

DRAFT

**Site-level Field Appraisal for Protected Area
Co-management: Himchari National Park,
Cox's Bazar**



Southeastern Cluster, IPAC

Cox's Bazar, April, 2009

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1. Project brief

The Integrated Protected Area Co-management (IPAC) is an initiative of GOB and USAID to embark upon the *strategic goal* of scaling-up natural resource co-management at the policy and operational level by achieving recognition, acceptance and integration of this approach by the GOB into its management tactics.

The overall IPAC *objective* is to promote and institutionalize an integrated protected area comanagement system for sustainable natural resources management and biodiversity conservation that results in responsible, equitable economic growth and good environmental governance.

IPAC will build upon and provided additional support to the successful co-management interventions launched under the Management of Aquatic Ecosystems through Community Husbandry (MACH) project and the Nishorgo Support Project (NSP). MACH served to demonstrate the feasibility of the community co-management model to open water and wetland resources. NSP has supported co-management of tropical forest resources and pilot sites of the Forest Dept protected area network. It has concentrated on preserving protected forest areas in Bangladesh, along with biodiversity conservation, by working with local resource users living around officially notified protected areas (wildlife sanctuaries, national parks and game reserves). Particular emphasis has been given to developing the capabilities of local resource management organizations to broker community consensus in understanding, accepting and assuming their roles and responsibilities under a co-management approach in collaboration with the Forest Department.

Under IPAC, carefully crafted, integrated, activities will be implemented over significantly larger areas to: develop a protected area strategy that applies to all ecologically and economically significant areas, including those outside of freshwater and forest ecosystems, build technical capacity within national and local level institutions for protected area co-management, and expand the geographic area of Bangladesh under

co-management to ensure the long-term success of the model. Institutionalization and successful implementation of IPAC will also address a series of short-, medium- and long-term climate change adaptation and mitigation issues.

Program:

The IPAC project includes three main components:

1. Development of a coherent strategy for integrated protected areas co-management and biodiversity conservation, through support for constituency building; visioning, policy analysis and strategy development; partnership building for sustainable financing; and development of an outreach and communication strategy with a focus on awarenessraising
2. Building stakeholder and institutional capacity, through support for training to GOB national and local level staff, NGOs and rural communities; strengthening of existing training centers and development of new and innovative applied training courses; and development of local support services for integrated, participatory co-management
3. Site specific implementation of co-management in Protected Areas to continue field testing and institutionalization of proven approaches for integrated PA co-management in existing and new aquatic and terrestrial protected areas; this will include the selection of additional sites to scale up the network of co-managed PA, and expanded support for alternative income generation activities, value chain strengthening, public-private partnerships, leveraged conservation financing and local level outreach to increase community interest in conservation and environmental stewardship, while contributing to improved welfare of rural communities through reduced vulnerability and increased adaptation to climate change, increased access to improved drinking water supplies and more secure and diversified livelihoods.

The program will also support cross-cutting approaches to take account of gender perspectives in natural resource management and to enhance gender mainstreaming

processes, along with a focus on youth, to improve the livelihoods of young people and to provide a solid future constituency for conservation.

Activity Purpose:

- ❑ Provide technical advisory services to GOB environment, forestry and fisheries departments to support the further development of the natural resources sector and the conservation of biological diversity;
- ❑ Develop a protected area strategy that applies to all ecologically and economically significant areas, including those outside of freshwater and forest ecosystems;
- ❑ Build technical capacity within national and local level institutions for protected areas comanagement;
- ❑ Expand the geographic area of Bangladesh under co-management to ensure the long-term success of the co-management model and to extend socio-economic benefits to surrounding communities, including increased access to improved drinking water supplies and to opportunities for alternative income generation
- ❑ Address within IPAC a series of short-, medium-, and long-term climate change mitigation and adaptation issues.

Project Location:

Field interventions in five Clusters including 26 targeted sites covering over 360,000 hectares and the surrounding landscapes with rural communities of 2.2 million people:

1. Sylhet (Tanguar Haor, Hail Haor, Hakaluki Haor, Lawachara, Rema-Kalenga, Satchari Khadimnagar protected areas)
2. Chittagong Hill Tracts (Pabla khali, Kaptai protected areas)
3. Southeastern (Teknaf, Inani, Himchari, Medha Kachapia, Fasiakhali, Chunati protected areas)
4. Central (Madhupur and Bhawal National Parks; Kangshaw-Malijhi and Turag-Bangshi wetlands)
5. Sundarbans (Wildlife Sanctuaries and ECA)

2. Himchari National Park

This park is located at Himchari under the Cox's Bazaar South Forest Division, about 12 km south from Cox's Bazar town. The park lies between 21.35° to 21.44° north latitude and from 91.98° to 92.05° longitude. This National Park was formally established through a Gazette Notifications in 1980 by the Bangladesh government as a conservation area for research, education and recreation under the article 23(2) of Bangladesh Wildlife Preservation (Amendment) Act 1974. The total area of Himchari national Park is 1729 hectare.

It comprises the reserve forest areas of Bhangamura and Chainda blocks under Cox's Bazar Forest Department Evergreen and semi-ever-green tropical forests are found in this area. The park is under Cox's Bazar range contains four forests beat named as: Kolatoli, Himchari, Jhilongja, Link Road and Chainda. There are about 35 villages and settlements have been found. Among them about 57% is located inside and at the edge of the forest, 40% located outside and only one village (3%) is out side of the National Park.

The Himchari National Park is comprised of lush tropical rain forest, grasslands and trees, and features a number of waterfalls, the biggest of which cascades down toward the sandy, sun-drenched beach. The natural beauty of the area provides a welcome break from the hustle and bustle of city life, for locals as well as tourists. This is a unique place comprising the scenic beauty of green hills and blue waves of huge sea, which is the heaven of tourists. There is a big waterfall in the National Park which is a major attraction to the tourists.

Once the flora and fauna in this area was abundant and birders never fail to be delighted at the extensive bird-life. But the scenario has been changed due to encroachments, illegal felling, and destruction of wildlife habitat by converse the forest land for agriculture and betel leaf cultivation. Still now, there are There are 58 species of trees, 15 species of shrubs, 4 species grasses, 19 climbers and 21 species of herbs altogether 117 plant species are available there. The beautiful orchids break the innumerable shades of

green with splashes of color many of the herbs found in Himchari National Park have therapeutic properties that the local people understand and can make use of. Besides, there are 55 species of mammals, 286 species of aves, 56 species of reptiles and 13 species of amphibians are found in this evergreen forest. Limited number of elephants found here too. This wide variety of plant life provides suitable habitats for the more than 286 species of birds that call the park home, including the Barn Swallow (*Hirundo rustica*), Asian Palm Swift (*Cypsiurus balasiensis*) and *Acridotheres fuscus*. The latter is a genus of Starling that has been introduced into other parts of the world, such as South Africa, Hawaii, Israel, Australia and New Zealand, where it is often referred to as an Indian Myna. Beside, a small group of elephants, Rhesus macaque, porcupine, barking deer, and jungle cat still exists with great threats.

