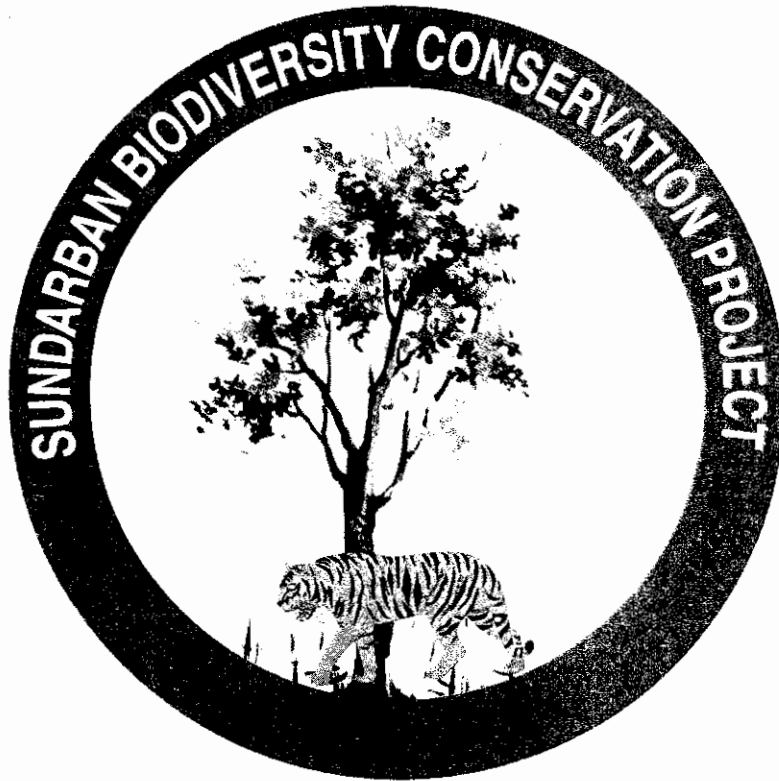


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**Ecotourism Management Plan**  
**INTERNAL NOTES- IN No. 62**

**by Mr. Louis G. Chaves**  
**Ecotourism Specialist**  
**ADB: BAN 1643/3158**  
**May 2002**

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## **Ecotourism Management Plan for the Sundarban Reserve Forest**

May 2002

ARCADIS Euroconsult, The Netherlands  
and  
Winrock International, USA

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## LIST OF ACRONYMS AND ABBREVIATIONS

ACF	Assistant Conservator of Forests
ADB	Asian Development Bank
ADFO	Additional Divisional Forest Officer
AEC	Arcadis/ Euroconsult
ATOB	Association of Tour Operators of Bangladesh
BPC	Bangladesh Parjatan Corporation
CCF	Chief Conservator of Forests
CF	Conservator of Forests (Khulna)
DFO	Divisional Forest Officer
EMD	Environmental Management Unit
FD	Forest Department
FRMP	Forest Resources Management Project (GOB/WB)
FS	Forest Station
GEF	Global Environmental Facility, World Bank
GIS	Geographical Information System
GOB	Government of Bangladesh
GPS	Geographical Positioning System
HTTI	Hotel of Tourism Training Institute, Dhaka
IFMP	Integrated Forest Management Plan for SRF (of FRMP)
IRMP	Integrated Resource Management Plan for the SRF
IUCN	International Union for the Conservation of Nature
IYE	International Year Ecotourismn
MOEF	Ministry of Environment and Forests
MDP	Management Plan Division
NTO	National Tourism Organization
LLW	Lowest Low Water (spring low tide)
NGO	Non Government Organization
NWFP	Non-wood Forest Product
PA	Protected Area
PD	Project Director
PP	Project Proforma, SBCP
RF	Reserved Forest
RIMS	Resource Information Management System
RRP	Report and Recommendation of the President (ADB Project Document)
RECOFTC	Regional Community Forestry Training Center
SBCP	Sundarban Biodiversity Conservation Project (present project)
SRF	Sundarban Reserve Forest
TAG	Technical Assistance Group (consultants)
TIES	The International Ecotourism Society
TAKA	TAKA, equivalent to 58 TAKA per 1 US \$, December 2001
TL	Team Leader
TYDP	Ten Year Development Plan, FAO's Ecotourism plan for SRF
UNEP	United Nations Environment Program
WI	Winrock International
WB	World Bank
WTO	World Tourism Organization
WWF	World Wildlife Fund for Nature

## Executive Summary

Representing 2.5 percent of the world's mangrove forests, the Sundarbans is the largest contiguous block of mangrove forest in the world covering some 900 thousand hectares. The Sundarban reserve forest (SRF) of Bangladesh represents the majority of this area (62%).

The Sundarbans Biodiversity Conservation Project is located in the SRF, including the three wildlife sanctuaries, and its associated impact zone (a 20 km wide buffer surrounding the SRF), as well as the SRF marine zone (boundary 20 km south of the SRF in the Bay of Bengal). The combined Project Area is 6,017 sq.km. The SBCP focuses many of its activities in the impact zone where some 3.5 million people live, and of whom some 1 million are dependent on products extracted from the SRF.

The project is designed to achieve the development of a sustainable management and biodiversity conservation system for all resources in the Project Area. The primary objective is to secure the integrity of the environment and biodiversity of the Sundarbans and for the long-term sustainable conservation of the biodiversities of the SRF.

The objective of the ecotourism component of the project is to develop the means by which responsible and sustainable tourism within the SRF can be promoted, generating income opportunities for the local population, and also promoting environmental awareness and protection in the SRF.

To attract serious ecotourists in today's highly competitive market, the development of any type of tourism activities in the SRF must be promoted and operated on the basis of "environmentally responsible tourism", which must be achieved through tour operators' commitment to the SRF rules of conduct. Forest Department guidelines should be complemented with international guidelines. By establishing a clear set of guidelines for visitors and tour operators, reinforced by an active training program, it is the intention of this plan that *all tourism within the SRF be ecotourism*.

Properly formulated ecotourism activities must avoid potential degradation of the natural and physical environment, economic inequity and instability, and any long-term social and cultural changes of the population. Environmental degradation includes clearly visible impacts like litter, water pollution, erosion, and noise pollution, as well as more subtle but equally important effects like alterations in animal behavior, and changes in the relative species abundance. Development of ecotourism must entail a thorough planning process which clearly outlines the means by which impacts are minimized or mitigated. Marketing ecotourism inherently creates the challenge of managing increasing numbers of visitors and the consequently increased potential for impacts resulting from their activities, hence, emphasis is usually given to encouraging high spending from a low volume of visitors.

The SRF as a whole offers a unique set of attractions, or "hooks", with the potential to draw visitors from all over the world. Among some of these are:

1. The world's largest contiguous mangrove forest and the singularity of the Sundarbans ecosystem.
2. Large variety of visually accessible wildlife (especially birds).
3. Presence of charismatic megafauna including the Royal Bengal Tiger, Estuarine Crocodile, and Ganges River Dolphin..
4. The river boat experience.



5. Sundarbans culture and history – the intimate connection between people and natural resources.

Those areas of the SRF that offer the most immediate and future potential for tourism, in their order of importance, are:

- 1) Katka-Kochikali for its beautiful Khals, its flora, fauna and its proximity to the Bay of Bengal.
- 2) Mandarbaria Island for its seclusion and white sand beach.
- 3) Nilkomol as a main entry point to the SRF.
- 4) Sekhertek and Bari temples for their cultural and historic value.
- 5) Dubla Island for the fishing season during the Raash Mela.
- 6) The Impact Zone, for the unique culture and economic activities of the local communities dependent on the Sundarbans.
- 7) Karamjal Mangrove Visitor and Interpretation Center as a main entry point to the SRF.
- 8) Other SRF entry points including Andaria Bil, Champai, and the Khulna Visitor Information Center, as well as Burogalini and Sharankola where as yet there are no facilities.

The Forest Department is poorly equipped administratively and financially to embark in any kind of business development. Tourism services and products can be provided more effectively and efficiently by the private sector. A free and competitive market encourages companies to innovate and increase efficiency and to respond quickly and strategically to the rapidly changing international market.

The successful implementation of this plan will depend in large part upon the support provided by a clear and consolidated directive both within the Forest Department and at the national level, a strong resolve among the public and private sector to work cooperatively, and the direct involvement of local communities. The involvement of local communities and resource users in ecotourism serves to instill in them a personal sense of stewardship and pride for the SRF. This group represents a powerful and as yet untapped resource for education and conservation initiatives. The Forest Department need not be the only “guardian of the forest.”

Many successful examples of tourism and ecotourism development “from the ground up” can be attributed to a sustained public-private partnership with an integrated strategy including infrastructure development, training, and marketing. The recommended role of the Forest Department is to act as a promoter and facilitator of ecotourism in the SRF. Government funding of basic infrastructure is the key to stimulating private sector activity. The role of government institutions like the Forest Department is especially crucial in setting the standards required of conservation-compatible tourism.

The quality of knowledge, skills, and professionalism of all actors will ultimately determine the success of the SRF as a tourism destination. Forest Department personnel, private tour operators, and local communities of the impact zone who will host visitors all require training in nature and cultural interpretation, hospitality, safety and basic first aid, international hygiene and sanitation standards, micro-enterprise development, foreign language skills and intercultural communication, and information technology to effectively serve visitors to the SRF. Training must not be considered as a one-time event but rather as a continuous process. Training should also serve to engage the commitment to ecotourism and conservation, and complementarity of activities, among SRF stakeholders, as well as within the Forest Department itself.

In 1975, Bangladesh became a founding member of the World Tourism Organization. Despite the WTO's in 1992 call for the SRF to become the "springboard and catalyst for further tourism development in the rest of Bangladesh" tourism in the SRF remains demonstrably in a very early stage of development.

Despite its smaller area relative to the Bangladesh SRF, the Indian Sundarban is considered the destination of choice by international travelers. A recent study by Tisdell (1997) comparing Sundarban tourism in India and Bangladesh, found that facilities and tours in Bangladesh were relatively poorly developed, that the Indian Sundarban "is cheaper to visit and more accessible."

The marketing of ecotourism in the world today is very sophisticated and the supply of goods and services far exceed its present demand. To compete with ecotourism to the Indian Sundarban, tours to the SRF must offer something unique, additional to the recognized selling points (e.g. tigers) of the Sundarban. As a competitive advantage, *low impact river-based tourism* has great potential for development as a unique commodity to be offered in the SRF.

Ecotourism is a new concept and is in general not well understood by the Forest Department, private industry, or even the National Tourism Organization of Bangladesh. Serious ecotourists that have visited the SRF are not satisfied with the services that the tour operators provide. Inadequate quality of services provided by tour operators results from a lack of understanding of client expectations, especially challenging because expectations differ among domestic and international visitors. Also, few areas in the SRF have been designed to receive tourists. Most "popular" sites within the SRF offer limited (if any) accommodations and basic services. Despite this, visitors were optimistic that with properly designed and managed tours and facilities, the SRF could become a favored ecotourism destination. Tour operators recognize their deficiencies and seek to acquire basic equipment and build their capacities in marketing and hospitality and interpretation.

Estimated annual visitor entries to the SRF from 2000/2001 data:

- A. 45,000 day excursionists entering the SRF through Mongla. These visitors spent an average of 30 TAKA per person per day. Duration of stay averaged 3 to 4 hours. Roughly half of them paid an entry fee of 2 TAKA. Visitors came with relatives and friends for recreation and leisure only, especially during public and religious holidays and during the winter dry season.
- B. 6,400 domestic tourists visiting two or three different areas of the SRF (e.g. UNESCO Site, Karamjal, Katka) staying for 2.5 days average and spending an equivalent of 1,300 TAKA per day. These individuals travel mainly in large groups on vessels that can accommodate a significant number of persons. The entry permit per person is of 4 TAKA per day when collected.
- C. 600 to 700 international tourists. Most of these visited two or three different areas of the SRF and stayed 3.5 days on average while spending 3700 TAKA per day (including the 4 TAKA per day entry permit). Of this group, some 150 visited Bangladesh with the express interest of tourism. This subgroup averaged 4.5 days in the Sundarbans and traveled on tour packages organized and operated by only a small number of outfits.

Domestic tours to the SRF exact a significant physical and environmental impact due their large volume. Literally hundreds of visitors may disembark from one launch to converge

simultaneously on a site. These large and uncontrolled groups of visitors leave large amounts of litter, create excessive noise disturbing wildlife, and extract plants from the reserve.

The Forest Department does not presently capture sufficient funds to sustain its own operations, including the maintenance of existing tourism facilities and services in the SRF. In part, this has been due the lack of an incentive on the part of the Forest Department to increase its revenue, as any income generated is transferred to the National Treasury for management, and inadequately redistributed back to the Forest Department. For instance, between 1988 and 1994, the Sundarban Division generated some 41% of the Forest Department's total revenue, yet only 14% of the total was returned to the Sundarban Division to finance its management costs.

Although there are no clear records from which to summarize revenue, excepting Karamjal where visitors are recorded, from the visitor data presented earlier, it is estimated that *the Forest Department generates some 120,000 TAKA annually for standard visitor entry fees alone, including Karamjal. This amounts to less than 1% of total income generated by tourism in the SRF, estimated at over 30 million TAKA annually.*

Conservation activities in the SRF must be considered as an inherent cost in any ecotourism business plan, as it is the integrity of the natural area which ultimately generates revenue. Based on Leader-Williams' (1990) rule of thumb of US\$ 400 cost per square kilometer for protected areas management for large mammal conservation, the FAO (1995) estimated the annual cost of conservation of the SRF at US\$ 2.2 million, or 130 million TAKA. This value is over two times the amount of 2001 Forest Department costs for management of the SRF, around 50 million TAKA. Tourism in the SRF has the potential to contribute to conservation and management, but not enough alone to support these costs.

