NA	NA	NA	NA	603,433
February	955	10	1,630	12	2,607	443,476
March	1,167	04	1,897	11	3,079	519,790
April	1,044	13	1,652	34	2,743	448,665
May	438	01	617	09	1,065	172,340
June	359	41	453	41	894	130,360
July	1,405	01	839	44	2,289	434,231
August	1,158	19	1,587	36	2,800	539,165
September	3,513	21	2,943	37	6,514	1198,043
October	2,579	11	1,343	07	3,940	806,877
November	NA	NA	NA	NA	NA	NA
December	NA	NA	NA	NA	NA	NA

Source: DWLC.

Table 2G: Monthly Total of Visitors and Revenue at Bundala National Park, 1994

Month	Local Adults	Local Children	Foreign Adults	Foreign Children	Total	Revenue (Rs.)
January	NA	NA	NA	NA	NA	NA
February	1,430	NA	2,433	21	3,884	669,075
March	NA	NA	NA	NA	NA	NA
April	NA	NA	NA	NA	NA	NA
May	633	134	532	01	1,300	230,533
June	NA	NA	NA	NA	NA	NA
July	1,169	01	1,946	57	3,173	530,970
August	1,239	04	2,037	21	3,301	560,986
September	2,310	13	3,295	13	5,631	1039,768
October	1,486	10	2,571	10	4,077	698,684
November	NA	NA	NA	NA	NA	NA
December	NA	NA	NA	NA	NA	NA

Source: DWLC.

Tourist Facilities: There are three camp sites at the site. The main problem is that currently access to Wasgomuwa is only from the north and two alternative routes to the south are blocked by a river. The DWLC is considering installing a simple bridge which can allow access by foot and then from the park side of the bridge, jeeps will be available for hire. Jeep hire at each site could be franchised out to jeep operators on a concessionary basis.

Horton Plains

Description of Site: Horton Plains is located in the south central Hill Country in the Nuwara Eliya District and covers an area of only 3159 ha. The area was the newest national park, being gazetted only in 1988. It is also of importance as the only DWLC National Park in the wet zone. The forest includes unusual vegetation due to the height of the park at over 2000m. The park has a well known viewpoint at World's End. Sambur can be seen grazing at dawn and dusk.

Current Visitation: Tourist arrivals have been growing each year and in 1995 had reached an estimated 101,000, of whom an estimated 91% were national tourists.

Tourist Facilities: Accommodation is available at Anderson's Lodge, but this has been under repairs for some time. The Ceylon Hotels Corporation operates a lodge known as Farr Inn with 8 rooms. There are three camp sites. A visitors center is planned at the junction of Gal Oya and Pattipola Roads, but work has not yet begun.

Sinharaja Forest

Description of Site: Sinharaja Forest Reserve is a unique, low land rain forest comprising about 11,187 ha, spreading across several administrative districts. It is one of the least disturbed and biologically unique forests in Sri Lanka. During the 1970's, Sinharaja forest was subjected to threat from selective logging for the plywood industry. Then the forest was declared a Man and Biosphere Reserve by UNESCO in 1978 and subsequently identified as a World Heritage Site in 1989.

The dense vegetation of Sinharaja exhibits a high species diversity, and a high level of endemism. Faunal life in Sinharaja also exhibits high endemism, including butterflies, fish, amphibians, reptiles, birds and mammals. There are around 22 villages on the immediate periphery of the forest with two villages inside the reserve. The approximate population of these villages is 5,000.

Current visitation: Due to the difficult access, visitors to the forest mainly comprise of people such as students, researchers and conservationists, who visit for educational purposes. Sinharaja is the park where the percentage of foreign visitors is highest. Foreign visitors are attracted by the diverse multi-story vegetation and bird watching. Visitation in 1994 was 3000 national tourists and 4,400 foreign tourists.

Tourist Facilities: There is a FD lodge with capacity for 20-30 people. Also some private people provide accommodation. Martin's Bungalow has room for about 10-15 people.

Udawattakale Protected Natural Reserve:

Description of Site: Udawattakale Natural Reserve of about 118 hectares close to Kandy contains natural and semi natural tropical evergreen forest. It has a long history being declared a national reserve in 1856, and as a sanctuary in 1938. It was gazetted as a strictly protected national forest reserve from May 1955. As it lies within the municipality of Kandy, adjacent to the Temple of the Tooth Relic, it is easily accessed by two main roads radiating from the city. Visitors come to observe the birds, forest animals such as

monkeys and to look at the meditation cave. Pus-wel is a 200-300 year old indigenous creeper or climber, which covers about 3-5 ha of land. It is indigenous to Sri Lanka and is found most commonly in Udawattakale.