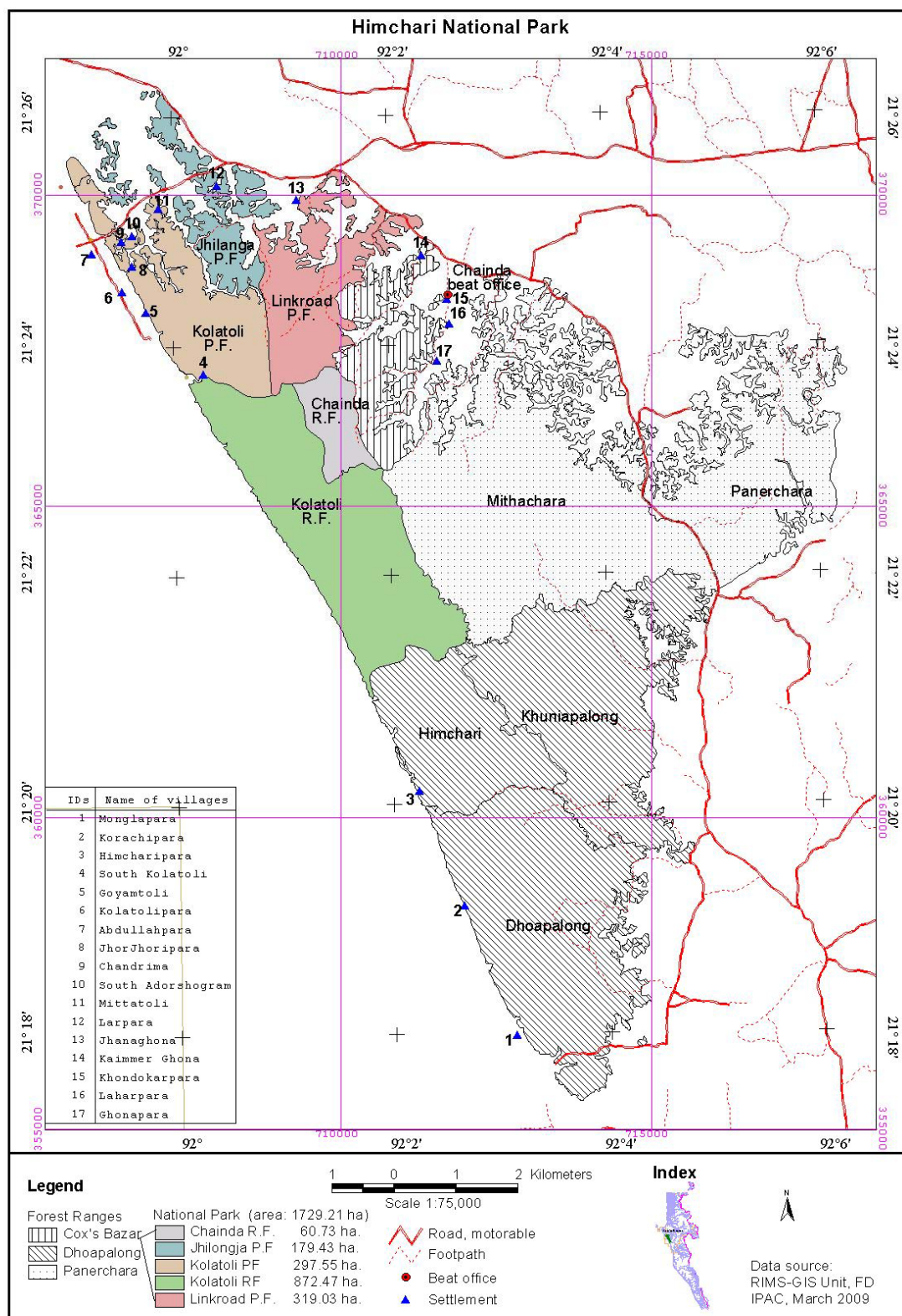


Figure 1: Map of Himchari National Park (Core and Landscape area)

3. Methodology

During the appraisal process of Himchari National Park a two-step rapid appraisal strategy was taken. RRA was conducted as the first in the appraisal process, followed by PRA.

RRA was carried out as an initial activity in the field with a primary focus on generating information that would help to get a sense of the range of stakeholders, key issues and challenges that need to be addressed and provide information on the context (social, economic, ecological) in which the project will operate.

Built upon the outcome of the RRA, a subsequent PRA exercise collected in-depth information on the identified issues and was designed to ensure greater participation of local people in information collection.

The overall purpose of the RRA and PRA was to come up with a comprehensive situational analysis of the Himchari National Park with a view to understand: -

- Who destroys and how the forest is destroyed
- What are the underlying driving forces for the forest degradation
- Cause and effects of the behavior of local people
- Opportunities for improvement in forest management

3.1 Study period

RRA and PRA field exercises in Himchari National Park were conducted during 10th February to 15th February 2009 and 22 February to 5th March 2009, respectively and the detail time schedule for the field activities is given in Table 1 & 2.

Table 1: List of selected RRA Spots and schedule for visits

Date	Name of RRA Spots
10.02.2009	Discussion with local FD personnel at Range Office about RRA/PRA issues and visit to Himchari NP Beat office
11.02.2009	Reconnaissance visit to Himchari NP and adjacent villages/ settlements.
12.02.2009	Reconnaissance visit to HNP forest areas
14.02.2009	Team building and discussion about Site Level Appraisal for TGR and CWS compiled by NACOM, July 2004
15.02.2009	Developing PRA Tools like questionnaire for KI and HH survey and Checklist for GD and FGD, Trend Analysis.

Table 2: List of selected PRA Spots and schedules for conducting field activities

Date	Beat	Village/ settlement	Performed activities	Remarks
22.02.2009	Himchari	Karachipara	GD, FGD, KI, HH interview (3), Resource and social mapping, Trend analysis	Inside
		Monglapara	GD, Venn diagram and HH interview (1)	Adjacent
23.02.2009	Kolatali	Kolatolipara	GD, FGD, KI, HH interview (7) and Resource mapping	Inside
		Borochara	GD, FGD, KI, Venn diagram, HH interview (7), Resource and social mapping, Trend analysis	Inside
25.02.2009		Maittatoli	GD, KI and HH interview (1)	Inside
Moulavipara		GD, KI interview (1)	Adjacent	

		Light housepara	GD, HH interview (3)	Adjacent
26.02.2009	Jhilongja	Janarghona	GD, KI and HH interview (5), Venn Diagram, Trend analysis, Resource/ social mapping and Forest Transact	Inside
02.03.2009	Chainda	Khondokerpara	GD, FGD, KI, HH interview (7), Trend analysis and Resource/social analysis	Adjacent
03.03.2009		Laharpara	GD, HH interview (2)	Inside
		Ghonapara	GD, HH interview (5)	Inside
04.03.2009	Link Road	South Muhuripara	GD, KI, Trend analysis and Resource/Social Mapping, Venn Diagram	Inside
05.03.2009	Himchari NP	Forest Area	Forest and Village transact, FGD	

3.2. Setting RRA and PRA Issues and Questions

A short but effective training workshop was organized on 28th January at IPAC Southeastern Cluster office, to identify, prioritize and finalize the RRA/PRA issues and questions. The type and nature of issues, the research team's accessibility and mobility in the area, the behavior of local people and their rapport with the field staff were all taken into consideration in the design of these methods and tools. The workshop was attended by specialists (Mr. Utpal Dutta, Governance Specialist, IRG) and representatives from field implementation partners (CODEC), representatives from participatory monitoring partners (World Fish) and local FD staff, who were likely to be involved in the RRA/PRA field exercise. This workshop provided an opportunity to prepare a field protocol, decide and agree on approaches, methods and tools to be used and also to make and consolidate team understanding. The detailed methodology for these activities was embodied in a manual and used in half days training workshops with the field teams to

give instruction in using the research tools and to ensure that the methodology remained same across the team and across the sites. The RRA/PRA issues and checklist were developed by the field team, lead by PMARA of the project. The RRA/PRA specific activities and tools that were used are given in Table 3.

Table 3: Selected RRA/PRA issues for Himchari National Park, specific activities and tools used.