Within two years of full implementation of the Ecotourism Management Plan, the SRF has the potential to generate some 47 million TAKA annually, a roughly 50% increase over 2001 income. This estimate is calculated from the visitor data presented earlier and assumes:

- 3.5% annual increase in domestic tourists and day visitors
- 1.5% annual increase in international tourists
- increases in average duration of stay of 0.5 and 1 day for domestic and international tourists, respectively
- increased expenditures during their stay of 5% and 25% per day for domestic and international travelers, respectively
- increased revenue from revised Forest Department fee structure (25 TAKA for entry to Karamjal Visitor Center, 100 TAKA SRF entry fee per person per day for domestic tourists, and 580 TAKA (US\$ 10 equivalent) SRF entry fee per person per day for international tourists)

Of this amount, over 10% (4.9 million TAKA) would be captured annually by the Forest Department as standard entry fees, in contrast to the current 1% capture rate. This is still only 4% of mean post moratorium (1990-1994; Mitchell, 1995) Forest Department total revenue generated by the SRF, or 124 million TAKA, mostly from direct resource use. Taken in another context, this amounts to 8% of projected 2003 Forest Department SRF management expenditures, or 58 million TAKA given an annual rate of increase of 8.1% (calculated from Forest Department records, 1986-1993).

*As is it not possible to separate out and quantify Forest Department administration and staff costs specifically associated with ecotourism-related activities (entry fee collection, enforcement,*

etc.), a hard cost-benefit analysis for ecotourism as a separate activity within the Forest Department is not possible. For this reason, it is suggested that ecotourism be delegated to a distinct unit within the Forest Department to better track financial performance of ecotourism-related activities and investments.

We estimate that there is potential to achieve 3-4 % conservation cost financing by means of tourism-related revenues for the SRF by 2003. This figure will also of course depend on treasury reallocations, which has in the past returned 34% of SRF-generated revenue to the SRF. Revenue from concession sales, canoe rentals, and permits and licenses will increase this figure, however, conservation, on which ecotourism depends, will continue to rely, in part in the near term, on external financial support from the Government of Bangladesh and international donors.

Accommodations for tourists in the SRF will be strictly river-based. Existing Forest Department guest houses will be for the exclusive use of Forest Department personnel. No new land-based accommodations will be constructed. Accommodations for overnight tourists while in the SRF must be provided, preferably by private tour operators, on tour boats or floating eco-lodges moored at a distance from shore. *Floating eco-lodges* should be introduced that can be anchored at main points of the SRF and can be towed at different times to other areas. Tourists can be transported with their luggage in smaller and faster motorized boats from the main entry points of the SRF to the floating eco-lodge, or by chartered sea plane, much more quickly than the large launches that currently transport and accommodate tourists.

The designation of approved waterways for tourism is recommended to minimize impacts in sensitive (restricted) areas, and to better manage and ensure the safety of tour boat activities in the SRF.

As the number of visitors to the SRF increases, there will arise a need to coordinate their entry and activities to minimize impacts. The recommended strategy in this case is to concentrate their activities on selected sites like compulsory entry points at Karamjal, Sarankola, and Burogalini. Entry points will also serve to educate large numbers of visitors on the importance and sensitivity of the ecosystem, and on appropriate conduct while visiting the reserve. By increasing their capacity to receive visitors and generate revenue, these centers will become attractions in their own right and self sustaining.

Tour operators should also be encouraged to break up itineraries en route to the SRF by stopping to visit the many different cultural and natural attractions of the impact zone, especially near Khulna and Bagerhat.

The Ecotourism Management Plan presented here is a guide for Forest Department operations. Tour operations in the SRF are to be relegated to the private sector. Within the Forest Department, the Division of Wildlife and Tourism will be responsible for ensuring the implementation of the Ecotourism Management Plan. In short, it will be the responsibility of the Forest Department to:

- enforce the codes of conduct which define ecotourism
- develop and maintain basic support infrastructure
- collaborate with the private sector in the promotion of the SRF

This report was prepared by Luis G Chaves, Ecotourism Specialist, and David Taylor Shoch, Natural Resource Management Specialist. The cover photo is by Kirsten Claire.

## I. Background and Objective

Representing 2.5 percent of the world's mangrove forests, the Sundarbans is the largest contiguous block of mangrove forest in the world covering some 900 thousand hectares. The Sundarban reserve forest (SRF) of Bangladesh represents the majority of this area (62%).

The SRF is a unique ecosystem that has been recognized globally for its importance as a reservoir of biodiversity. This mangrove forest supports a unique assemblage of flora and fauna, including charismatic species like the Royal Bengal Tiger, Estuarine Crocodile, and the Ganges River Dolphin. The Sundri tree, for which the Sundarbans is named, is a near endemic species, distributed along a limited coastline of the Bay of Bengal. The Sundarbans forest ecosystem differs significantly in species composition from mangroves of the Malayan Archipelago, demonstrated by Ismail in the *Environment and Ecology of Forested Wetlands of the Sundarbans of Bangladesh* (1990), and arguably is the only ecosystem of its kind in the world.

The SRF includes three discrete wildlife sanctuaries comprising 23% of the total area and a marine zone that extends 20 kilometers into the Bay of Bengal. In 1999 UNESCO declared these three wildlife sanctuaries of the SRF as a World Heritage Site in order to recognize and protect its unique natural resources.

The Sundarbans Biodiversity Conservation Project is located in the SRF, including the three wildlife sanctuaries, and its associated impact zone (a 20 km wide buffer surrounding the SRF), as well as the SRF marine zone (boundary 20 km south of the SRF in the Bay of Bengal). The combined Project Area is 6,017 sq.km. The SBCP focuses many of its activities in the impact zone where some 3.5 million people live, and of whom some 1 million are dependent on products extracted from the SRF.

As described in the Project Loan Agreement, the project is designed to achieve the development of a sustainable management and biodiversity conservation system for all resources in the Project Area. The primary objective is to secure the integrity of the environment and biodiversity of the Sundarbans and for the long-term sustainable conservation of the biodiversities of the SRF.

As per the latest revised Project Proforma, the main objective is to be supported by some of the following operational objectives that specifically refer to Tourism/Ecotourism activities in the Sundarbans.

1. The development and implementation of a tourism sector plan that integrates sustainable utilization strategies with protection and conservation activities.
2. Support the growth of appropriate tourism within the SRF as a means of increasing revenue and building local awareness of the SRF biodiversity.

The SBCP has been established by agreement between the Government of Bangladesh (GOB) and the Asian Development Bank (ADB). The main executing and implementing agency is the Forest Department (FD) under the Bangladesh Ministry of Environment and Forests (MOEF). The project is directed by a Project Director (PD) and assisted by a Technical Advisory Group (TAG) composed of national and international specialists in different fields. The US\$ 77 million project will take place over 6 years, beginning operation in 2000.

As detailed in the Project's Inception Report the project is divided into the following components including Ecotourism and Environmental Awareness:

- Component A: Effective Organization of the SRF
- Component B: Biodiversity Conservation, including forestry, non wood product, aquatic and wildlife resources
- Component C: Socio-Economic development in the Impact Zone
- Component D: Ecotourism and Environmental Awareness
- Component E: Contracting, research and studies, and monitoring

The objective of the ecotourism component of the project is to develop the means by which responsible and sustainable tourism within the SRF can be promoted, generating income opportunities for the local population, and also promoting environmental awareness and protection in the SRF. As specifically stated in the SBCP Revised Project Proforma (July 2001), the Ecotourism Component will seek to:

“...integrate sustainable utilization strategies with protection and conservation activities and to support the growth of appropriate tourism within the SRF as a means of increasing revenue and building local awareness of the SRF biodiversity ... through the active promotion of public-private partnerships, the provision of essential infrastructure, training, and extension campaigns, the development and implementation of an ecotourism strategy for the SRF ...the strategy will recognize the immaturity of the tourism sector in the SRF and adjoining region and will develop a practical set of implementable activities that are economically justified. Emphasis will be placed on ensuring that the GOB does not incur additional financial burden, or risk, and that a supply side infrastructure program is not the focus of the strategy.”

Developed through this component, the Ecotourism Management Plan for the SRF will contribute to national policies for the SRF.

## II. Introduction to Ecotourism Principles

Ecological tourism or ecotourism is a new form of tourism that has developed at an accelerated rate in the last 15 years, although as a concept it was not clearly defined until early 1990 following a call from academics and industry for a global standard.

In contrast to other forms of tourism, for example extreme tourism, adventure tourism, ethic tourism, roots tourism, that have also developed recently, ecotourism has been envisioned not only as another business of the hospitality industry but also as a development tool to generate benefits for conservation purposes and provide alternative employment for individuals that extract and/or depend on sensitive natural resources.

In 1990, Elizabeth Boo, a program officer of the World Wildlife Fund, published one of the first books written on the subject, demonstrating the promising synergies created between the travel industry and conservation. As she deftly states, "ecotourism is an example of a business that can actually further conservation goals." Boo defined ecotourism as nature travel that contributes to conservation by:

- 1) generating funds for protected areas
- 2) creating employment opportunities for communities surrounding protected areas
- 3) providing environmental education for visitors
- 4) minimizing the negative impacts of the activity

By 1993 many other well-known organizations developed their own definitions of ecotourism – that of the IUCN has been used for the purpose of this project and guided the development of the SBCP Project Proforma and ADB documents. The IUCN defines ecotourism as "environmentally responsible travel and visitation to relatively undisturbed natural areas to enjoy and appreciate nature, that promotes conservation, has low visitor impact, and provides for the ... socio-economic involvement of local populations". By establishing a clear set of guidelines for visitors and tour operators, reinforced by an active training program, it is the intention of this plan that *all tourism within the SRF be ecotourism*.

The International Ecotourism Society (TIES), composed of individuals and organizations across different tourism sectors, similarly defines ecotourism as "responsible travel to nature areas that conserves the environment and sustains the well being of local people."

Defining ecotourism is useful in establishing what ecotourism is not. There are many other similar, and too-often used, terms, such as "soft tourism", "green tourism", "nature tourism", and "low impact tourism", for which standards have not been rigorously defined.

An ecotourist is defined by the nature of his or her activities while visiting the protected area, which conform to an established code of conduct ensuring the conservation and livelihood outcomes described above. The ecotourist must care for the place visited as if it was his or her own home.



Properly formulated ecotourism activities must avoid potential degradation of the natural and physical environment, economic inequity and instability, and any long-term social and cultural changes of the population. Environmental degradation includes clearly visible impacts like litter, water pollution, erosion, and noise pollution, as well as more subtle but equally important effects like alterations in animal behavior, and changes in the relative species abundance. Development of ecotourism must entail a thorough planning process which clearly outlines the means by which impacts are minimized or mitigated. Marketing ecotourism inherently creates the challenge of managing increasing numbers of visitors and the consequently increased potential for impacts resulting from their activities, hence, emphasis is usually given to encouraging high spending from a low volume of visitors. This conundrum is apparent, but not resolved, in the Sundarban Wildlife Management Plan, conservation in the Bangladesh coastal zone (World Wildlife Fund); "mass tourism [in the SRF] is not appropriate, but there is a large number of people with an interest in unspoiled wild places who would welcome the chance to visit the Sundarban if the opportunity were available." To accurately monitor tourism activity impacts, indicators and baseline values must be established as early as possible.

Many countries have capitalized on the recent interest in ecotourism. The yearly world turnover has been estimated at US\$ one trillion and although ecotourism has produced some admirable financial results as a business, it has achieved less than anticipated as a conservation tool and for the benefit of the local communities. This issue is to be evaluated in the upcoming International Year of Ecotourism Summit in Quebec in 2002.

One of the crucial challenges in successfully developing ecotourism is that ecotourism must be understood as a business, as an exchange of goods and services, and not solely as a conservation tool. In many cases, ecotourism plans lack a sound investment analysis and/or feasibility study. Too often, efforts have focused more on the development of eco-friendly infrastructure and facilities with no assessment of real demand. This supply-oriented approach is based on the fact that ecotourism is a novelty and that demand is greater than supply. However, ecotourism packages today abound around the globe, and are extremely well-marketed and priced. Much more is required than the construction of an observation tower or a boardwalk to be able to attract visitors, domestic or international.

Today's ecotourism business is demand-driven. This requires that potential customers are identified and their needs and expectations are understood to responsively develop strategies and priorities. The important question is not what facilities and infrastructure to build but rather why should they be built and for whom. A tourism plan without market research is unacceptable. Market research must also assess the draw of existing tourism resources.

### **III. Attractions of the Sundarban Reserve Forest**

The SRF as a whole offers a unique set of attractions, or “hooks”, with the potential to draw visitors from all over the world. Among some of these are:

1. The world’s largest contiguous mangrove forest and the singularity of the Sundarbans ecosystem.
2. Large variety of visually accessible wildlife (especially birds).
3. Presence of charismatic megafauna including the Royal Bengal Tiger, Estuarine Crocodile, and Ganges River Dolphin..
4. The river boat experience.
5. Sundarbans culture and history – the intimate connection between people and natural resources.

In tourism, an attraction is simply anything that attracts the attention of visitors. Attractions are not rated by the providers but by the users that are able to identify them as an attraction or no. For this reason it is very important to involve as many different users in the process of identification and classification of existing and potential attractions as possible.

Attractions are the core of all types of tourism activities and represent the major demand determinant and draw to a particular destination. The attractions are to be supported by some type of hospitality services and infrastructure.

Specific attractions (locations) within the SRF have been identified in this plan, and their potential assessed, with notable input from the Project Director, Divisional Forest Officers, and other TAG members, by means of site visits and interviews.

Logically, 6000 square kilometers of forest is a vast area to conduct an exhaustive inventory. There are likely other areas with similar potential for tourism yet to be discovered. Mandarbaria for instance has only recently been recognized for its tourism potential.

Five main areas have been identified in this plan as having the highest potential for ecotourism and merit further development in the next three years as proposed in this plan.

These “hot spots” were identified by evaluating the total amount of time tourists are willing to spend visiting attractions at a specific site (“power of attraction”), together with the relative time and travel expense required to get there, as well as the quality of facilities and hospitality services available. Average travel times were calculated using maps, transportation schedules, and tide tables. These parameters provide a measure of the potential for tourism at a given site.

Andaria Bil, Champai, Burogalini, Sharankola, and Khulna have all been identified as major entry points to the Sundarbans and require basic infrastructure and facilities. Information and education centers have been proposed for these areas in this plan. The main objective of creating facilities to receive visitors at the SRF’s entry points is to concentrate them in the periphery of the reserve, thereby minimizing impacts in other areas of the SRF.