Current Visitation: The number of visitors reach a peak during the Kandy Perahara season. The average monthly income earned from entrance fees is around Rs. 15,000. Presently, one casual and one permanent labourer are employed in the park. Motor vehicles are not allowed to enter the forest. The entrance fees are given below:

Entrance Fees:

Local Adult : Rs. 10
Local Children : Rs. 05
Local Student : Free with Prior Approvals
Foreign Adult/Child : Rs. 50

Table 2H: Monthly Visitation Rate of Udawattakale Forest (1993-1996)

Month	1993			1994			1995			1996		
	Local	Foreign	Total	Local	Foreign	Total	Local	Foreign	Total	Local	Foreign	Total
January	951	322	1273	na	na	na	745	357	1102	444	214	658
February	1157	387	1544	na	na	na	610	483	1093	473	192	665
March	903	334	1237	na	na	na	874	513	1387	574	143	717
April	865	214	1079	863	256	1119	480	303	783	356	52	408
May	587	104	691	877	190	1067	304	161	465	853	52	905
June	246	51	297	547	173	720	521	123	644	450	60	510
July	na	na	na	832	493	1325	501	430	931	469	192	661
August	na	na	na	476	364	840	716	363	1079	447	185	632
September	na	na	na	841	322	1163	819	246	1065	338	81	419
October	na	na	na	586	247	833	238	188	426	628	150	778
November	na	na	na	485	353	838	255	155	410	504	181	685
December	na	na	na	1027	351	1378	789	202	991	na	na	na
Total	4709	1412	6121	6534	2749	9283	6852	3524	10376	na	na	na

Note: na = not available.

Source: FD.

Table 2I: Revenue Raised at Udawattakale Forest - 1993-1996 (Rs.)

Month	1993	1994	1995	1996
January	10,067	--	24,980	15,630
February	11,060	--	30,220	13,805
March	10,124	--	35,045	12,485
April	7,080	8,051	18,800	6,015
May	3,575	6,874	11,205	9,980
June	1,767	5,400	11,715	7,080
July	--	14,055	26,270	14,465
August	--	12,147	27,475	13,550
September	--	9,774	19,015	7,770
October	--	7,163	12,280	12,585
November	--	9,128	10,110	13,775
December	--	11,179	15,905	N.A
Total	43,673	242,980	242,980	N.A

Source: FD.

Tourist Facilities: There are presently good paths in the park, and a large map at the entrance. There are no camp sites or specialised nature trails, but the Forest Department is considering developing these in future. No guides are currently available. A conservation center for Udawattakale is now being built and once this center is completed, more information would be made available about this forest to visitors.

Peradeniya Botanical Garden:

Description of the Site: Peradeniya Botanical Garden was established in 1821 during the British colonial period. The extent of area is 67 ha and consists of around 1,000 trees (400 labelled species) over 100 years old. Presently this garden is managed by the Department of Agriculture. It is located on the Peradeniya - Kandy road about 7.5 km from Kandy.

Current Visitation: Most tourists visit the Peradeniya Gardens on their way to the Cultural Triangle and the Hill Country.

Entrance Fees:

Foreign Adult:	Rs. 130
Foreign Student/Children:	Rs. 65
Local Adult:	Rs. 12
Local Student:	Rs. 03
Cars/Double cabs/Jeeps	Rs. 65
Bicycles	Rs. 25
Push Bicycles	Rs. 07

Table 2J: Visitation Rate and Revenue of Peradeniya Botanical Garden (1993-1996)

Month	1993		1994		1995		1996	
	No. of Visitors	Revenue (Rs.)	No. of Visitors	Revenue (Rs.)	No. of Visitors	Revenue (Rs.)	No. of Visitors	Revenue (Rs.)
January	76,099	1,338,614	74,980	2,636,063	91,301	2,669,244	70,296	2,468,634
February	110,962	1,540,123	102,585	2,857,090	128,732	3,635,440	94,637	2,686,623
March	150,796	1,688,886	147,538	3,234,562	180,894	4,110,864	92,071	2,346,261
April	124,322	1,284,425	120,985	2,386,685	113,136	2,672,735	79,440	2,047,495
May	44,330	688,570	87,133	1,541,280	51,321	1,411,132	84,468	1,938,281
June	72,676	802,844	77,794	1,629,429	57,423	1,215,650	76,931	1,407,596
July	118,299	1,067,574	94,511	2,107,929	79,071	2,124,103	95,602	2,207,523
August	128,015	1,415,874	57,250	2,266,097	109,222	2,820,047	92,486	2,205,632
September	85,688	1,048,710	87,345	2,225,625	89,714	2,344,954	84,623	2,094,823
October	83,232	1,074,042	73,485	1,982,986	68,924	2,594,565	84,622	2,094,823
November	60,445	1,173,394	49,846	1,823,209	47,311	2,218,965	70,892	2,092,612
December	87,718	1,177,782	112,674	2,458,051	79,275	2,407,238	N.A	N.A
Total	1,142,582	14,300,838	1,086,126	27,149,006	1,096,324	30,224,937	N.A	N.A

Source: DAP.