Sl.	RRA Issues	Specific activities	Tools Used	Participants
1.	Stakeholder Assessment	Reconnaissance visit to the Himchari NP, familiarizing with the key informants from inside settlements, identification of local institutions/organizations and their roles and activities.	GD Sketch mapping, KI, HHs Interview and FGD	FD personnel, Local institutions, Forest settlers, local elites
2.	SH Demographic profile	Collection of settlement wise demographic info from Upazila Parisad (Population Census: 2001, published 2006), On-site discussion and interviews	GD KI, FGD and trend analysis	Local institutions, Forest settlers, local public representatives and local elites
3.	SH Economic Activities/ Livelihood Strategies and Human Capital Development	Identification of income sources, employment and seasonality, credit opportunities by NGOs, seasonal workload of male and female.	HH Interview, GD, KI, FGD and Seasonal Calendar	Local communities, forest villagers, old people of the communities, forest user groups, settlers and local elites
4	Resources status and forest dynamics	Identify major resource base, natural regeneration of forest species, forest make up dynamics, physiographic and topographic features of the HNP, access to forests and settlements, land use and forest cover and thickness, causes and extent of resource change	Trend analysis, HH interview, resource mapping, forest transact, GD and KI	Local people, forest villagers, settlers and local influential people
5	Resource exploitation	Identification of major forest resources collected, including NTFPs, reasons and extent of forest resources exploitation, dependency on the forest/forest products and seasonal trend in resource exploitation	Trend analysis, HH interview, GD and KI	Local people, forest villagers, settlers, public representatives & FD staff and local influential people

6	Legal aspects	Identify various issues regarding declaration of NP, existing challenges in biodiversity conservation, conflicts among FD, local elites, encroachers and local administration, land encroachment process in and around HNP and law enforcement mechanism in the PA	GD KI	FD staff and forest villagers, Local community and local govt. members and Local elites
7	Power structure	Identify the roles and hierarchy of administrative, political and business elites in management of PA, social cohesion and adhesion and underlying cause and reconciliation.	GD, KI, FGD and HH interview	HHs heads, Local community leaders, FD personnel and local govt. representatives
8	Gender Issues	Livelihood pattern of forest dwellers: male and female perspectives; education, living standard, health status and mobility of male and female; gender perspectives in decision-making process.	GD, HH Interview, KI and FGD	HHs heads, Local community leaders, female groups of the communities
9	Local governance system and community structure and functioning	Identification of local influential/ elite people, decision making process, conflict resolution, local problems, causes and possible solutions.	GD, Venn Diagram, Ranking-scoring and FGD	Local communities and elites
10	Behavior of local people	Initial response of the local people and FD staff towards the project; Sources of conflict and conflict resolution	FGD, GD and HH interview	FD staff, Local community and HHs heads
11	Local Level Awareness	Identification of awareness and perceptions about resource degradation and conservation, willingness for resource conservation, awareness about the existence of nearby park/game reserve and reserved forest, knowledge about forest and wildlife preservation acts	GD, FGD and HH interview	Local communities, FD personnel and HHs heads

3.3. Formation of RRA and PRA Field Teams

The RRA/PRA field teams were formed with representatives from World Fish, CODEC and FD local staff, having biological and sociological background. The single, united team was working in different location of the HNP and somewhere this team split up into two to gather maximum information and working simultaneously by performing their respective duty.

Table 4: RRA/PRA Team of IPAC for Himchari National Park

Name	Designation	Duties
Mr. Prantosh Chandra Roy	Site Coordinator, Teknaf Site, IPAC	Conduct Transect, Social and resource mapping, Group Discussion, Focus Group Discussion, Key informant and HH interview, Venn Diagram, seasonal calendaring and reporting
Mr. Nazmul Abedin	Site Facilitator, Teknaf Site, IPAC	
Mr. Shihab Rayhan	Site Facilitator, Teknaf Site, IPAC	
Mr. Akhil Kumar Biswas	Enterprise Support Facilitator Southeastern Cluster, IPAC	
Mr. Bishawjit Sen	Communication, Outreach and Governance Facilitator, Southeastern Cluster, IPAC	
Mr. Ruhul Mohaiman Chowdhury	PMA Research Associate, Southeastern Cluster, IPAC	

3.4. Selection of RRA and PRA Spots

On the basis of information provided by local FD staff and the field implementing partner (CODEC and World Fish), various sample locations were selected during planning for the purpose of information collection. These locations are hence called RRA and PRA spots. The selection of locations was based on a number of selection criteria. The selection process was completed during planning workshop. While the number of sites visited during the RRA was limited, the team focused on gaining an overview of issues covering the whole of the National Park area. The RRA was mainly based on unstructured and semi-structured household interviews, KI interviews, group and focus group discussions. A limited number of other RRA tools were also used like trend analysis, seasonal analysis, sketch mapping etc. Therefore, a decision was made that the PRA would focus on only issues and stakeholders relating information to the management of forest within the National Park area. However, in addition to focus group and group discussion, various PRA tools, like Ven diagramming, resource mapping, seasonalities, trend analysis, Livelihood analysis etc., were used during PRA exercises. A list of the selected RRA and PRA spots for Himchari NP is given in preceding Table 1 and 2.

3.5. Choice of RRA and PRA Methods and Tools

The RRA and PRA methods and tools to be used for generation of information were selected, elaborated and detailed in the training workshop. The type and nature of issues, accessibility and mobility in the area, behavior of local people and rapport of the field staff decided appropriateness of these methods and tools with the local people. It may be mentioned that a particular tool was not exclusive for a particular issue; rather a tool was used for a number of issues. Similarly, particular information was sought by a number of techniques and tools and thus provided an opportunity for triangulation for deciding on the acceptance of particular information.

3.6. Field Implementation Strategies for the Selected Tools

During RRA/PRA exercise, a total of 34 HHs interviews, 8 group discussion, 6 key informant interviews, and 6 Focus group discussions, 3 transect, 3 trend analysis and 3 Resource and social mapping were conducted. The field implementation strategies of various tools used are given in Table 6.

Table 6: Records of performed activities in different beats of Himchari NP during RRA/PRA

Beat	Village/ Settlement covered	FGD	GD	KI	HHs Interview	Transect	Trend Analysis	Resource and social mapping
Himchari	Karachipara	1	1	1	3		1	1
	Monglapara		1		1			
Kalatoli	Kalatolipara	1	1	1	7			1
	Borochara	1	1	1	7	1		1
	Maittatoli			1	1		1	
	Moulovipara		1		1			
Jhilongja	Janarghona	1	1		5	1	1	1
Chainda	Khondokerpara	1	1	1	7	1	2	1
	Laharpara				2			

Link Road	Muhuripara	1	1	1			1	1
Total	10	6	8	6	34	3	6	6

3.7. Description of the Used RRA and PRA Tools

Following tools were used to gather field data during RRA/PRA of Himchari National Park. Each tool was used to collect information about more than one issues as shown in bellow:-

Ven Diagramming Issues

Local power structure, local community organizations, local institutions and agencies, local conflict and conflict resolution, family decision making, mobility of women & men, local NGO/CBOs.

Seasonal Calendar Issues

Fuelwood, bamboo and timber collection, unemployment, workload, accessibility to forest, transportation problem, brickfield/sawmill operation, forest patrol, agricultural activities, collection of building materials, hunting, vegetable collection, damages by elephant, sand collection, sungrass extraction.

Trend Analysis Issues

Forest cover, forest thickness, tall trees, herbs and shrubs, forest use, unemployment, local solvency, land encroachment, settlement/population solvency/income, livelihood expenditure, literacy, unemployment, use of forest for income, use of forest for HH needs, transportation and mobility, homestead plantation, food scarcity, credit and IGA, occupation, damages by elephant, wildlife, hunting, illegal tree felling, fuel wood collection, bamboo and cane collection, fruit bearing trees in the wild, livestock, turtles and tortoises, agricultural activities, medicinal plants.

Ranking and Scoring Issues

Local problem ranking, wealth ranking and livelihood analysis.