As the number of visitors to the SRF increases, there will arise a need to coordinate their entry and activities to minimize impacts. Two strategies may be employed, either 1) concentrate the visitors in a particular site to keep other areas of the reserve free of impacts, or 2) disperse them. The recommended strategy in this case is to concentrate their activities on selected sites like

compulsory entry points at Karamjal, Sarankola, and Burogalini. Entry points will also serve to educate large numbers of visitors on the importance and sensitivity of the ecosystem, and on appropriate conduct while visiting the reserve. By increasing their capacity to receive visitors and generate revenue, these centers will become attractions in their own right and self sustaining.

This strategy must go hand in hand with zoning restrictions of activities in the SRF. It is recommended that further tourism development be excluded from areas not specifically contemplated in this plan for infrastructure interventions.

Development of ecotourism is a slow process and the responsible development of an ecotourism destination takes years of understanding, field observation, and testing of new ideas while continually striving to minimize environmental impacts.

Those areas of the SRF that offer the most immediate and future potential for tourism, in their order of importance, are:

1. Katka-Kochikali for its beautiful Khals, its flora, fauna and its proximity to the Bay of Bengal.
2. Mandarbaria Island for its seclusion and white sand beach.
3. Nilkomol as a main entry point to the SRF.
4. Sekhertek and Bari temples for their cultural and historic value.
5. Dubla Island for the fishing season during the Raash Mela.
6. The Impact Zone, for the unique culture and economic activities of the local communities dependent on the Sundarbans.
7. Karamjal Mangrove Visitor and Interpretation Center as a main entry point to the SRF.
8. Other SRF entry points including Andaria Bil, Champai, and the Khulna Visitor Information Center, as well as Burogalini and Sharankola where as yet there are no facilities.

**PRESENT AND POTENTIAL POWER OF SRF ATTRACTIONS AND ACCESS BY AREA.**

AREA	PRESENT POWER OF ATTRACTION (RANGE)	POTENTIAL POWER ATTRACTION (RANGE)	ACCESS TO AREA, AVG TRAVELTIME
<b>KATKA-KOCHIKALI</b>	1-2 days	2.5 – 3.5 days	1 day Dhaka 8 hours Mongla
<b>MANDARBARIA</b>	½ day	1 - 1.5 days	1.5 days Dhaka 3 hour Nilkomol
<b>NILKOMOL</b>	1 day	1 – 1.5 days	1 day Dhaka 2 hours Dubla
<b>SEKHERTEK TEMPLE /RUINS</b>	2 hours	½ - 1 day	7 hours Mongla 6 hour Mandarb 5 Nilkomol
<b>DUBLA</b>	½ day	½ - 2 days	1 day Dhaka 2 hours KoTAKAa
<b>IMPACT ZONE</b>	Unknown	1 - 2 days	½ day Dhaka, 2 hours Jessore

<b>KARAMJAL VISITOR CENTER</b>	45 minutes	½ -1 day	1 hours Mongla
<b>ANDARIA BIL</b>	Unknown	½ -1 day	2.5 hours Mongla
<b>CHAMPAI</b>	Unknown	½ day	3 hours Mongla
<b>KHULNA INFORMATION CENTER</b>	Unknown	1 - 2 hours	2 hours from Jessore airport

### 1.) Katka-kochikali

Katka and Kochikali possess a good image among nationals that visit the area periodically in large numbers from all over the country. This area includes a variety of attractions for both general interest tourists as well as for more specialized types of nature oriented tourism (e.g. birdwatching tours).

Canoeing affords an intimate experience of the extensive network of channels. Of particular interest is the Baharani connector which links Katka and Kochikali. Opportunities for observing undisturbed wildlife here are excellent - masked finfoots, monkeys, monitors, and snakes are often seen, as well as the occasional tiger on a sandbank or crossing the Khal. Night canoeing in the Jamthala Khal offers the chance of witnessing bio-luminescence in the water during the winter months. The Boyarkhal and Bhulurdia Khals are good for birdwatching in the morning and afternoon. Canoeing north from Kochikali, west along the Supoti Khal, one arrives at Tiger Point which is a good area to observe and photograph adjutant storks, wild boar, crocodiles and groups of deer crossing the smaller Khals.

Visitors can also take a half day or full day walk from the Forest Department station at Jamtala Khal, along Kochikali beach to the Badamtala Khal. Tracks of tigers, fishing cats, wild boar, and deer, are common and readily identifiable in the sand banks here. Jungle fowl and deer are frequently observed, and on the beach visitors can spend time combing for shells and observing mangrove propagules. Small groups with a license can continue further and enter the long grassland through a small stretch of forest.

Nearby Egg Island and Dimer Char Island offer excellent wildlife viewing. Tigers have been seen hunting in the grassland from the observation tower on Egg Island and the white sand beach there is a known breeding ground for Olive Ridley Turtles. Dimer Char has a wonderful channel for canoeing and bird watching where four different species of kingfishers and numerous herons are often observed.

Around the Katka Forest Department station and guest houses are a number of trails through mangrove forest opening onto the Bay of Bengal, providing an ideal site for sunsets and good light for late afternoon photography.

Existing accommodations in Kochikali guest house are limited and mainly reserved for the use of Forest Department officials and their guests. The quality of accommodations is poor.

Refrigeration and fresh water are not available. The massive cement building is not inviting to visitors and provides no ventilation as glass windows must remain closed due to lack of mosquito screens. The generator is very loud and of inadequate capacity.

In contrast, the Katka guest house is considerably more agreeable to ecotourist tastes, with its wood construction and location in front of the beach. However, as in Kochikali, accommodations here are limited and usually reserved for forest department officials. There is no supply of fresh water, except for the pond behind the guest house where garbage is usually dumped.

Safety near the forest station is good compared to more isolated areas of the SRF. Guards usually accompany tours in the forest and channels. The forest station here is one of the few in the SRF that can communicate by radio with the DFO office in Khulna.

Potential market segments identified are mainstream tourism and recreation, ecotourism, adventure tourism, and special interest tourism.

#### SUMMARY ASSESSMENT OF ATTRACTIONS AT KATKA-KOCHIKALI

ATTRACTION	IMPROVEMENT POTENTIAL	DURATION (HOURS)	LIMITATIONS AND IMPACTS
Canoeing Katka-kochikali	Additional canoes, resting platform, interpretive signs.	4 - 8	Safety - tides and inclement weather.
Katka beach walk to Jamatala Khal	Additional planning and control.	4 - 8	Potential impact on grassland.
Egg Island, Khal and Beach	Dock/resting platform for khal.	2 - 3	Safety - tigers, tides, inclement weather.
Night canoeing Jamtala Khal	None.	2 - 3	Safety - tides and inclement weather. Security.
Bhurudia Khal-Canoeing	Interpretive signs.	2 - 3	Safety - tides and inclement weather. Security.
Boyarkhal Canoeing	Interpretive signs.	3 - 4	Canoe portage. Safety - tides and inclement weather.
Supoti Khal-Forest Station to Tiger Point Canoeing	None.	1 - 2	Safety - tides and inclement weather.
Katka forest walk, behind station to Boyarkhal	Trail development, interpretive signs, staff training in hospitality and interpretation.	2 - 3	Noise pollution from loud generators. Safety - tigers.

## 2.) Mandarbaria Island

Mandarbaria Island is situated in the southwest corner of the SRF and is encompassed by one of the wildlife sanctuaries within the SRF. Visitors to Mandarbaria usually come from Burogalini or from the Nilkomol Heritage Site through the Sakabkhali and Balir Gang Khal and crossing the Betmara Gang (two to three hours). Due to its remote location, the island is seldom visited by tourists and has little recognition among tour operators of the SRF.

Mandarbaria Island features a pristine long white sand beach and a feeling of quiet and seclusion totally unique in the SRF. It is highly rated among special interest tourists seeking a closer connection with nature free from noise and other disturbances. Along with its beauty and calm the island lends a sense of remoteness, an errant and solitary projection of the Sundarbans embraced by the Bay of Bengal.

With the exception of a small hidden Forest Department station with friendly and welcoming FD rangers, there are no other structures on the island. Where the water is calm, some visitors swim from the beach in front of the Patrol Station. Tourists, most of them domestic, usually disembark in front of the Forest Station and walk one or two hours on the beach before returning to their boats. Many tours continue on to Kudrat Point. Kudrat Point is popular among nationals because it marks the furthest point south in Bangladesh. There is no beach at Kudrat Point, and it is difficult to anchor and safely disembark due to the characteristically rough water of this area.

Despite its lack of recognition as a destination, Mandarbaria Island offers a wide range of activities that are sought out by many tourists. Visitors can walk south along the beach and comb the sand for shells (pieces of giant oysters are often found). Sea turtles nest here, mainly the Olive Ridley Turtle that arrives to lay its eggs during the winter months. Tracks of wild boar, monitor lizards, deer, and tiger can be encountered along the beach strand. In the grasslands behind the beach are some small waterholes which attract wildlife. Past the grasslands, a web of nature trails winds through tall mangrove forest. Seasonally-dry Khals that run through the forest offer an additional means of access.

Another popular activity is to circle the island by boat through the Chandbaria Khal to the Bay of Bengal. Although this route can offer a beautiful sunset from the western side of the island, the Chandbaria Khal is too wide for any close observation of wildlife.

Potential market segments identified are ecotourism and adventure tourism.

### SUMMARY ASSESSMENT OF ATTRACTIONS AT MANDARBARIA ISLAND

ATTRACTION	IMPROVEMENT POTENTIAL	DURATION (HOURS)	LIMITATIONS AND IMPACTS
Beach walk, swimming	Interpretive signs, mooring buoys, controlled access to restricted areas, rest area, general site clean up.	1 - 2	Safety – rough surf. Disturbance of wildlife. Litter, pollution.
Wilderness trail in grassland	Interpretive signs, site map.	1 - 2	Safety – tigers. Disturbance of wildlife.

Forest Department Patrol Station	Renovation, information.	½ - 1	
Evening beach bonfire	None.	2	Disturbance of wildlife. Firewood collection.
Chandbaria Khal cruise	None	2 - 3	Safety – inclement weather.
Bahir Mandarbaria Khal by canoe	Interpretive signs, maps, canoes, dock/resting platform.	2 - 6	Safety – inclement weather and tides. Security.

### 3.) Nilkomol (Hiron Point)

Nilkomol hosts the UNESCO World Heritage Site plate for the three sanctuaries and an important symbolic destination for tourists. As a destination within the SRF, this area holds greater recognition among Bangladeshi tourists than the Katka-Kochikali area. Despite this fact, accommodations for visitors were only just being constructed in 2001, few services are provided and the facility has an overall “institutional” appearance not inviting to international visitors.

Visitors can walk around the Wildlife Sanctuary Headquarters area, around its pond and through its buildings that serve to accommodate Forest Department personnel. In front of the station, across the Nilkomol Khal, early morning and late in the afternoon present good times for viewing herds of deer that congregate here to browse. The Forest Department observation tower at nearby Keora Suti is a popular site for visitors arriving from the Nilkomol Khal. North of the Keora Suti Khal, there are several narrow but navigable channels for small boats that offer viewing opportunities of the forest and wildlife like large troops of Rhesus Macaque, monitor lizards, and a variety of bird species. Canoeing is excellent during the winter when the water is very clear. Crocodiles are often spotted on the steep sand banks.

Potential market segment identified is mainstream domestic tourism and recreation.

#### SUMMARY ASSESSMENT OF ATTRACTIONS AT NILKOMOL

ATTRACTION	IMPROVEMENT POTENTIAL	DURATION (HOURS)	LIMITATIONS AND IMPACTS
UNESCO site main entry point	Canoes, resting platform/dock, information center, interpretive signs, landscaping, and general site cleanup.	1 – 2	Litter and pollution.
Nilkomol Khal by motorboat	Planning and control.	1	Noise pollution.
Nilkomol Khal by canoe, night canoeing	Dock and resting platforms.	1 – 2	Safety – unsafe practices of motorboat operators.
Keora Suti from Nilkomol Khal by canoe only	Dock renovation, new observation tower.	2 – 4	Security.
Canoeing small Khals	Interpretive signs, maps, and	2 - 4	Security.

north of Keora Suti	resting platforms.		
Trail to Lighthouse	Reconfiguration of trail, maps, interpretive signs, tiger safety messages.	2 - 3	Safety – tigers. Litter and pollution.
Boardwalk to Keora Suti observation Tower	Elevated boardwalk, trail maintenance, interpretive signs, tiger safety messages	2 - 4	Safety – tigers.

#### 4.) Sekher Tek and Barabari

“Deep inside the Sundarbans ... at some distance to the south west of Kamarbari near the Marjal River, now thickly forested with Sundari trees and infested with tiger, wild boar, snakes and herds of beautiful spotted deer, there is a place named Sekher Tek. Here some ruins of old buildings and species of trees of settled areas are to be found.”

Professor Satish Chandra Mitra, 1914

“About a mile distant from it [Sekher Tek] the ruins of a fort could be seen which the Professor [Chandra Mitra] inclined to identify with Pratap’s Sibsa Fort, locally known by the boalis [sic] as Barabari. Its high defense rampart, a dilapidated Siva temple, some tanks, two or three buildings and innumerable remains of former habitation are still to be found.”

N. Ahmed, *The colonization in the Sundarbans*, UNESCO1989

The Sekher Tek, or Sakher area as it is commonly referred to, is the SRF’s most important, yet little known, cultural attraction found to date. The area is also known as the Baribari settlement. The Sekher Tek area is located adjacent to the Sibsa River a few kilometers south of the Adachai Forest Department Station. Access is gained by trail or by canoe from the mouth of the Patha Khal.

As a cultural attraction Sekher Tek brings an added depth to the tourist experience of the SRF, which enjoys an already diverse palette of natural attractions. Although representing a small market segment, Sekher Tek offers good potential for a short adventure tourism experience to complement visits to other areas in the SRF. The entire area remains in a pristine and natural state and is an ideal site for adventure tourists who can “discover” on their own a Hindu temple “lost” in the Sundarbans.