Tourist Facilities: The garden has the facilities of a restaurant, toilets and well developed tarred roads inside the farm. Maximum vehicle speed allowed inside the park is 15 km/hrs.

Pinnawela Elephant Orphanage

Description of Site: Pinnawela Elephant Orphanage is located in Kegalle District on the Kegalle Rambukkana route, 85 km away from Colombo. The site has 53 elephants. The orphanage was established in 1975 with 8 elephants in 11 ha of land belonging to the DWLC. In 1982 responsibility for the orphanage was shifted to the Zoological Gardens, Dehiwela. There has only been one elephant death recorded in its history.

Elephants are brought to this orphanage from the wild by the DWLC, if they are ill, wounded or where offspring are separated from their mothers. Normally elephants are difficult to breed in artificial conditions, but the orphanage has had 10 births in captivity. Animals are not released back to the wild, but are sometimes donated to Buddhist temples or as gifts to foreign countries.

Current Visitation: The visitation rate was 507,000 in 1995, of which 68% was foreign tourists. The entrance fees are given below, and in 1995 revenue from these entrance fees was Rs. 14 million. Unlike the DWLC and FD which have to surrender all their money to the Treasury, Pinnawela can keep some of the funds for development work.

Entrance fees:

Local:	Week ends and public holidays	- Rs. 10/person
	Other days	- Rs. 7/person
	Children	- Rs. 3/child
	Student	- Rs. 2/student
Foreigner:	Rs. 75/person	
	Rs. 40/children	

Table 2K: Monthly Visitation Rate and Income for 1995

Month	No. of Locals	No. of Foreigners	Total Income (Rs.)
January	20,088	17,228	1,362,596
February	24,793	18,060	1,451,819
March	45,413	17,767	1,514,000
April	29,828	15,458	1,252,242
May	13,540	7,625	655,210
June	21,608	6,523	620,550
July	32,622	12,697	1,139,492
August	42,704	16,875	1,478,810
September	38,488	14,207	1,312,223
October	27,047	13,623	1,172,464
November	15,145	13,160	1,051,281
December	32,160	11,388	1,044,658
Total	343,436	164,611	14,055,345

Source: DAP.

Tourist Facilities: No accommodation is available in the orphanage. The orphanage has requested the Provincial Council to provide more land to facilitate the environment for captive breeding. It is intended to have long elephant sheds and 2 artificial water tanks which would allow the visitors to observe the elephants drinking water.

Muthurajawela

Description of the Site: The Muthurajawela Visitors Center is one of the most innovative examples of nature tourism currently in existence. The Muthurajawela marshes and Negombo lagoon form one large wetland of 7,000 ha between Colombo and Negombo. According to current plans, some 2,000 ha of this wetland will be conserved in its present state, mainly because of its rich plant and animal life and flood detention. The Muthurajawela Visitor Center was established by the Central Environmental Authority in late 1996. Its main aim is to provide information on the natural environment and raise funds for conservation management activities. The Center is run as a non profit organization with excess funds used for conservation of the center. The long term plan is to convert the Center into a company with CEA as a member of the Board.

Current Visitation: The current visitation is about 400 per month, which does not include additional school groups. About 25% of visitors were foreigners in January 1997. The entrance fees are Rs. 50 for foreigners and Rs. 15 for locals, and the boat trip is Rs. 350 for foreigners and Rs. 125 for locals (with half price for children). The Center is now covering its monthly operating costs of about Rs. 150,000.

Annex 2: Major Nature Tourism Sites

Tourist Facilities: A main attraction of the Muthurajawela Visitor Center is a guided boat trip, that shows a variety of landscapes and ecosystems. The Center provides a bounty of information on the area through exhibits, slide shows and videos. Souvenirs and postcards are available for sale. The Center also has bird hides, and nature trails through fishing villages and a garden of medicinal and ayurvedic herbs.

The Center has also developed an innovative organised programme for school children which helps them learn about the biodiversity and culture through games. The programme is now proving popular in attracting school parties.

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