Transect walk Issues

Soil, vegetation, land use, elevation, crops, wildlife, human activities etc.

Forest Resource mapping Issues

Forest land use cover, resource zones, resource exploitation zones, animal distribution, settlements

Focus Group Discussion

Focus Group Discussions were carried out with different professional groups, resource user's groups, local public and government representatives with a view to collect information on specific areas.

- During PRA, FGD were principally conducted with different stakeholder groups, mainly with local FD staff, forest villagers, local public representatives etc. other professional groups, like fuelwood collector, sawmill owner, etc.
- During RRA FGD were conducted with un
- The FGD were conducted by appointment and by invitation and a local guide was used to invite the people.
- Senior project personnel /or senior personnel from the partner NGO /and or senior FD Official and/or experts were usually present in the FGD sessions.

Key Informant Interview

The key informants are local people who have extensive knowledge on the local environment, situation and events. The purpose of this interview was to utilize them in collecting information from them relevant to the project needs.

- KI interview was by prior appointment. A local guide helped in making appointment with the KI. The interview was taken by paying visit to Key informant HH or by inviting him to the team base
- A preliminary discussion with local FD staff, field implementing partner's staff and interview of local people gave adequate clue for selecting KI. Preferably local schoolteachers, retired officials, local elites or local public representatives would be selected as the KI.
- A typical KI interview lasted for about 1.5 hrs. The entire team took part in the interview taking session
- As with HH interview, a similar checklist of questions was used for the purpose of KI interview.

Group interview

- The purpose of the planned Group Interviews was to collect some information on the locality and local situation based on the consensus of the local people.
- Interviews were conducted at places, preferably at local tea stalls, road junctions and other local community places, where local people gathered spontaneously. No formal invitation to the local people were made for participating at the group interview.
- Mapping, seasonalities, ranking and scoring exercises, whenever possible, were done in such group interviews.
- Typically a group interview lasted for about 1-1.5 hrs
- At least one group interview was held each day
- This was basically an unstructured interview and a checklist of issues was used as a basis for questions

Household (HH) interview

- Individual/HH interviews were conducted with randomly selected interviewee, typically visiting one household at each stop.
- Both male and female respondents were considered.
- Typical HH interview last for about 1 hr – 1:30 hr

- The interviewee was not treated as respondents to a questionnaire, but active participants in an unstructured/semi-structured interview. A checklist of issues was used as a basis for questions, not necessarily addressing all questions in each interview and sometimes departing from basic questions to pursue interesting, unexpected or new information, relevant to the project and situation.

3.7. Additional Tools

Besides those cited and described tools for field appraisal additional tools were used to collect data more efficiently viz. social and resource mapping, ven diagramming, seasonal calendaring, trend analysis, ranking-scoring etc. were done separately dedicated to these activities. However, most of the time these activities were performed after end of FGD and KI interviews.

3.8. Secondary Information Collection

Secondary information related to demographic data was collected from Upazill Parishad which is based on Population Census-2001. Basically, HHs number, village information, educational status, access to safe water and sanitation and some sociological aspect were collected from secondary information manual.

3.9. Organizing RRA and PRA field work

The organization of field exercises involved a series of logical steps. The field teams always made efforts to adhere to those steps. **The flow of activities is shown in the following flow chart.**

Reflection and Analysis

After each day of fieldwork, the team sat together for about 1 ½ hours for team interaction and triangulation. The activities performed during the session included:

- Reviewed information gathered that day and made summary of the information, triangulated whenever necessary. The person designated for report writing took note of discussions
- Planned the next day's activities
- Methodological review

Triangulation and filtering

A single in formation may be collected by using several tools or from several sources. The team cross-checked their results and accepted the most logical analysis. During these feedback sessions and subsequent data analysis, team members were required to use their own judgment to ensure the most reliable analysis of the situation was presented.

4. PRA Findings

Himchari national park, a hill forest zone with semi-evergreen and sub-tropical forest types declared in 1980 and being managed by the Cox's Bazar Range under Cox's Bazar South Forest Division. Once dense natural forest tracts with medium high hills is heavily deforested and degraded during 1990s, turned into degraded hill forests with bushy vegetation cover and currently under threat of uncontrolled land uses. The proximity to Cox's Bazar, hilly landscapes, natural streams and extended sandy beach still exhibits scope for eco-tourism development in the area. PRA exercise reveals that this NP needs extensive interventions of protection, large-scale plantation of indigenous plants, habitat restoration program as well as support to forest settlers and local poor for their livelihood.

4.1. Forest cover and forest dynamics

PRA and various discussions revealed that Himchari national park was once dense and multi-layered semi-evergreen forests with remarkable diversity in its flora and faunal resources. As the forest cover degrades in natural sub-tropical hilly zones, high forests (with more than 70% crown cover of mixed vegetations) gradually shrink down to low forests (ranging from >30% to 70%), scattered trees (below 30% crown cover) and eventually to brush land. Once Himchari national park (HNP) was reportedly to be high forests is completely deforested and elephant habitat thereof is largely degraded. The vegetation cover is dominated by herbs, sungrass, shrubs and bushes. Sungrass and scattered groves of natural bamboo are remnant non-wood forest products (NWFPs) in the park. Local communities opine that during the decade 1990-2000, extremely high level of illicit felling and extraction of timber, fuelwood, bamboo and other NWFPs occurred. Currently, due to absence of mother trees and repeated burning, no natural regeneration occurs and sungrass invades the tracts. Further, increasing pressure of fuelwood scavengers are causing removal of thin bushy vegetation cover from hills, whereby no management from FD side is visible.

Along the northern frontier of the HNP dense settlements sprout since early 90's by people from off-shore islands and Rohingya from Myanmar. This population is entirely dependent on forest reserves for their fuelwood consumption and a large portion of these communities further collect non-wood forest products for their livelihood.

PRA findings in table 7 exhibits that forest cover is replaced by bushy vegetation whereas no mature/mother trees are available and consequently natural regeneration of indigenous species are absent. Due to acute shortage of food and shelter, wildlife populations are rapidly disappearing and few elephant herds roam around inside the park and often destroy nearby crop field and settlements. Illegal felling of trees has turned into illegal removal of remnant bushy vegetations as fuelwood by a huge population from adjoining settlements. Increasing population of settlers' influx into the park area and gradually being encroached with the help of forest villagers, local influential people and FD staffs. Since the area is declared as a PA, collection of NWFPs like sungrass, bamboo, fodder,

medicinal plants and cane are prohibited. However, local influential and political elites with the assistance from local FD personnel are main driving forces responsible for rampant encroachment, landuse transformation, and illegal removal of forest resources. These pressures along with shortage of manpower and funds eventually made FD unable to manage the park.