Naximuddin Ahmed argues that even though the SRF has remained for the most part free of human settlement, attempts to settle the area have been made since the middle ages. Most of these failed due to the hostile natural environment and attacks from the Portuguese and Magh pirates that used the SRF for hiding. In the early 18<sup>th</sup> century, a series of mud forts was erected deep inside the SRF as a safe sanctuary in the event of a Moghul attack on the Bengal capital. One of these forts, Bedkasi, was constructed on the banks of the Sibsa river at the entrance of the older Shekher Tek temple.

The main temple today is a tall solitary structure made of red terracotta. The temple ruins are still in good condition, though covered by thick vegetation which adds to the sense of discovery. The temple is referred to as the Tiger Temple.



The Patha Khal and associated sandbanks is a good area for early morning and late afternoon birding. Pug marks and other animal sign can be seen along the trail leading to the temple.

Access to Sekher Tek is somewhat difficult and many tour operators are unfamiliar with the area and consequently do not include it as part of their scheduled tours. Those operators that do visit the site often scheduled Sekher Tek for the conclusion of a tour package.

Potential market segments identified are ecotourism and adventure tourism.

#### SUMMARY ASSESSMENT OF ATTRACTIONS AT SEKHER TEK

ATTRACTION	IMPROVEMENT POTENTIAL	DURATION (HOURS)	LIMITATIONS AND IMPACTS
Sakher Ruins	Interpretive signs, maps, staff to provide hospitality and interpretive services, gift shop, general site cleanup.	2.5 - 3.5	Difficult access. Disturbance of wildlife. Physical impact on ruins. Security.
Canoeing on Patha Khal	Additional canoes, resting platforms.	1 - 2	Security.
Visit to fishermen on the Sibs River	None.	1 - 2.5	Security.

#### 5.) Dubla Island

Dubla Island, mainly during the winter season, offers both natural and cultural attractions to its visitors. Dubla Island is the largest permitted fishing center in the SRF. In September, thousands of fisherman set up their camps on Dubla Island to begin fishing the coastal waters there. At about the same time, large numbers of people head for the offshore islands to the south and east of the SRF. The fishing season coincides with the annual religious celebration of Dubla Mela, which honors the Hindu deity Krishna's divine and platonic love for his beloved Radha. This celebration takes during the full moon in November, and as day breaks the next morning, devotees say their prayers and float offerings in the water.

The fishing camps themselves are a major attraction for visitors, affording a view into the lives and activities of the fishermen and traders. Among the many fishing camps of the island, one that is particularly popular is the fishing camp of Retired Major Zia, where visitors are always welcomed to rest in a Goal Ghar built in the middle of the pond and listen to the major's stories of the Sundarbans. Major Zia is a well-known personality in Bangladesh who lived in seclusion for many years in the forest and is intimately familiar with the area's history and environment.

Cruising north along the Meherali and Bheda Khals there is a good opportunity to spot dolphins, crocodiles, monitor lizards, large troops of Rhesus macaques, shy clawless otters, many species of birds. The end of the Bheda Khal is a particularly renowned hot spot for - white-bellied sea

eagle, Palla's fish eagle, kites, herons, and ducks can be spotted in the shallow waters and sand banks of this part of Dubla.

Day-long trips to accompany fishermen in their boats can also be arranged by some tour operators. Catches are fascinatingly diverse including eels, sea snakes, squid, octopus, and sharks. Tour operators and the tourists can purchase fresh fish to be prepared and served in the tourist boat for dinner at the end of the day.

Despite the variety of attractions at Dubla Island, this site suffers from a lack of interpretive ability and knowledge on the part of tour operators, and also a lack of any accommodations, toilets, or fresh water supply.

Potential market segments identified are mainstream tourism, special interest tourism (religious pilgrims), and ecotourism.

#### SUMMARY ASSESSMENT OF ATTRACTIONS AT DUBLA ISLAND

ATTRACTION	IMPROVEMENT POTENTIAL	DURATION (HOURS)	LIMITATIONS AND IMPACTS
Dubla Fishing Village, Kella	Cleanup, interpretive signs, maps.	2 - 4	Indiscriminate by catch. "Fishy" smell of camps.
Visit with Major Zia in Meher Ali	None.	2 - 3	Captive animals.
Cruising Bheda and Meher Ali Khals	Interpretive signs.	2 - 3	-
Birdwatching Sandbanks/ Alor kol/Bay	None.	2 - 3	Access at low tide.
Estuary/offshore fishing with fisherman boats	None.	2 - 3	Indiscriminate by catch. Safety - inclement weather. Security. Seafood dinner - potential health risks and selling restrictions by traders.
Raash Mela Festival	Interpretation for foreign tourists, waste disposal system.	1 - 3 days	Poor waste disposal.

#### 6.) SRF Impact Zone

The following activities within the SRF impact zone are here identified and recommended as promising components of tour packages to complement visits to the reserve.

**Vicinity of Jessore** – activities could be accompanied by a day visit to Calcutta

- Hindu Temples
- Fish raising ponds
- Otter fishing village
- Jute factories
- Wholesale fur market
- Zoo

**Vicinity of Khulna** -- activities could be complemented with a return trip to Dhaka on one of the old steam boats, or "Rockets."

- SRF Information and Visitor Center
- Museum of archaeology
- Khulna Newspaper Mill
- NGO's at work
- Culture (e.g. Muslim traditions and festivals, Henna demonstrations)
- Fish markets
- Hindu shrines
- New market for souvenir shopping (offers good quality Indian fabrics, shawls, and saris)
- Old market in the city
- Khulna city tours by rickshaw
- University of Khulna
- Sunset cruise on the Bonrani boat

#### **Vicinity of Bagerhat**

- Canoe and boat trips into the SRF
- UNESCO sites and monuments
- Shat Gambuz Mosques and others in the surrounding area
- Monastery ponds and the sacred crocodiles
- Hindu temple
- Culture / village life - shrimp ponds, rice fields, production of spices and Betel nuts
- Golpata distribution depot
- Snail shell depots
- Shrimp fishing

#### **Vicinity of Shatakaira**

- Hindu village and Samindhars Palace
- Portuguese fort
- Production of traditional bricks for roofs
- Culture - life and livelihoods in the impact zone, Hindu traditions and festivals, nightly shows of music and culture
- NGO's at work
- Local crafts shopping
- Tiger widow villages
- Storytelling by famous Bandarabans tiger hunter, Pachabdi Gazi

## **Special Events**

The following are important cultural events, festivals, and/or natural phenomena that take place annually in the SRF that have potential to attract visitors to the area.

<b>Dubla Raash Mela</b>	Five days every year during November full moon on Dubla Island
<b>Honey Collection</b>	Three months every year starting with an opening ceremony in April
<b>Otter Fishing</b>	Winter season (mostly 3 villages involved)
<b>Hilsha Fishing</b>	July to September along the periphery of the SRF
<b>Golpata Harvest</b>	As scheduled by the Forest Department
<b>Grass Cutting</b>	As scheduled by the Forest Department
<b>Shell Collection</b>	Beaches throughout the year
<b>Ridley Turtle Nesting</b>	Winter season on islands of the Bay of Bengal
<b>Fireflies</b>	Winter season
<b>Bioluminescence</b>	Winter season on the Bay of Bengal

## IV. Policy Assessment

Policy is the same thing to a government as values are to an individual in providing guidelines and parameters for actions. One of the biggest constraints to the implementation of an ecotourism management plan for the SRF is the lack of a clear policy guiding tourism in the SRF.

National policies related to or affecting tourism in the SRF do exist, however, experience has shown that they lack adequate follow-through. This is a result of their often vague language which opens up a range of interpretations to those appointed to carry out the policies. Policies are often informally “revised” on a case by case basis. Some of these policies include:

- Government of Bangladesh Forest Act 1875, latest amendment in 1989
- Declaration by GOB of the Sundarban mangrove forest as a Reserve Forest 1927
- Government of Bangladesh First National Tourism Plan, Master Plan 1965-1985
- Government of Bangladesh Wildlife Preservation Act 1973
- Government of Bangladesh National Forest Policy 1979 - “Steps shall be taken to conserve forests and wildlife and utilize the recreational potential of the forest sector”
- Government of Bangladesh Second Strategic Master Plan, 1985-1995
- Government of Bangladesh National Environmental Policy 1992 – calls for use of EIA’s
- Government of Bangladesh National Tourism Policy 1992

The GOB Forest Act empowers the Forest Department to implement a management program for the sustainable use of natural resources. The act prohibits the granting of any right to use of the Forest Reserves, including the SRF, to individuals or communities. Additionally, the GOB Wildlife Preservation Act empowers the Forest Department to police unlicensed hunting, trapping, and possession of wildlife materials in the three wildlife sanctuaries of the SRF (established in 1977).

The GOB National Tourism Policy of 1992 carries the prime objective to use tourism as a means to improve the socio-economic condition of the country by creating interest among tourists to visit Bangladesh. The policy calls for, among other things, improved safety for travellers, the creation of low cost tourism facilities for both domestic and international visitors (e.g. safari tours and treetop style lodges). More importantly, the policy calls for the development of ecotourism in the Sundarbans, including specific development plans for Khulna, Mongla, Katka and Hiron Point. The policy also invites the involvement of the private sector, formally acknowledging

“that tourism is a multi-sectoral industry and that the private sector must be encouraged to invest in tourism independently or in joint ventures which might be gradually handed over to the private sector ... government regulation of private tourist development is generally agreed to be a vital necessity and this should aim to set standards and control, but not stifle, private enterprise.” (GOB, 1992)

The GOB’s mandate for tourism is carried out by the Ministry of Civil Aviation and Tourism. The Bangladesh Parjatan Corporation (BPC) is a semi-autonomous government agency whose chairman reports to the Ministry of Civil Aviation and Tourism. The main function of this corporation is to promote and develop tourism. The mandate is wide and includes not only the promotion and marketing of Bangladesh as a tourism destination but also the acquisition and development of existing and new facilities to provide resources for tourism. This includes hotels, tour operations, food and beverage establishments, and other hospitality services. The BPC currently has over 1000 employees countrywide. The BPC has not been successful in managing

strategic investments in tourism services and facilities, demonstrated by the very low occupancy at the BPC hotel in Mongla.

In contrast to the BPC, tourism services and products can be provided more effectively and efficiently by the private sector. A free and competitive market encourages companies to innovate and increase efficiency and to respond quickly and strategically to the rapidly changing international market. The more appropriate role for a national tourism organization like the BPC is to coordinate different sectors of the industry as a facilitator and to promote the recognition both domestically and internationally of Bangladesh as a tourism destination. This is important, as currently there is little cooperation between national tour operators in promoting the SRF.

The current Forest Department budget is inadequate to maintain existing infrastructure at SRF sites. Enthusiasm for ecotourism as a source of revenue must be tempered with the understanding that ecotourism characteristically develops slowly and requires significant efforts in promotion. The Forest Department is poorly equipped administratively and financially to embark in any kind of business development. The more capable private sector has expressed interest in new ecotourism business ventures in the SRF but has been discouraged by the lack of a clear and consistent policy for the Forest Department.

Bangladesh is also party to a number of international conventions on conservation, among them the World Heritage Convention, The Convention on Biodiversity, The Ramsar Convention, and the Convention on International Trade in Endangered Species (CITES), and participates in UNESCO's Man and the Biosphere Program. All of these conventions require the Government of Bangladesh's participation in the worldwide initiative to conserve and protect unique natural areas like the SRF sanctuaries, declared a World Heritage Site in 1999.

Management plans for ecotourism within the SRF have been proposed in the past. In 1995, a "Ten-year Development Plan" (TYDP) for implementation of ecotourism activities in the SRF was presented as part of the FAO's Integrated Resource Development Plan of the SRF.

In Phase I of the plan, a "development without destruction" strategy was recommended, featuring the construction of jungle camps and lodges (total 82 beds) at Katka, Nilkomol, Dhangmari, Koachikali, and Mandarbaria to accommodate special interest tourists and to be operated, managed, and marketed by the Forest Department. The TYDP additionally recommended transportation of the tourists to the lodges in a large 64-passenger boat style with accommodations, as well as smaller motorized and non-motorized boats for the tourists to travel along the small channels, all to be managed by the Forest Department. Phase II of the plan called for the construction of an Eco-village and Conservation Center, along with international standard upgrades to the Royal Hotel in Khulna.

The TYDP also included a series of recommendations on tourism and recreation activities in the SRF that can be summarized as follows:

- Establishment of a Sundarban Tourism Advisory Committee
- Immediate emphasis on product development
- Prioritization of development planning
- Implementation of a "development without destruction" strategy
- Regulation and monitoring
- Training
- Publicity and Marketing

- Establishment of common objectives to include a formal policy.

The TYPD was never implemented. In part, this was due to lack of foresight in the basic infrastructure and operational capacity required by the Forest Department to run and operate the lodges, inadequate stakeholder buy-in, and lack of engagement of the private sector and local communities. The plan additionally suffered from a lack of any evaluation of environmental impacts, lack of market research to justify infrastructure investments, inadequate marketing, training, and organizational strategies, and the inherent lack of adaptability of a “ten-year” plan.

## **V. Market and Financial Assessments**

### **The Sundarban Reserve Forest in the World Market for Ecotourism**

“Bangladesh is plagued by the images and reality of having suffered a series of natural disasters from floods and cyclones which have severely curtailed economic development and which have affected investor confidence in the country...coupled with natural disasters, have been various periods of political instability...”

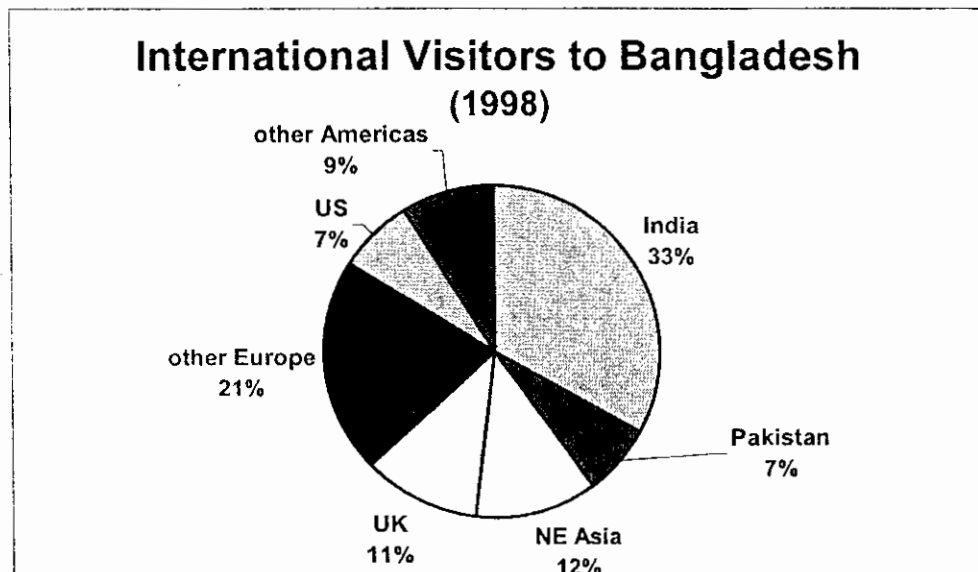
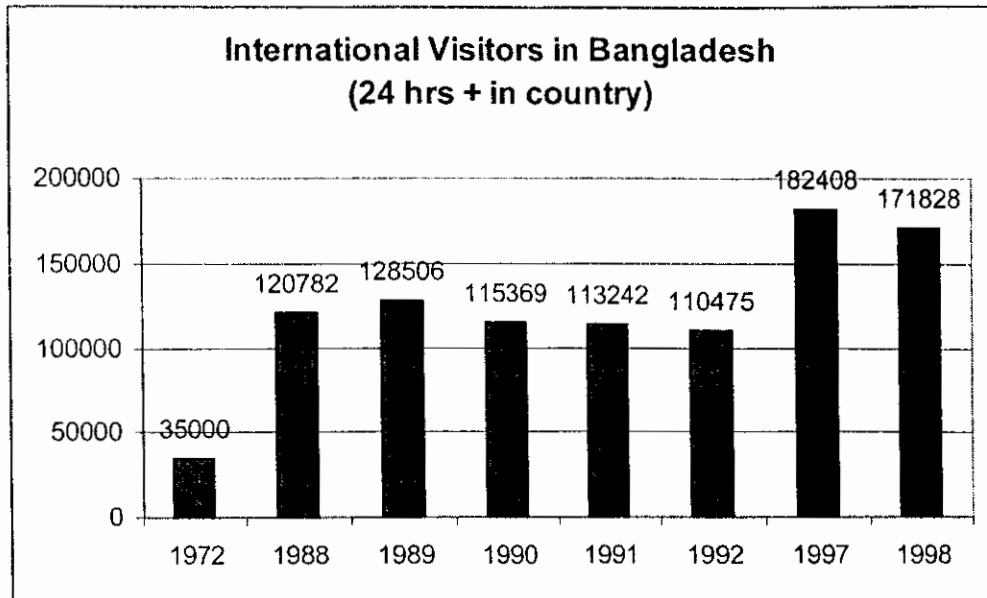
Michael Hall and Stephen Page, 1998

Revising this image must be addressed in any tourism development plan for Bangladesh.

In 1975, Bangladesh became a founding member of the World Tourism Organization. Despite the WTO's in 1992 call for the SRF to become the “springboard and catalyst for further tourism development in the rest of Bangladesh” tourism in the SRF remains demonstrably in a very early stage of development.

The following figures illustrate trends in arrivals and the composition of international visitors to Bangladesh, assembled from Bangladesh Bureau of Statistics and BPC data. The figures should be interpreted with the understanding that not all visitors recorded are tourists – many of these may represent business travelers, particularly in the case of India and Pakistan. Outside the region, the UK and USA represent the two largest individual markets with 11% and 7% respectively. 81% of all visitors to Bangladesh arrived by air. Monthly arrival records show that most visitors arrive in Bangladesh during the winter “high” season from January to March, when the weather is cooler and dryer.





The tourism sector worldwide has been hit hard by the events on September 11 2001 in the United States. The revised forecast for new growth in international tourism worldwide has been estimated at no more than 1.5%. Tour operators in Bangladesh have already seen up to 30% cancellations on their group bookings, particularly those from North American markets.

Despite its smaller area relative to the Bangladesh SRF, the Indian Sundarban is considered the destination of choice by international travelers. A recent study by Tisdell (1997) comparing Sundarban tourism in India and Bangladesh, found that facilities and tours in Bangladesh were relatively poorly developed, that the Indian Sundarban "is cheaper to visit and more accessible."

Travel distance and time are negative factors that influence the decisions of potential tourists. These "costs" include the psychological and physical effort required to make the trip and issues

such as security and safety. The balance of access and power of attraction is widely recognized as the deciding factor in consumer preferences.

Accessibility can be measured as percent travel time, or average travel time / divided by duration of visit (including travel). The average percent travel time for SRF sites is 42% (3 travel days/ 7 total tour days), which is high and discourages many travelers from visiting the SRF; in other words almost half of the SRF experience is travel and access. Accessibility is a major constraint for the development of tourism. To attract more tourism to the SRF, it is imperative to reduce the percent travel time to around 35% by increasing the amount of time tourists spend in the SRF (impact zone included), and/or reducing the total travel time to the destination. *This will improve the perception of the overall experience, and also increase opportunities for visitors to spend money during their visit, effectively allowing for increased revenue without necessarily increasing the number of visitors.*

Promoting tourism in the SRF will require increasing the average duration of stay in the reserve (currently 3.5 days average), which is very low when compared to the large amount of time and travel expense required to access the SRF. As an objective, the average duration of stay in the SRF should increase to at least 5 days by developing new activities or attractions in the impact zone.

The poor performance of the tourism sector in Bangladesh is also attributed to the lack of adequate support infrastructure. The very humid weather conditions during the monsoon season exact a high maintenance cost on infrastructure and facilities, driving up the overall operational costs for tourism (Clift and Page, 1996).

Nevertheless, despite the many negative factors affecting the prospects of tourism in Bangladesh and in the SRF, the SRF offers great potential that could, with the right conception, management, and implementation, jumpstart the lagging tourism industry of Bangladesh.

### **Market Survey**

With the collaboration of Forest Department officials, BPC officials, tour operators and guides, representatives of the NGO and donor community, other TAG members, and of course SRF visitors, we have gained insight into the needs and expectations of both domestic and international tourists visiting the SRF, as well as the present limitations of SRF tour operations. Findings were used to guide the development of the Ecotourism Management Plan outlined here.

### *Methodology*

From November to December 2001, 258 questionnaires were administered to visitors and tour operators in both English and Bangla at different times and in different parts of the SRF. Surveys were conducted by the specialist with the assistance of the Divisional Forest Officer Wildlife and Tourism and the newly appointed Assistant Conservator of Forests. Each interview/survey lasted approximately 20 minutes. Survey findings were supplemented with secondary research from existing documents. Research was frustrated with the dearth of available records from the Forest Department on numbers of visitors admitted, permits issued, numbers accommodated in guest houses, and revenue.

### *Results*

Ecotourism is a new concept and is in general not well understood by the Forest Department, private industry, or even the National Tourism Organization of Bangladesh. Serious ecotourists

that have visited the SRF are not satisfied with the services that the tour operators provide. Inadequate quality of services provided by tour operators results from a lack of understanding of client expectations, especially challenging because expectations differ among domestic and international visitors. Also, few areas in the SRF have been designed to receive tourists. Most "popular" sites within the SRF offer limited (if any) accommodations and basic services. Despite this, visitors were optimistic that with properly designed and managed tours and facilities, the SRF could become a favored ecotourism destination. Tour operators recognize their deficiencies and seek to acquire basic equipment and build their capacities in marketing and hospitality and interpretation.

The Forest Department is regarded as inconsistent and inequitable in its treatment of tour operators. This is manifest in unexpected delays in issuing entry permits to visitors, who sometimes must wait for hours at a forest station. In addition, the documentation requirements for visitors change arbitrarily from one entry to the next, again, evidence that policy guidelines are informally "revised" in the field. Some international tours operate without a tour operators license. *Controlling the number of visitors to the SRF is understandably a daunting task, yet the policies of the Forest Department must be transparent for the public-private partnership of ecotourism to succeed.*

The majority of the visitors surveyed had no knowledge of the Sundarban before they came to Bangladesh.

Despite great potential, tour programs to the SRF in general do not include cultural and historical attractions in and around the impact zone. Visitors are exposed to very little interaction with local people and their communities.

The majority of tourists return from the SRF without having observed a Royal Bengal Tiger. Unrealistic expectations generated by tour operators can contribute to customer dissatisfaction. There are only a handful of tour guides operating in the SRF with the necessary knowledge and experience to entertain visitors with other tiger-related activities in the forest short of seeing a tiger firsthand (e.g. identification of pugmarks, nighttime slide shows, etc.).

Estimated annual visitor entries to the SRF from 2000/2001 data:

A. 45,000 day excursionists entering the SRF through Mongla. These visitors spent an average of 30 TAKA per person per day. Duration of stay averaged 3 to 4 hours. Roughly half of them paid an entry fee of 2 TAKA. Visitors came with relatives and friends for recreation and leisure only, especially during public and religious holidays and during the winter dry season.

B. 6,400 domestic tourists visiting two or three different areas of the SRF (e.g. UNESCO Site, Karamjal, Katka) staying for 2.5 days average and spending an equivalent of 1,300 TAKA per day. These individuals travel mainly in large groups on vessels that can accommodate a significant number of persons. The entry permit per person is of 4 TAKA per day when collected.

C. 600 to 700 international tourists. Most of these visited two or three different areas of the SRF and stayed 3.5 days on average while spending 3700 TAKA per day (including the 4 TAKA per day entry permit). Of this group, some 150 visited Bangladesh with the express interest of tourism. This subgroup averaged 4.5 days in the Sundarbans and traveled on tour packages organized and operated by only a small number of outfits.

Although people travel long distances from their home, for many the main purpose of their trip is not nature study but to spend time with the friends and relatives that accompany them. This growing world market is very important and often underestimated. Many visitors also expressed the need for more interactive and physical activities as part of their tour package. The majority of international visitors to the SRF are expatriates living and working in Dhaka who visit the reserve over a weekend for recreation and in particular for the boating experience. More than 10,000 expatriates reside with their families in Bangladesh, mainly in Dhaka.

Within the SRF, the wildlife sanctuaries are the destinations of choice for both domestic and international tourists. Most importantly, it is the proximity of the sanctuaries to the ocean, the Bay of Bengal, that draws visitors.

Day visitors to the SRF live mainly in nearby communities and cities around 30 to 50 kilometers distant from the reserve. Domestic visitors arriving from more distant parts of the country generally stay with relatives and friends in nearby villages or cities such like Bagerhat, Shatakaira, and Khulna, prior to visiting the SRF. International tourists come from Dhaka via Jessore by air and some directly by "Rocket" to Mongla, Sarankola, or Khulna.

Since 1990, 75 to 80% of the business volume of international tourists to the SRF has been controlled by one leading tour boat operator. In the 1998/99 winter season, the "Tour Guide" brought 1500 tourists to the SRF on 56 trips. This company has developed links with international tour operators in Japan, the United States, and in Europe. While the company's maximum yearly carrying capacity (with two boats) is relatively low, it seldom exceeds 50% capacity even during the high season. Among the main nationalities of tourists are, in order of predominance, Bangladeshi, Japanese, UK, Dutch, US, Danish, Swedish, French, German, Norwegian, and Australian.

Domestic visitors represent 73% of the total number of visitors to the SRF. Most domestic tours to the SRF are day tours. Only four of twenty-five operators of the Association of Tour Operators of Bangladesh (ATOBO) conduct overnight tours in the SRF. Some 70 small boats and 40 large launches operate in the SRF to serve the needs of domestic visitors, primarily from Mongla to Karamjal.

Domestic tours to the SRF exact a significant physical and environmental impact due their large volume. Literally hundreds of visitors may disembark from one launch to converge simultaneously on a site. These large and uncontrolled groups of visitors leave large amounts of litter, create excessive noise disturbing wildlife, and extract plants from the reserve.

### **Income-generation Through Tourism in the Sundarban Reserve Forest**

The Forest Department does not presently capture sufficient funds to sustain its own operations, including the maintenance of existing tourism facilities and services in the SRF. In part, this has been due the lack of an incentive on the part of the Forest Department to increase its revenue, as any income generated is transferred to the National Treasury for management, and inadequately redistributed back to the Forest Department. For instance, between 1988 and 1994, the Sundarban Division generated some 41% of the Forest Department's total revenue, yet only 14% of the total was returned to the Sundarban Division to finance its management costs (Mitchell, 1995); 34% of revenue is returned to the State.

Even visitors believe that the 2 TAKA entry fee to Karamjal is too low. The visitor center at Karamjal, for example, collects an annual revenue of only 46,658 TAKA, an inadequate amount to maintain the facilities there. Based on willingness to pay, a more appropriate amount is 10 to 20 TAKA, which would raise the annual revenue at Karamjal to 200-400,000 TAKA. International visitors are willing to pay even higher entry fees. Presently, many ecotourism destinations exact different fees for domestic and international tourists.

The present Forest Department system of entry fees to the SRF is elaborated below. These fees are not well-known to the public, and are not consolidated in any known policy document. Likewise, the fee structure is not properly spelled out and printed at entry stations to the SRF. Even within the Forest Department there is confusion, as forest guards at some entry stations do not know how to administer the fees or what amount to charge visitors.