Table 7: Trend Analysis (forest quality and resource use matrices)

Issue	Pre-1971	Upto 1990	Present	Major causes for change	Future Risk
Forest cover and density	00000	000	0	Excessive exploitation/ tree felling, poaching/ expansion of settlement and Rohinga immigrant, agricultural activities & betel leaf cultivation, land encroachment and conversion/ problem in regeneration	High
Tall trees	0000	0	-	Illegal selective felling; loss of mother trees and subsequent decline of natural regeneration.	High
Herbs and shrubs/ undergrowth	0	000	0000	Due to indiscriminate exploitation of forest resources, once high forests gradually became low forest, scattered trees and eventually this tract became brush land.	Less
Wildlife	00000	000	0	Habitat destruction, low level of awareness and hunting caused loss of wildlife	High
Illegal tree felling	0	00000	0	During 90's rampant illegal felling occurs in the NP. Local FD, administrative, influential peoples and political elites are reported to be the main driving forces.	High
Fuelwood collection	0	000	00000	Lack of alternate fuel source, activity emerged as added income, no forest protection, unemployment	Medium
Land encroachment	0	0000	00	Population increase, establishing settlements by migrants and Rohingas, betel vine cultivation and also for agriculture	High
Bamboo collection	0	0000	0	Over harvesting due to increasing demand of bamboo in betel leaf cultivation, fencing and handicraft making	Medium
Cane collection	0	0000	-	Excessive exploitation in the past	High
Fruit bearing trees in the wild	00000	000	-	Illegal felling, natural disaster and monoculture plantation of exotic species	Medium
Betel leaf cultivation inside the NP	-	00	0000	Increasing settlers are being engaged in betel leaf farming in the valleys of the hills for high profitability;	Medium
Agricultural activities inside the NP	0	000	00000	Population increase, decrease of agricultural land in the plains for settlement. It influences encroachment of forest lands and practicing agriculture.	medium
Jhum (Shifting cultivation)	-	0	0	Officially Jhum is banned and less profitable.	Less
Sungrass	0	00	0000	Due to massive destruction of tall trees and burning in the hills, sungrass emerges; Profitable forest produces as thatching grass.	less
Medicinal Plant	000	00	-	Due to heavy destruction of natural forests, medicinal plants are almost lost; absent of local healers; availability of Allopathic medicine and ignorant of traditional medicine value of plants.	moderate

Fodder	0000	00	0	Destruction of wildlife habitat including fodder species like banana, bamboo etc.	less
Man-Elephant conflict	-	00	00000	Increased, due to habitat destruction, unavailability of food and shelter for elephants;	High

N.B 5 circles has used to indicate highest abundance/intensities

4.2. Settlements and their stakes with the HNP

During PRA exercise, demarcation of the HNP could not be identified. However, PRA and secondary sources revealed that people from about 35 settlements/ villages inside and adjacent the HNP are directly or indirectly dependent on the park (table 8). Among those 21 settlements are inside the park area with more than 4000 HHs. About one-third of these population settled in the forest hills after devastating cyclone in 1991 and the rests accumulated gradually. In this regard, it is evident that declaration of a portion of forest reserves to be a Protected Area is solely based on scientific and forestry view points whereby local political and administrative elites are often disregarded with idea sharing. Consequently politicians and local elites often treat forestlands as either no man's property or wastelands. Political leaders and local administration, hence, rehabilitate poor migrants into the forests. Few such instants are found in case of HNP like govt. residential area and model villages for cyclone ravaged shore-dwelling communities in Jhilongja area.

Table 8: Identified settlements and their level of stakes with Himchari NP under Cox's Bazar Range.

Sl. No	Village	Total HHs No	Beat	Location	Level of Stake
1	Himchari Para	200	Himchari	Inside	Major
2	Korachipara	150		Inside	Major
3	North Monglapara	210		Adjacent	Moderate
4	Majerpara	100		Adjacent	Major
5	South Monglapara	160		Adjacent	Major
6	Mogpara	15	Chainda	Inside	Major
7	Ghonapara	100		Inside	Major
8	Laharpara	90		Inside	Major
9	Chainda Murar kaccha	100		Inside	Major
10	Khondokerpara	500		Adjacent	Major
11	Cchararkul	150		Inside	Major
12	Kaiummerghona	300		Inside	Major
13	Islamabad	30		Inside	Major
14	Charpara	422		Adjacent	Moderate
15	Momsururchar	30		Adjacent	Moderate
16	Sadhurpara	100		Adjacent	Moderate
17	Kalatolipara	500	Kalatoli	Inside	Major
18	Borochara	350		Inside	Major
19	Adorshogram	250		Inside	Major
20	Chaindrima	120		Inside	Major
21	Maittatoli Jail gate para	60		Inside	Major

Sl. No	Village	Total HHs No	Beat	Location	Level of Stake
22	Goiyamtoli	180		Inside	Major
23	Shuknachari	120		Inside	Major
24	Jharjharipara	100		Inside	Major
25	South Pahartoli (Moulovipara)	220		Adjacent	Moderate
26	Lighthousepara	308		Adjacent	Moderate
27	Abdullahpara	35		Adjacent	Moderate
28	Jhilongja	1500	Jhilongja	Near to Adjacent	Minor
29	Janarghona	480		Inside	Major
30	Shahittikpalli	250		Adjacent	Moderate
31	Badsharghona	300		Adjacent	Moderate
32	Faterghona	100		Adjacent	Moderate
33	South Muhuripara	230	Link road	Inside	Major
34	North Muhuripara	607		Inside	Major
35	Footkhali	60		Inside	Major

4.3. Stakeholder Assessment

Identification and assessing perceptions and motivations of stakeholders' is of significant importance in relation to conservation and protected area management. The mutual interactions among natural process, local people and management interventions are viewed through PRA process to identify local stakeholders and their level of stakes. Further, power structures at local level, prevailing conflicts and actors thereof are identified to develop a comprehensive foundation for IPAC interventions in the sites. A number of group discussions at settlement level, interviews of influential and administrative key informants, focus group discussions, venn diagram etc are tools applied during this process. A total of 22 stakeholders are identified whereby 11 are primary ones as illustrated in Table 9 below.

Table 9: Identified stakeholder groups in Himchari NP (based on RRA/PRA findings).

Sl. No	Stakeholder (SH) name/type	SH description	Role/Description of activities of SH	Impact on forest. Sea and its resources	Level of stake	Risks
1	Local elites: Primary SH	Local businessmen, local elites and influential person and administrative elites	Influence in PA land encroachment process, purchase timber and other NTFPs from illegal feller and engage labor for illicit felling	Forest loss and encroachment	Major	High

2	Local FD personnel Primary SH	Legal custodian of forest areas and responsible for management of PAs	Patrolling, and conservation of NP	Plays significant role in conservation and sometimes reported to be engaged in illegal removal of forest produces	Major	High
3	Forest villagers: Primary SH	Most of them are encroacher and very few are registered villagers with FD.	Land encroachment and its conversion, fuel wood and bamboo collection, agriculture inside the forest, sun grass collection, sometimes illegal tree felling and often facilitate further encroachment of NP land	Increased pressure on forest, reduced biodiversity	Major	High
	Land encroachers / forest settlers	Settlers in NP area came from offshore islands, Myanmar and surrounding areas	Landless poor people and Rohingya migrants are entirely dependent on forest and marine resources for their livelihood	Play significant role in uncontrolled harvesting of forest and marine resources	Major	High
4	Fuel wood collector: Primary SH	Hardcore poor and poor people including children, women, some adult, usually unemployed from settlements inside and surrounding the NP	A huge population from entire landscape collect fuelwood, from remnant brush land and nearby social forestry plantations. The NP is largely degraded.	Biodiversity reduced and forest regeneration hampered	Major	High
5	Betel Leaf Cultivator: Primary SH	Forest villagers, local poor, middle class people and people from outside (i.e. Rohingya.)	Encroach land, clear vegetation and weed adjacent areas, use bamboo as support to vines and fence around the plot that come from the forest, lot of cultivation and associated activities.	Forest land lost, biodiversity reduced, forest regeneration hampered	Major	High
6	Sun-grass collector Primary SH	Local influential people leases Chon Mohal from FD and then local labours are engaged for extraction	Sun-grass, an annually produced thatching materials are collected and subsequently burnt	Burning completely destroy biodiversity of the Chon Mohal especially for Fox.	Major	High
7	Rohinga settlers Primary SH	Refugees from Myanmar and their growing population, mostly unemployed	Establish their houses inside the PA, collect forest produces for their livelihood support, engaged in robbery and stealing. They are used as tools for forest land encroachment backed by the local influential people.	Loss of forest produces, making social conflict.	Major	High
8	Fishermen Primary SH	Local poor communities are largely dependent on fishing	Sea side settlers are engaged in fishing			
9	Bamboo Collector:	Local poor and betel leaf cultivator	Collect for betel leaf cultivation, HHs consumption and for commercial purpose.	Natural bamboo grooves are declining and	Major	High