*Regular visitors (domestic and international)*

Entry fee per day per person:	4 TAKA
Entry fee per motorboat per day:	100 TAKA
Registration of motorboats per trip:	75 to 125 TAKA
Per guard per day to accompany boat (2 guards minimum):	50 TAKA
Entry fee per country boat per day:	25 TAKA
Guest house (entire) per day:	2500 TAKA
Guest house per room per day:	1000 TAKA
Entry fee to Karamjal, per day per person:	2 TAKA
Entry fee to Information and Education Center in Khulna:	2 TAKA
Entry fee to mangrove boardwalk in Karamjal:	5 TAKA

*Special rates for camera crews (domestic and international)*

Film Crew, fee per person per day:	US\$ 10
Wildlife baiting for photography or film, 7 day one time fee:	US\$ 50
Per guard per day to accompany crews (2 guards minimum):	US\$ 2
Refundable retainer per film crew:	US\$ 500
(Reimbursed with delivery of copy of materials produced)	
Movie camera use in SRF, per day per camera:	US\$ 50
Still camera use (professional) in SRF, per day per camera:	US\$ 10

*Special events (domestic and international)*

Fuel wood, per person per day (for participants of Raash Mela festival):	2 TAKA
Entry fee for Raash Mela participants, per person per day:	0.25 TAKA

Although there are no clear records from which to summarize revenue, excepting Karamjal where visitors are recorded, from the visitor data presented earlier, it is estimated that *the Forest Department generates some 120,000 TAKA annually for standard visitor entry fees alone, including Karamjal. This amounts to less than 1% of total income generated by tourism in the SRF, estimated at over 30 million TAKA annually.*

Conservation activities in the SRF must be considered as an inherent cost in any ecotourism business plan, as it is the integrity of the natural area which ultimately generates revenue. Based on Leader-Williams' (1990) rule of thumb of US\$ 400 cost per square kilometer for protected areas management for large mammal conservation, the FAO (1995) estimated the annual cost of conservation of the SRF at US\$ 2.2 million, or 130 million TAKA. This value is over two times the amount of 2001 Forest Department costs for management of the SRF, around 50 million TAKA. Tourism in the SRF has the potential to contribute to conservation and management, but not enough alone to support these costs.

## VI. Ecotourism Management Plan for the Sundarban Reserve Forest

The successful implementation of this plan will depend in large part upon the support provided by a clear and consolidated directive both within the Forest Department and at the national level, a strong resolve among the public and private sector to work cooperatively, and the direct involvement of local communities. The involvement of local communities and resource users in ecotourism serves to instill in them a personal sense of stewardship and pride for the SRF. This group represents a powerful and as yet untapped resource for education and conservation initiatives. The Forest Department need not be the only "guardian of the forest."

### **Elements required for a clear and effective national policy on ecotourism in the SRF:**

- Emphasis on long range financial and environmental planning and sustainability.
- Emphasis on promoting and maintaining not only the environmental merits of the SRF, but also the cultural merits (traditions, livelihoods, festivals, etc.) of the SRF and in particular the SRF impact zone.
- Education and environmental awareness plan to go hand in hand with tourism promotion and development.
- Clear organizational plan outlining delegation of authority and responsibilities of collaborating agencies, including but not limited to the Forest Department, Bangladesh Parjatan Corporation, and Ministry of Civil Aviation and Tourism.
- Moratorium on the development of new lodging facilities (e.g. guest houses) in the SRF, limiting the focus of activities to *river-based* tourism.
- Mechanism/s to capture supplemental revenue from tourism for the funding of Forest Department support services and general SRF management.
- Hospitality and nature/culture interpretation training plan for Forest Department officers.
- System of incentives to encourage the private sector to become more efficient and operate responsibly in the SRF.
- Licensing system to regulate all tour operators conducting operations in the SRF.
- Zoning plan to restrict development of tourism support facilities and tourism activities to least sensitive areas.
- Code of ethics and conduct in the SRF.
- Minimum standards for support facilities in areas to receive tourists, requirements for the utilization of local materials and traditional architectural design in facilities construction.
- Minimum standards for tour boats for accommodations and other hospitality services, safety, waste control, and noise pollution.
- Border agreement with Government of India to facilitate passage of tourists and tour groups.

Efforts were made in the development of this plan to involve the input and participation from as varied a group of stakeholders as possible, including:

- Forest Department officials of the SRF and JBCP, the Secretary, Joint Secretary, the Advisor to the Minister, Chief Conservator of Forests, the SBCP Project Director, Project Directors of

other projects within the Ministry, Conservator of Forests in Khulna, Divisional Forest Officers, Assistant Conservator of Forests, and forest rangers and field personnel.

- Bangladesh Parjatan Corporation officials at different levels including its chairman
- International donors including representatives of the Asian Development Bank, the World Bank, the Government of Netherlands
- IUCN officials
- University of Khulna officials and other academic institutions including the Hotel Training and Tourism Institute (HTTI) in Dhaka
- Bird Club of Dhaka members and other interest groups including professional photographers and enthusiasts of the SRF both in Khulna and Dhaka
- Press Club in Khulna, and the Press and Film Production Companies
- Local NGO's
- Businesses of the hospitality industry in Dhaka and Khulna
- National tour operators, member and non members of the Association of Tour Operators of Bangladesh
- Tour guides leading tours in the SRF
- Local boat tour operators and their associations
- SRF visitors including both domestic and international
- TAG members from ARCADIS Euroconsult and Winrock International



## **A. Physical/Infrastructure and Operational Strategy**

Accommodations for tourists in the SRF will be strictly river-based. Existing Forest Department guest houses will be for the exclusive use of Forest Department personnel. No new land-based accommodations will be constructed. Accommodations for overnight tourists while in the SRF must be provided by private tour operators on tour boats or floating eco-lodges moored at a distance from shore.

Infrastructure development is to be phased over a five year period. All new land-based support infrastructure is to use of traditional architecture with wooden construction and other local materials like golpatta thatch roofing. Any landscaping should employ exclusively native species of trees and shrubs. Site plans should be designed to accommodate the distribution of existing vegetation.

It is recommended that the Forest Department and tour operators co-sponsor an annual program for students and other interest groups to collect and haul out accumulated garbage from SRF tourist sites. Waste cleanup is of particular importance to maintain the scenic integrity of the Mandarbaria white sand beach.

### **1) Katka-Kochikali**

Wooden canoes are an essential component of the support infrastructure required in the Katka-Kochikali area. Canoes and paddles are to be purchased and made available for visitors' use, to include 10 small (6 person) canoes, 10 medium (10 person) canoes and 5 large (15 person) canoes. Life vests must also be made available for all canoeists. We propose that canoe rentals to visitors and tour operators be managed and operated by the Forest Department DFO Wildlife and Tourism. Canoes will remain secured at newly-constructed docks at the mouth of the Kochikali Bharani connector and at the entrance of the main khal at Egg Island.

Access to the forest and khals will be restricted to programmed circuits. The khals assigned for canoe paths will be for canoe use only, to avoid disturbance of wildlife by boat motors. Tourists will not be allowed to get out of their canoes unless specified at assigned resting areas. Directional signs and maps are recommended to orient canoeists and travelers on foot along programmed circuits. Interpretation signs should also be posted, along with rules of conduct at the beginning of trails.

The construction of an open wood and golpata roof Goal Ghar at the forest station close to the existing dock at Katka will serve to welcome and inform newly-arrived visitors, and display crafts and souvenirs and basic necessities like batteries and film for sale.

The Goal Ghar should be manned by a Forest Department officer. It is important that the Forest Department officer is visible and present at the Goal Ghar, especially during the winter high season. The officer assigned will be responsible to verify entry permits and to monitor the activities of tour groups and record entry data. The officer will also be responsible also managing canoe rentals, monitoring weather conditions, and updating visitors on safety concerns.

Guest houses in the area should be reserved for the exclusive use of Forest Department personnel and their guests and not for tourist accommodations.

The deteriorated condition of the existing observation tower in Katka is a serious safety concern and should be repaired or rebuilt. In the interim, access to the tower should be restricted to no more than 5 persons at a time.

Modest amenities (e.g. mosquito nets) can be provided at the observation tower to accommodate overnight stays by small tourist groups with special licenses. Each observation tower should be designed to accommodate 6 tourists plus guards. For this privilege, along with the accompaniment of armed guards, tourists will pay an extra fee. The extra fee will serve to limit overnight use in these particularly sensitive areas and minimize the impact of visitors.

The construction of an elevated wood boardwalk with Goal Ghars, like that at Karamjal, is recommended for Katka. The Goal Ghars should be located to provide a strategic view of the grassland, without allowing access into this restricted area.

To reduce disturbance to the tiger population at Katka-Kochikali, known hunting and denning sites, like the Jamthala grassland, have been excluded from tourist use and infrastructure development. More field surveys and continued monitoring is necessary to accurately delineate areas of tiger activity and restrict visitor access to them.

It is recommended that boats not be allowed to overnight at the Jamthala Khal dock, as loud parties and fireworks often take place on the launches, disturbing the sense of remoteness and serenity valued by many visitors.

Concept	Estimated Cost (TAKA)
<b><i>Katka</i></b>	
Renovation dock	30,000
Renovation tower with basic accomodations	330,000
Wilderness trail signs	120,000
Goal Ghars (2)	40,000
Photography blinds (5)	25,000
Toilets	30,000
<b><i>Kochikali</i></b>	
Renovation dock	30,000
Renovation existing walkway	50,000
Interpretation signs entrance	25,000
Goal Ghars (2) at beach	40,000
New observation tower	190,000
Photography blinds (5)	25,000
Wilderness trail + signs	60,000
Canoes (10)	75,000
Goal Ghars (2) at channel	40,000
Small dock at channel	30,000
Channel markers	30,000
TOTAL	1,170,000

## 2) Mandarbaria Island

Little additional infrastructure is required at Mandarbaria Island. In fact, the island should be kept as natural and untouched as possible. One or two Goal Ghars could be constructed on the

periphery of the beach strand to provide resting places and shade for visitors. Given the importance of this area to tigers and nesting sea turtles, a complete wildlife inventory should be conducted to orient tourist activities and the construction of Goal Ghars in a suitably sensitive manner. An interim zoning plan is to restrict tourist activities to the beach. Special licenses could be issued to small groups to access other parts of the island.

Sea turtle activity should be monitored nightly from the beach during the nesting season. Access to the beach should be prohibited from first egg-laying to last hatching, however, during this time tour groups can be allowed to assist Forest Department personnel in nighttime monitoring efforts, provided overnight accommodations are provided offshore on tour boats. Monitoring teams should work without lights to avoid frightening or disorienting turtles.

Concept	Estimated Cost (TAKA)
<i>Mandarbaria</i>	
New Observation tower with basic accomodations	300,000
Goal Ghar (2)	40,000
Signs for wilderness trails	30,000
Toilets	30,000
TOTAL	400,000

### 3) Nilkomol (Hiron Point)

A trail and elevated wood boardwalk should be sited and constructed between the Heritage Site and the Keora Suti dock. Existing infrastructure at Keora Suti is seriously degraded and must be reconstructed, including the observation tower and wooden dock.

Canoes should be made available by the Forest Department at the Keora Suti dock, from which visitors can access a programmed canoe circuit into the channels north of Keora Suti, and ending at the patrol station at Nilkomol. A small wooden resting platform should be constructed midway along the circuit.

We also recommend a trail to link the patrol station to the Hiron Point lighthouse. Controlled access to ascend the lighthouse with its unparalleled view of the SRF should be afforded to visitors. Rest stops with benches should be provided, along with directional and interpretation signs, and rules of conduct posted at the beginning of the trail.

Masks, as curiosities and to discourage tiger attacks, should be made available for sale at the Information Center Goal Ghar. Tiger safety issues are important here and precautionary measures are necessary to reduce the risk of tiger-human confrontations.

To improve the aesthetics of the site, it is recommended that existing concrete structures be beautified with a decorative Golpata dressing over the zinc roofs and exteriors painted in earth tones (brown or tan). Future structures should employ traditional architecture and wood materials.

Concept	Estimated Cost (TAKA)
<b><i>Nilkomol</i></b>	
Observation Tower	190,000
Renovate dock	25,000
Wilderness trail signs and channel markers	30,000
Canoes (10)	75,000
Landscaping	300,000
Goal Ghars (2)	40,000
Photography blinds (4)	20,000
TOTAL	680,000

#### 4) Sekher Tek and Barabari

The Sekher Tek and Barabari area should be conserved in its present state. It is inadvisable to "clean up" the ruins, by removing colonizing vegetation, which would deprive visitors of the sense of adventure and discovery that is the site's greatest asset. Continued archaeological study and exploration of the ruins by professionals is recommended, which could produce findings of great attraction value to area tourism.

Canoes should be made available to allow visitors to access the Hindu temple from the small khal. Canoe rentals can again be managed by the Forest Department from the Adachai patrol station or from a small dock and Goal Ghar at the entrance of the Patha Khal, with local fishermen to be hired as guides. A recommended canoe trail to the temple starts at the mouth of the Patha Khal east for about one kilometer before turning south on a narrow channel. Several hundred meters ahead, a small wooden dock can be constructed to tie up canoes and from which visitors can disembark to follow a trail to the temple. A few directional signs and conservation messages should be posted along the trail. Use of motor boats on the canoe trail should be prohibited.

Tours to Sekher Tek can be augmented with visits to nearby fishing communities on the Sibsa River.

The elevated grounds of the ruins serve as ideal tiger habitat and therefore tourist activities must be oriented to reduce disturbances and potential encounters with the resident tigers. A rigorous program of wildlife monitoring will be required to achieve this. In the interim, visitors should continue to be restricted to the existing trail that leads to the temple. As an additional safety precaution, visits should require the accompaniment of an armed Forest Department guard.

Concept	Estimated Cost (TAKA)
<b><i>Sekher Tek</i></b>	
Wilderness trail signs	20,000
Canoes (5)	37,500
Goal Ghar	20,000
TOTAL	77,500

## 5) Dubla Island

The thousands of tourists and pilgrims that visit Dubla Island during the three days of Raash Mela have an enormous impact on the site. To minimize these impacts, some basic infrastructure must be provided to ensure adequate waste disposal and sanitation. As numbers of visitors continue to increase every year, it is important for the Forest Department to project the magnitude of future needs. Environmental messages and waste receptacles should be placed in key areas during the festival. Additional manpower should be contracted to clean up the beaches and fishing camps during and after the festival. All waste should be hauled outside the SRF after the conclusion of the festival.

Each year at the time of the festival, Forest Department personnel should raise and man a temporary Goal Ghar close to the beach to educate visitors and participants on conservation ethics and the value of the SRF. This ersatz information center can also provide handicrafts, maps, and SRF materials for sale. Forest Department personnel should make special effort to instruct visitors to respect the culture, values, and religious traditions of the festival participants while interacting with them and enjoying the festival.

Map layouts and directional signs should be posted at each fishing camp are also recommended to orient visitors, as well as dispersed resting benches with golpata roofs.