Sl. No	Stakeholder (SH) name/type	SH description	Role/Description of activities of SH	Impact on forest. Sea and its resources	Level of stake	Risks
1	Local elites: Primary SH	Local businessmen, local elites and influential person and administrative elites	Influence in PA land encroachment process, purchase timber and other NTFPs from illegal feller and engage labor for illicit felling	Forest loss and encroachment	Major	High
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	Land encroachers / forest settlers	Settlers in NP area came from offshore islands, Myanmar and surrounding areas	Landless poor people and Rohingya migrants are entirely dependent on forest and marine resources for their livelihood	Play significant role in uncontrolled harvesting of forest and marine resources	Major	High
	Primary SH			elephant food is reducing		
10	Coal producers Primary SH	Adult Fuel wood collectors make small pits inside the forests and burn woods to prepare coal	Stumps and trees, which are difficult to carry from the forests, are chopped and burnt in pits for one day and brings the coal to market	Huge loss of biomass and burning causes loss of biodiversity; sometimes causes forest fire.	Major	High
11	Hunter Primary SH	Local poor and fuel wood collectors for HH consumption	Local people are reported to hunt porcupine and deer	Loss of wildlife	Moderate	High

Secondary SHs are Farmer, Dry leaf collector, Medicinal plant collector, Cane collector, Fruit collector, Vegetables collector, Tea stalls Owner, Sand collector, Fodder collector, Local Police, Local Govt & LGED

RRA/PRA process exhibits that reserved forests are managed and conserved by the Forest Department whereby local communities are largely dependent on forest resources for their livelihood and there is a large market for these produces. However, extraction of forest / national park resources are banned by the Government whereas local markets

have an acute demand of forest resources. Right in this process local elites, politicians, businessmen and power structures are deeply interlinked. We have identified local administrative and political elites, local FD personnel, businessmen to be first category primary stakeholders whereas resource users and forest settlers are categorized as second level primary stakeholders. The initial category stakeholders are active ones i.e. regulate the resource flows and the later are passive i.e. being used by the earlier classes.

Table 10 below shows settlements and villages inside and adjacent to the HNP who have identified stakes on resource extraction and uses at various level. In general, park inside villages are largely dependent on the park for collection of fuelwood, sungrass and encroachment are the mostly found interactions. Among 37 local villages Jhlongja, Mittatoli jail gate, Borochara, Kolatoli para and Koracipara are much dependent on remnant forest resources as well as fisheries in the sea.

Table 10: Settlements and its stakes with different resources in the HNP

Villages/ settlements	Location	Resource extraction			
		Fuel wood collection	Illegal timber felling	land encroachment	collection of NTFPs
Himchari Para	Inside	0000	0	000	000
Korachipara	Inside	00000	00	0000	00
North Monglapara	Adjacent	00	0	00	0
Majerpara	Adjacent	000	0	0	00
South Monglapara	Adjacent	00	0	00	0
Mogpara	Inside	0000	0	0000	000
Ghonapara	Inside	0000	0	000	
Laharpara	Inside	0000	0	0000	00
Chainda Murar kaccha	Inside	0000	00	000	
Khondokerpara	Adjacent	000	00	00	00
Cchararkul	Inside	0000	0	0000	000
Kaiummerghona	Inside	0000	00	000	
Islamabad	Inside		0	00000	
Charpara	Adjacent		0	0	
Momsururchar	Adjacent		0	0	
Sadhurpara	Adjacent		0	0	
Kalatolipara	Inside	00000	0	00000	000
Borochara	Inside	00000	0	0000	00
Adorshogram	Inside	000	0	00000	00
Chaindrima	Inside	0000	0	00000	
Maitatoli Jail gate para	Inside	00000	0	00000	000
Goiyamtoli	Inside			0000	
Jharjharipara	Inside	0000		00000	000
Shuknachari	Inside	000		000	
Abdullahpara	Adjacent	00		0	000
South Pahartoli (Moullovipara)	Adjacent	000		0	0

Lighthousepara	Adjacent	0000		000	0
Jhilongja	Near to Adjacent	00000	000	0	
Janarghona	Inside	000	00	0000	00
Shahittikpalli	Adjacent	000		000	
Badsharghona	Adjacent			0	
Faterghona	Adjacent	0000		00	
South Muhuripara	Inside	000	00	000	00
North Muhuripara	Inside	000	0	000	
Footkhali	Inside	0000		0000	
Nuniarchara	Outside	00		–	
Kolatoli Charpara	Outside	0000		–	

4.4. Resource user groups

HNP, as of today, is at the verge of highest degradation of her resource base. Trees are rarely found and so as natural regeneration. Exploitation of fuelwood is rampant and without any restriction, degraded forestlands inside the park are invaded by grasslands. Repeated burning after sungrass harvest resulted almost entirely destroyed the last hope of natural regeneration and wildlife habitats. RRA/PRA process outcomes are summarized in table 11 below.

Table 11: Summary information on resource exploitation in HNP

Sl.	Name of resources	Reasons for resource exploitation	Users	Dependency	Risk
1	Fuel wood	HHs consumption and for commercial purpose	Local people, tea stall, hotel owners	High	High
2	Fishermen	HHs consumption and for commercial purpose	Local communities and local markets	High	High
3	Timber	Commercial and HH building material	Local people, furniture mart	Low	High
4	Sungrass	Commercial and HH thatching material	Local people, Local Market	High	High
5	Other NTFPs*	Commercial and HHs Consumption	Local People	High	High
6	Wildlife	Commercial and HHs Consumption	Local People	Low	High
7	Betel leaf vine cultivator	Commercial use	Local market	Low	High

* Includes bamboo, cane, medicinal plants, fruits, vegetables, dry leaf and grass etc.

Unauthorized settlers inside the park area and neighbouring population are primary resource users who are rampant in resource exploitation and expand encroachments. Cutting / leveling the hills, removal of remaining vegetation coverage from hills and grazing by settlers' cattle are major causes of forest degradation, erosion and landslides. These groups of people are often landless poor and being used by local elites. Forests are both the source of consumables for their HHs and resource markets at downtown controlled by the influential people.

PRA discussions identified that some portion of the HNP is illegally captured by local elites and enjoy the resources either by selling the land to the encroachers or maintaining business of fuelwood and sungrass, or use it as cropland, betel leaf vine cultivation.

4.5. Seasonal trend in resource extraction and resource users

Unemployment, Solvency, Accessibility to Forest, Transportation Facility/Easy Mobility, Brickfield/Sawmill Operation, Forest Patrol, Agricultural Activities, Timber Felling, Fuel Wood Collection, Bamboo and Cane, Building Materials, Hunting, Vegetable Collection, Betel Leaf Vain cultivation, Sand Extraction, Sun grass, Damages by Elephant

Table 12: Seasonality Chart on Various issues for HNP

Resources Name	Baisakh	Jaistha	Asshar	Shrabon	Bhadra	Ashwin	Kartik	Agrahyon	Poush	Magh	Falgun	Chaitra
Unemployment	00	000	0000	00000	00000	0000	000	000	00	0	0	00
Solvency	000	00	00	0	0	0	00	00	000	0000	0000	000
Accessibility to Forest	0000	000	0	0	0	0	00	000	0000	0000	0000	0000
Transportation Facility/Easy Mobility	00	00	—	—	—	0	0	00	0000	00000	0000	0000
Brickfield/Sawmill Operation												
Forest Patrol	00	00	0	0	0	0	0	0	00	00	00	0
Agricultural Activities	00	0	00	0	0	0	0000	00	0000	0000	000	0
Timber Felling	—	0	—	—	—	—	—	—	—	00	00	0
Fuel Wood Collection	00000	0000	0	0	0	0	00	000	00000	0000	000	0000
Bamboo and Cane	00	0	—	—	—	—	—	00	000	000	000	0
Building Materials	0	0	—	—	—	—	0	0	0	0	0	0
Hunting	0	—	—	—	—	—	—	—	—	0	0	0
Vegetable Collection	—	—	—	—	—	—	0	0	0	0	0	—
Betel Leaf Vein	00	000	000	000	00000	0000	00	0	0	000	000	0
Sand Extraction	0	0	—	—	0	0	00	0	0000	00000	00000	00
Sun grass	000	00	—	—	—	0	00	000	0000	00000	00000	000
Damages by Elephant	00	00	0	0	0	0	0	000	00000	0000	00	0

The HNP is comprised of Himchari, Kolatoli, Jhlongja and Link Road beat and part of Chainda beats. Forest villagers were registered and settled in early 50s in forestlands for their dwelling and in return they are to assist FD in patrolling and other assistance to the FD. FVs used to play significant roles in establishing and patrolling forest resources. FD personnel get all sorts of support from them in forest management whereby forests lies in remote locations of the country.

Over time population in forest villages increased and due to socio-economic changes forest villagers have widened their involvement in illegal removal of forest produces, encroachment of forestlands in guise of villager banner. In recent past they became an issue for the forest conservation since they are not cooperative to FD and little or no actions can be taken against them. Forest villagers are reported to have grabbed more forestlands than that of their allocation and often facilitate encroachment by migrating poor.

Table 13: Info on forest villagers and land encroachment.

Forest Beat	Forest Villagers	Encroachers	Remarks
Himchari			
Chainda			
Kalatoli			
Jhlongja			
Link road			

Table 14: list of brickfields and saw mills around the HNP

No brickfields and sawmills in the landscape zone of HNP.

Missing topics

Activities of DoEnvironment and CWBMP

Activities of DoFisheries

4.6. Communities, power structure and local governance

Over the time HNP has been experiencing significant changes in its socio-political and biophysical features. PRA findings enumerated the status of various issues since liberation of the country in 1971 with additional milestone of 1990 and that of the current. Issues identified are population growth, income and employment status, income from forests and household needs, livelihood expenditure, literacy, homestead plantations, mobility, food security, credit and AIGAs, major occupation and human-animal conflicts prevail in inside and surrounding communities based on general discussions, FGD, key informant interviews and other PRA tools as cited in table 15 below.

Table 15: Trend analysis of socio-economic situation

Issue	Pre-1971	Up to 1990	Present	Major Causes for Change
Settlement/Population	0	000	00000	Lack of planning activity, Migration of people, pre-1971 there was plenty of resource
Solvency/Income	0000	00000	000	Increased population but decreased agricultural land and resource also the income source
Livelihood Expenditure	00	000	00000	Less opportunity for income and price hike of daily commodities
Literacy	0	00	000	Increasing facilities in school, and mass awareness, providing sub-scholarships and incentives
Unemployment	0	00	0000	Less scope for job, economic crack down and lack of aptitude for job and skill people
Use of Forest for Income	00	00000	0	Availability of resource in the forest which in past easy to harvest but now lack of resource hinder to earn.
Use of Forest for HH Needs	000	00000	0	Logarithmic change because of scanty resource for livelihood
Transportation and Mobility	0	00	0000	New roads and highways are setting up
Homestead Plantation	0	00	0000	With the increase of forest settlers and traditionally

				homesteads are surrounded with fruit and timber tree species
Food Scarcity/Starvation	0	00	000	Increased population and poverty
Credit and IGA	—	00	0000	Several micro-credit NGOs are active in forest dwelling and other remote settlements and providing AIGAs
Occupation	Agriculture	Day labor, Agriculture, tree feeling, fishing	Agriculture, Day labor, tree feeling, business, service	New occupations are being emerged
Damages by Elephant	0	00	00000	As elephant habitats are being disturbed, human-elephant conflicts are increasing;
Livestock	0000	000	00000	

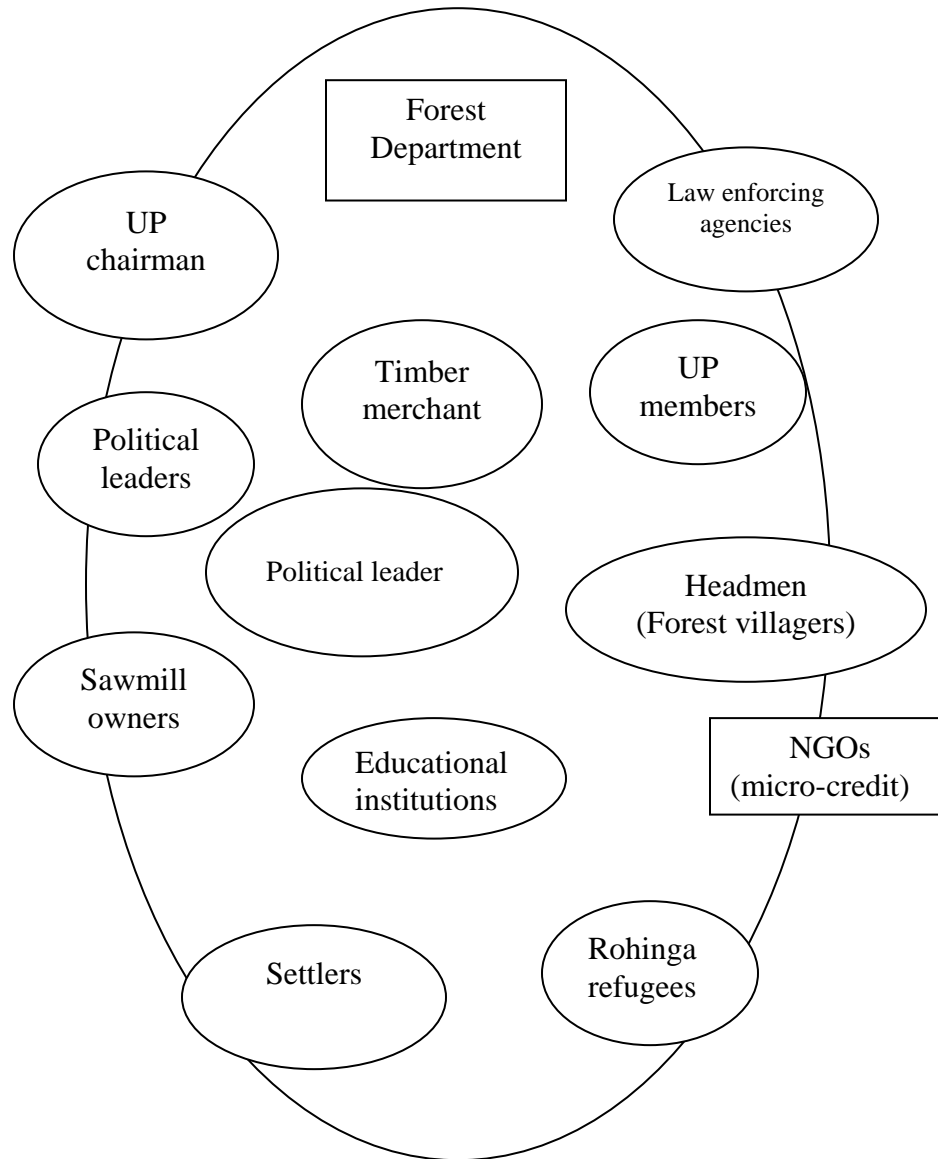
PRA findings identified a list of 53 persons locally influential political, administrative and/or social perspectives. Table 16 and figure 4 shows beat wise influential peoples who are regulating forest resource uses and maintain good linkages among the local power structures. Among them Union Parishad chairmans, members, local elites, headmen from forest villages, leaders of village conservation groups, businessmen and local elites are remarkable. They have significant influence in forest resources extraction, land encroachment, regulating local markets for timbers and other NWFPs. In order to formulate co-management councils these people should be consulted and be identified as key players for local affairs.