<i>Dubla</i>	
Goal Ghar	20,000
Displays and signs	90,000
Furnishings	30,000
TOTAL	140,000

## 6) Visitors Information and Education Centers

(summarized in part from the Master Action Plan of the Mangrove Visitors Center in Karamjal)

Visitors information and education centers are currently being developed/redeveloped at Khulna and Karamjal, and are recommended for development at Katka, Nilkomol, Sarankola and Burogalini.

The objective of the centers is to enhance the visitor's experience and to increase the visitor's commitment to the conservation of the SRF. The centers will disseminate in an engaging fashion information on the SRF ecosystem, conservation concerns, local culture, and appropriate conduct for visitors. Intended audience should include not only domestic and international visitors, but local residents and natural resource users living in and around the impact zone as well. The centers should be complemented with basic hospitality and recreational facilities, including snack bars, picnic areas, rest areas, toilets, etc.

The development of the Karamjal site and surroundings as the main entry gate to the SRF and as a Visitors and Interpretation Center aims at creating new possibilities and alternatives for leisure and nature enjoyment while raising public education and environmental awareness of the visitors the Sundarban.

To reduce the environmental impact and for economic of scale, instead of dispersing many tourism initiatives throughout the SRF, the strategy of concentration of tourism and visitors into this particular site at the entry of the SRF makes the most sense. The concentration of recreational

activities allows for better and more efficient management, especially when resources are limited, and for the control of the visitors.

The implementation of the proposed Master Action plan for the Karamjal Visitors Center and its surroundings was divided in three components that must integrate and relate to each other at all times.

Component 1: Organizational changes of the Forest Department to allow the DFO Wildlife and Tourism to take over the full administration and operations of Karamjal and training of staff required to run the Visitors Center.

Component 2: Physical Facilities, civil work and infrastructure required as proposed in the Plan. This component comprises of all architectural, design, engineer and civil work required to build, create, design, repair, rehabilitate, remove, open and/upgrade existing facilities and others contemplated in the plan.

Phase I of this component consists in the construction of a main entry gate and reception building, the renovation of the Patrol Post as an animal nursery, the upgrading and refurbishing of the four existing bungalows, including one for the Education and Information Center within the Visitor center, the reconstruction of existing crocodile rearing basins and breeding ponds, a provision for the construction of a herbivore enclosure, butterfly farm and apiary, the construction of several wooden raised boardwalks trails (presently under construction), Goal ghars in assigned resting areas, one new watchtower with barracks for limited accommodation, construction of hides and benches, the construction of an amphitheater for otter-fishing demonstrations and other cultural and educational shows, the construction of a two non-motorized boat renting stations for canoe renting, the construction of one motorized boat pier to be managed by an outside contractor, and the construction and renovation of basic eco-friendly infrastructure and services such as a snack bar, picnic area, storage facilities, public toilet facilities and reconstruction of public access paths within the Karamjal grounds.

Phase II of this component consists in expanding tourism and recreation activities from Dangmari, development of further trails in Karamjal and an extension of tours to Andaria Bil and surroundings including the construction of a new tower in Andaria and a connecting trail, construction of Goal Ghars interpretation signs and boards and benches between Karamjal and Dangmari that will become the main entry point as the main gate to Karamjal, therefore reduce the present impact of noise, visual and water pollution that the present motorized boats of local operators stressed in the area.

Component 3: Operations, Regulations and Environmental Management. Development of codes of conduct for both visitors and tour operators, management of areas, restrictions and recommendations on measures regarding waste collection, litter, disposal system of sewage and the minimization of noise pollution.

When completed as per plan the Karamjal Visitors Center will have an estimated physical carrying capacity of 8,500 visitors per day.

Not all information and education centers must be developed on this scale. An open Goal Ghar with golpatu roof and storage room will suffice for the entry points at Sarankol and Burogalini as well as to complement the Forest Department patrol stations at Katka and Nilkomol.

Concept	Estimated Cost (TAKA)
<b><i>Karamjal Information Center*</i></b>	
Renovation building assigned	60,000
Displays	120,000
Furnishings	30,000
Other Support as per master plan	30,000
<b>TOTAL</b>	<b>240,000</b>

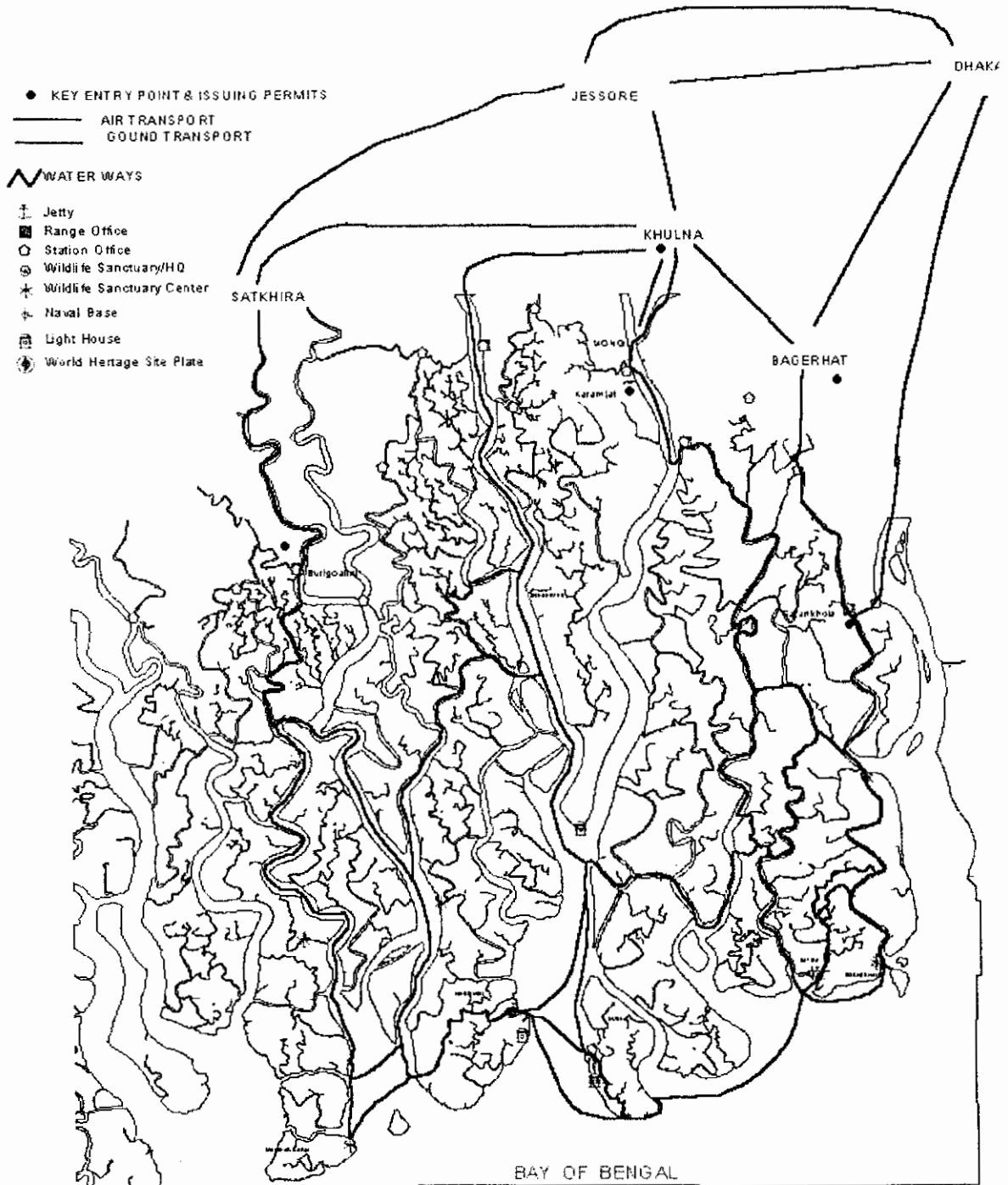
\*does not include all infrastructure proposed in the Master Action Plan of the Mangrove Visitors Center in Karamjal, which totals 13,048,000 TAKA.

<b><i>Sarankol / Burogalini</i></b>	
Goal Ghar	20,000
Construction wood building	150,000
Displays and signs	90,000
Furnishings	30,000
<b>TOTAL</b>	<b>290,000</b>

### **Designated Tour Circuits**

The designation of approved waterways for tourism is recommended to minimize impacts in sensitive (restricted) areas, and to better manage and ensure the safety of tour boat activities in the SRF. Suggested tour circuits are shown in the map below.

MAIN ROUTES AND RECOMMENDED WATERWAYS FOR LICENSED MOTORBOATS  
FOR THE OPERATION OF TOURISM ACTIVITIES IN SRF



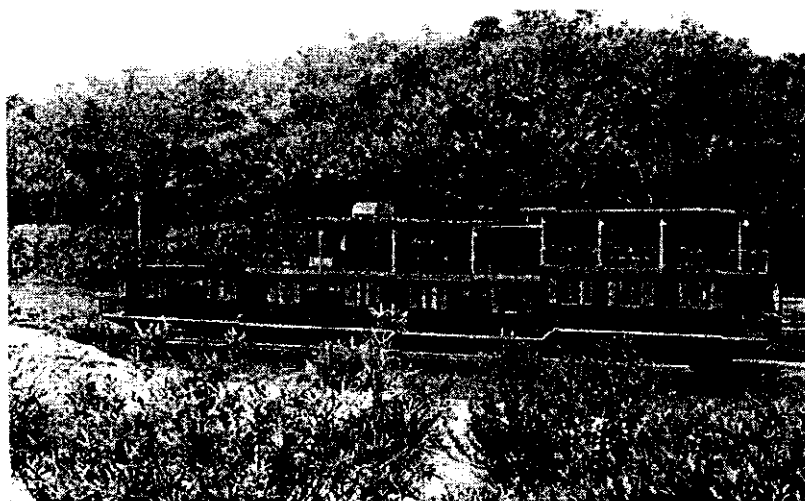
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### Recommendations to Reduce Travel Times (Real and Perceived)

- 1) Encourage and lobby government authorities for the completion of the airport in Mongla.
- 2) Work with private tour operators in the design of self-contained *floating eco-lodges*, similar to those presently operating in Laos, Cambodia and Vietnam, that can be anchored at main points of the SRF and can be towed at different times to other areas. Tourists can be transported with their luggage in smaller and faster motorized boats from the main entry points of the SRF to the floating eco-lodge, or by chartered sea plane, much more quickly than the large launches that currently transport and accommodate tourists.



- 3) Encourage tour operators to use speed boats and commuter boats with two 55 horse power engines.
- 4) Make available updated and accurate nautical charts and tide tables for the SRF.
- 5) Encourage tour operators to create attractions in transit (e.g. briefings on the destinations, slide presentations, lectures, contests).
- 6) Encourage tour operators to break up itineraries en route to the SRF by stopping to visit the many different cultural and natural attractions of the impact zone, especially near Khulna and Bagerhat.
- 7) Accelerate the granting process of SRF entry passes or require tour operators to prepare and present required documentation to the DFO central office one or two days in advance. Consolidate and make public the protocol for granting entry passes.

## B. Marketing Strategy

Many successful examples of tourism and ecotourism development “from the ground up” can be attributed to a sustained public-private partnership with an integrated strategy including infrastructure development, training, and marketing. The recommended role of the Forest Department is to act as a promoter and facilitator of ecotourism in the SRF. Government funding of basic infrastructure is the key to stimulating private sector activity. The role of government institutions like the Forest Department is especially crucial in setting the standards required of conservation-compatible tourism.

To attract serious ecotourists in today’s highly competitive market, the development of any type of tourism activities in the SRF must be promoted and operated on the basis of “environmentally responsible tourism”, which must be achieved through tour operators’ commitment to the SRF rules of conduct. Forest Department guidelines should be complemented with international guidelines like those of the IUCN, The International Ecotourism Society, Travel Concern Tourism Awareness Society, Worldwide Fund for Nature, UNEP, UNESCO, World Tourism Organization, World Tourism and Travel Council (WTTC), or Green Globe. Attaining seals of approval from any of these organizations will contribute to the international recognition of ecotourism in the SRF. These organizations additionally publish articles of interest and organize and advertise tours in their regular publications.

We recommend that the development of SRF promotional materials and advertising be contracted to one experienced marketing agency in Dhaka with international ties. As successful marketing must promote one consistent image only, the SRF marketing strategy should be designed to complement ongoing initiatives of the Association of Tour Operators of Bangladesh and the Bangladesh Parjatan Corporation, with provisions for cost-sharing advertising with tour operators, hotels, airlines, etc. The marketing plan should draw on input from tour operators and other stakeholders. By promoting the SRF for its biodiversity and well-conserved natural state, a marketing campaign can also serve as a tool for conservation awareness.

The marketing of ecotourism in the world today is very sophisticated and the supply of goods and services far exceed its present demand. To compete with ecotourism to the Indian Sundarban, tours to the SRF must offer something unique, additional to the recognized selling points (e.g. tigers) of the Sundarban. As a competitive advantage, *low impact river-based tourism* has great potential for development as a unique commodity to be offered in the SRF. The SRF should also be promoted as a “short-break” (two to four days) destination for domestic visitors, expatriates residing in Dhaka, and international travelers en route in Southeast Asia or India (or as part of a regional tour package).

A successful ecotourism marketing program for the SRF must be target tour operators as its primary focus, through participation in international tourism and ecotourism trade fairs, to encourage them to develop tour packages to the SRF. Domestic and international tour operators, in addition to international conservation organizations (who develop study tours of natural areas), should be invited on complementary trips to the SRF to familiarize them with opportunities there. The Forest Department must also assure tour operators that adequate support infrastructure and security exists in the SRF.

Marketing the SRF must also be part of a broader marketing strategy for Bangladesh as a destination. The Government of Bangladesh has requested the World Tourism Organization to assist in reviewing the last tourism master plan. Officials from the WTO have recently visited

Bangladesh and the Sundarban and have expressed their interest in collaborating in this process by starting to raise the image of the country with a strong marketing strategy for SRF destinations with ecotourism potential.

Marketing is an ongoing proposition and for continued market research, we recommend that a short questionnaire be included as part of the entry fee collection protocol, and as part of the annual renewal of tour licenses, to request relevant information (e.g. nationality, length of stay) from visitors and tour operators.

### **Recommended Components of Marketing Campaign**

- Brochures on ecotourism in the SRF with color photographs of wildlife should be developed in both English and Bangla and sized to fit in a standard European envelope for easy mailing. An initial production of 10,000 is recommended. The brochure should be distributed to tour operators and other tourism-related businesses, and given to every person that enters the SRF.
- Development of a universally-adopted SRF ecotourism logo.
- Adoption of a SRF mascot for delivering conservation messages. A contest can be held for Bangladesh school children to select the mascot. Stuffed mascots can be offered for sale in the visitors information and education centers. Initial production of 2,000 mascots is recommended.
- Production of standard entry passes with the SRF logo. 50,000 passes to be produced initially.
- Preparation and publishing of a half letter envelope size, black and white, SRF Field Guide for the Ecotourist, including codes of conduct, maps, natural history information on the SRF, and checklists of flora and fauna and tips on their identification with line drawings of representative species. The SRF Field Guide will be available for sale in large quantities to tour operators that will provide them to their clients and will also be available at the visitors information and education centers. Initial production of 5,000 guides in English and Bangla.
- Facilitate, via co-financing or technical collaboration, the publication of a tea table size, full-color, natural history book on the SRF, with professional quality photographs and English text, for international sale.
- Development of a SRF Ecotourism web page, with a link to the SBCP web page and tour operators' web pages.
- Organization and co-financing of complementary familiarization trips to the SRF with Biman Bangladesh, GMG, BPC, hotels, and/or tour companies. Trips are to be offered to international tour operators and international conservation organizations that conduct ecotourism programs.
- Production of SRF promotional goods for sale at the visitors information and education centers, such as t-shirts and hats.
- Production of postcards and posters, in both English and Bangla, for sale at the visitors information and education centers. Initial production of 2,000 recommended.
- Organization of an annual photographic or artwork competition in Khulna to promote recognition of the SRF.
- Participation in domestic and international tourism and ecotourism trade fairs with promotional displays of the SRF at a manned booth. Highly recommended is participation by Forest Department and BPC representatives in the International Tourism Trade Show in Berlin, Germany in 2003.

## C. Financial Strategy

Forest Department revenue from tourism in the SRF will be generated through the collection of entry and user fees and through the sale of concessions and souvenirs at the visitors information and education centers. All revenue must be recorded systematically and accurately to monitor the economic performance of tourism in the SRF, and to measure its contribution to Forest Department finances.

Within two years of full implementation of the Ecotourism Management Plan, the SRF has the potential to generate some 47 million TAKA annually, a roughly 50% increase over 2001 income. This estimate is calculated from the visitor data presented earlier and assumes:

- 3.5% annual increase in domestic tourists and day visitors
- 1.5% annual increase in international tourists
- increases in average duration of stay of 0.5 and 1 day for domestic and international tourists, respectively
- increased expenditures during their stay of 5% and 25% per day for domestic and international travelers, respectively
- increased revenue from revised Forest Department fee structure (25 TAKA for entry to Karamjal Visitor Center, 100 TAKA SRF entry fee per person per day for domestic tourists, and 580 TAKA (US\$ 10 equivalent) SRF entry fee per person per day for international tourists)

Of this amount, over 10% (4.9 million TAKA) would be captured annually by the Forest Department as standard entry fees, in contrast to the current 1% capture rate. This is still only 4% of mean post moratorium (1990-1994; Mitchell, 1995) Forest Department total revenue generated by the SRF, or 124 million TAKA, mostly from direct resource use. Taken in another context, this amounts to 8% of projected 2003 Forest Department SRF management expenditures, or 58 million TAKA given an annual rate of increase of 8.1% (calculated from Forest Department records, 1986-1993).

*As is it not possible to separate out and quantify Forest Department administration and staff costs specifically associated with ecotourism-related activities (entry fee collection, enforcement, etc.), a hard cost-benefit analysis for ecotourism as a separate activity within the Forest Department is not possible. For this reason, it is suggested that ecotourism be delegated to a distinct unit within the Forest Department to better track financial performance of ecotourism-related activities and investments (see Organizational Strategy).*

We estimate that there is potential to achieve 3-4 % conservation cost financing by means of tourism-related revenues for the SRF by 2003. This figure will also of course depend on treasury reallocations, which has in the past returned 34% of SRF-generated revenue to the SRF. Revenue from concession sales, canoe rentals, and permits and licenses will increase this figure, however, conservation, on which ecotourism depends, will continue to rely, in part in the near term, on external financial support from the Government of Bangladesh and international donors.

The following fees are recommended for consideration. New fees should be institutionalized over a two year period. Fees must be clearly posted at all SRF entry points.

*Entrance Fee to the SRF:*

For International Tourists:	US\$ 10 per day, including free admission to the Information Centers at Khulna and Karamjal, and free canoe use while in the SRF.
For Bangladesh Nationals:	100 TAKA per day, including free admission to the Information Centers at Khulna and Karamjal.
For students and educators:	20 TAKA per day, including free admission to the Information Centers at Khulna and Karamjal.
Raash Mela participants:	2 TAKA per day.
Country boats:	25 TAKA per boat per day.
Motorboats:	100 TAKA per boat per day.
Launches:	125 TAKA per boat per day.

*Admission Fees to Information Centers:*

For International Tourists:	100 TAKA per visit.
For Bangladesh Nationals:	25 TAKA per visit.
For students and educators:	20 TAKA per visit.
For local residents:	5 TAKA* per visit.
Children accompanied by paying adult	Free.

\*to be subsidized by private donors for a total admission fee of 15 TAKA.

*User Fees in the SRF:*

Canoe rentals:	Small canoes:	100 TAKA per day.*
	Medium canoes:	150 TAKA per day.*
	Large canoes:	250 TAKA per day.*
*Half price for half day trips (5am to 13:00 and 14:00 to 22:00).		
Overnight stay at observation towers:	US\$ 50 per person per night.	
FD guards:	200 TAKA per day (for two guards). To accompany all boats and groups on wilderness trails.	
Fuel wood delivery at Raash Mela:	2 TAKA per day.	

*Licenses and Permits:*

Professional film permits:	US\$ 100 per day or US\$ 400 per week with a US\$ 500 refundable retainer, to be reimbursed with delivery of copy of materials produced.
Domestic tour operators license:	5000 TAKA per year.
Local tour operators license:	2500 TAKA per year.

## D. Training Strategy

The quality of knowledge, skills, and professionalism of all actors will ultimately determine the success of the SRF as a tourism destination. Forest Department personnel, private tour operators, and local communities of the impact zone who will host visitors all require training in

- nature and cultural interpretation
- hospitality
- safety and basic first aid
- international hygiene and sanitation standards
- micro-enterprise development (production and marketing of traditional handicrafts for communities in the impact zone)
- foreign language skills and intercultural communication, and
- information technology

to effectively serve visitors to the SRF. Training must not be considered as a one-time event but rather as a continuous process. Training should also serve to engage the commitment to ecotourism and conservation, and complementarity of activities, among SRF stakeholders, as well as within the Forest Department itself.

Training will be conducted primarily at the Khulna Training Center and in the field as required, initially through the SBCP training program and with the involvement and direction of the DFO Wildlife and Tourism. Training costs can be co-financed by the private sector through participation fees. A local training initiative should also draw on the capabilities of the Hotel and Tourism Training Institute in Dhaka, especially for tour management and hospitality. We also recommend instituting a scholarship program for masters level studies in Ecotourism Development or Management, and/or internships with private ecotourism operations in the region (e.g. Nepal, Thailand), for Forest Department personnel.

The following courses are recommended as part of a broad-based training program for all those involved in ecotourism in the SRF. Within the Forest Department, special emphasis should be given to providing training to field personnel who will have clear opportunities to put into practice new skills and information learned.

Course/Workshop	Target Audience	Cost (TAKA)
Principles of Ecotourism	FD, BPC, Tour Operators, and NGOs	20,000
Tour Package Development	BPC, Tour Operators	10,000
Ecotourism Marketing	FD, BPC, Tour Operators	10,000
Tour Management and Operation	Tour Operators	10,000
Prevention, First Aid, and Security	FD, Tour Operators	10,000
Micro-enterprise development and marketing	NGOs and local community groups	20,000
Conservation Ethics and Environmental Management	FD, Tour Operators, and NGOs	10,000
Biodiversity/Invertebrate Interpretation	FD, Tour Operators, and NGOs	20,000
Regional History and Culture	FD, Tour Operators, and NGOs	20,000

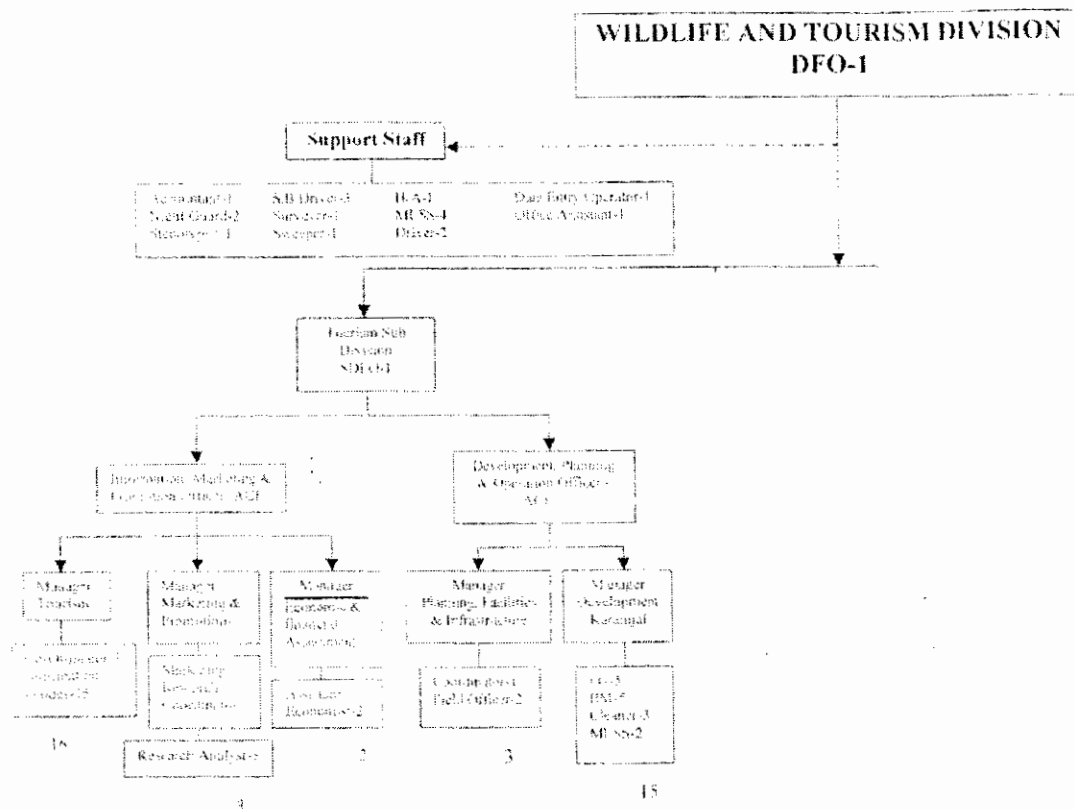
Social Skills and Intercultural Communication	FD, Tour Operators, and NGOs	10,000
English and other foreign languages as required	FD, Tour Operators, and NGOs	10,000
Computer Basics	FD	20,000
Database Management	FD	40,000

## E. Organizational Strategy

The Ecotourism Management Plan presented here is a guide for Forest Department operations. Tour operations in the SRF are to be relegated to the private sector. Within the Forest Department, the Division of Wildlife and Tourism will be responsible for ensuring the implementation of the Ecotourism Management Plan. In short, it will be the responsibility of the Forest Department to:

- enforce the codes of conduct which define ecotourism
- develop and maintain basic support infrastructure
- collaborate with the private sector in the promotion of the SRF

The following organizational structure is recommended for Forest Department Division of Wildlife and Tourism. Numbers refer to staff required.



The Information, Marketing, and Promotion Unit will be responsible for coordinating interpretive and enforcement staff in the field, convening training programs, coordinating marketing efforts with the BPC and the private sector, implementing the marketing campaign, conducting basic market research (to be gathered as part of entry pass protocol), and managing tourism-based Forest Department revenue.

The Development Planning and Operations Unit will be in charge of all construction, renovation, and maintenance of SRF tourism support infrastructure and services.



## **VII. Rules of Conduct for Ecotourism in the Sundarban Reserve Forest**

The following elements to a code of conduct for the SRF build on the existing code of ethics for the SRF. It is recommended that these guidelines become established legally and enforced, that each entry pass be considered as a contract between visitors and the Forest Department. Guidelines must be clearly posted in Bangla and English at all Forest Department stations and tourist areas, and be printed on the back side of entry passes.

### *Recommended Code of Conduct for Visitors:*

- Be respectful of wildlife and other visitors - keep noise to a minimum. Audio systems and fireworks are prohibited in the SRF.
- Leave the night to the animals - keep night lighting to a minimum.
- Be alert and mindful for your own safety and that of others.
- Dress in dark clothes or garments that blend with the flora.
- Respect signs and remain in areas of public access only. Canoeists must remain in canoes while on circuits.
- Take only pictures, leave only footprints. Pack out all trash or dispose of trash in designated receptacles. Do not extract or collect plants and animals from the SRF.
- Keep animals wild – do not feed wild animals.
- No cooking or open fires in the SRF.

### *Recommended Code of Conduct for Tour Operators (additional to the Visitors' Code of Conduct):*

- All tour operators visiting the SRF must be licensed by the Forest Department.
- Overnight mooring will only be allowed in designated areas. This extends to ships under the jurisdiction of the Port Authority of Mongla.
- Tours must be conducted on designated circuits only.
- Tour operators will apply appropriate safety standards in their operations – boats not to exceed maximum carrying capacities, all boats must be equipped with sufficient life vests (one per passenger), a first aid kit, and a two-way radio.
- Tour operators must educate all participants on the SRF codes of conduct prior to tour initiation.
- No dumping of sewage in the SRF.

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