Table 16: List of powerful and influential people in HNP.

Sl.	Name	Designation	Village	Forest Beat
1.	Mr. Abu Bakar		Muhuripara	Link Road
2.	Mr. Sadeq Ahmed		-do-	-do-
3.	Mr. Akbar Ahmed	Member of Union Parishad (MUP)	-do-	-do-
4.	Mr. Mozaher Ahmed	Ex-MUP	-do-	-do-
5.	Ms. Khaleda Begum	MUP	-do-	-do-
6.	Mr. Mujibur Rahman, Mujib	Chairman, Jhilongja UP	-do-	-do-
7.	Mr. Akter Ahmed		-do-	-do-
8.	Mr. Abdur Rahman		-do-	-do-
9.	Mr. Nurul Huda		-do-	-do-

10.	Mr. Abdul Hamid		-do-	-do-
11.	Mr. Eusha		-do-	-do-
12.	Mr. Munir Ahmed		-do-	-do-
13.	Mr. Johirul Islam		-do-	-do-
14.	Mr. Abdul Wadud, Headman	Forest Villager	-do-	-do-
15.	Haji Hasmot Ali		Kolatoli	Kolatoli
16.	Haji Gura Miah	President, Village Committee	-do-	-do-
17.	Mr. Nurul Islam	Line man	-do-	-do-
18.	Master Mofijur Rahman	Teacher	-do-	-do-
19.	Advocate Momtaz Uddin	Lawyer	-do-	-do-
20.	Dr. Zoinal Abedin	Doctor	-do-	-do-
21.	Mr. Shofiul Haque		-do-	-do-
22.	Mr. Mujibur Rahman		-do-	-do-
23.	Moulana Abdul Haque		-do-	-do-
24.	Mr. Abdul Gofur Sawdagor	Businessman	-do-	-do-
25.	Mr. Amir Hossain	Village leader	Borochora	-do-
26.	Mr. Abdul Khaleq	President, VCG	-do-	-do-
27.	Mr. Ismail		-do-	-do-
28.	Mr. Abdus Salam		-do-	-do-
29.	Mr. Md. Kalu		Adorsho gram	-do-
30.	Mr. Sahed Akbar		-do-	-do-
31.	Mr. Kabir Ahmed		-do-	-do-
32.	Mr. Md. Lalu		-do-	-do-
33.	Mr. Abdur Rahman	President, VCG	-do-	-do-
34.	Mr. Md. Alam Munshi	MUP	Monglapara	Himchari
35.	Moulana Bodiul Alam		-do-	-do-
36.	Mr. Khuilla Miah		-do-	-do-
37.	Mr. Md. Ferdous		-do-	-do-
38.	Haji Abdul Monnan		-do-	-do-
39.	Mr. Md. Hossain	EX- MUP	-do-	-do-
40.	Moulana Md. Alam		-do-	-do-
41.	Mr. Nurul Alam Nuru		-do-	-do-
42.	Mr. Abul Kalam		-do-	-do-
43.	Mr. Habib Ahmed		-do-	-do-
44.	Mr. Nozir Ahmed	Headman, Forest Villager	Koracipara	-do-
45.	Mr. Gias Uddin Chowdhury	Businessman	Himcharipara	-do-
46.	Mr. Delwar Alam Chowdhury		Chainda	Chainda
47.	Mr. Mahmudul Haque	Thana Education Officer	-do-	-do-
48.	Mr. Monir Ahmed Sawdagor	Businessman	-do-	-do-
49.	Mr. Nurul Islam Sawdagor	Businessman	-do-	-do-
50.	Mr. Abdur Rahim		-do-	-do-
51.	Mr. Sawrar Kamal	Mayor, Cox's Municipality	-do-	-do-
52.	Mr. Md. Mostafa	Ex Police Inspector	-do-	-do-
53.	Haji Ashrafuzzaman		-do-	-do-

Figure 4: Power structure of Himchari National Park



Since IPAC visions natural resources issues as an entry point to promote peoples' rights, involvement of civil society in ensuring good governance, especially in local government, is identified as a focus of the PRA process. Consequently local institutions/ organizations namely FD, DoF and DoE, local administration, law enforcing agencies and various projects and their functionalities and coordination mechanism were reviewed.

As the land owning agency FD is legal custodian of the HNP. FD is responsible for carry out silvicultural operations including nursery raising, plantation establishment and maintenance, protection of forest resources from illegal removal, maintaining and improving habitat for wild lives and biodiversity conservation. PRA discussions reveals

that HNP is largely degraded its forest resources and wildlife habitats. Due to proximity from a rapidly growing tourist zone -Cox's Bazar, increasing population pressure from off-shore islands and low level of political commitment for PA, Ban on forest resource extraction and administrative corruption etc. made HNP facing overwhelming challenges since last two decades. FD has always been under-manned at the field level programme implementation whereby mere patrolling could not prevent steady decrease of forest resources. Hence, FD has adopted collaborative management of PAs - a major shift in strategy from fencing and policing. FD personnel at field level expressed their hope for better management of HNP, which can be demonstration effect from NSP experience.

Department of Fisheries and Department of Environment are government partners agencies - major stakeholders of IPAC intervention. PRA findings did not cover detailed involvement of DoF and DoE at HNP perspectives. Exclusive appraisal should be conducted.

Local administration (including district commission, union parishad, LGED and other line departments) and their development projects and several NGOs active in the area have a great influence over the HNP and its landscape. PRA findings reveal that district commission has rehabilitated several model villages and settlements for landless poor and cyclone victims inside the HNP. These are Adarsha gram, Borochara after 1991 cyclone. Over the years further settlements evolved and expanded through encroachment in the HNP.

Table 17: Information on NGO activities in Himchari NP

Sl	Name of NGO/CBOs	Area	Activities
01	Grameen Bank	Link road, Chainda	Micro credit
02	NACOM	Himchari, Pecherdweep	VCG Formation, Biodiversity Conservation
03	Marine Life Alliance	Himchari, Pecherdweep	Marine biodiversity conservation with a focus on turtle conservation.
04	RIC	Link road, Chainda	Help aged people, water and Sanitation
05	COAST	Kolatoli	Micro credit
06	BRAC	Around the NP	Education, Credit, Nursery, Seed
07	ASA	Jhlongja,	Micro credit, Group formation
08	SHED	Chainda	CARE partner and nutrition of woman & will be involved in Co-management of Inani project with Arannayk Foundation
09	CARE	Link road	Livelihood Support, Water and Sanitation, Nutrition.
10	Proshika	Kolatoli	Micro credit
11	MUKTI	Around the NP	Micro credit, Livelihood activities
12	MEGHNA	Link road	Micro credit
13	PULSE	Kolatoli	HIV and Sex Workers Health Care
14	Mercy Mankind	Link road	Social Welfare

15	ANONDO	Around the NP	Education and Micro credit
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State-owned natural resources in poor nations always experience from manifold conflicts and HNP shows similar characteristics. Some of the conflicting issues are direct and some are indirect whereby each issues also has ultimate or proximate causes. Similarly, no individual cause is alone rather inter-mingled with each other. PRA shows that land dispute is the most vital issue for conflicts in HNP as depicted in the following Venn diagram (figure 5). Further, table 18 shows the sources of conflict and its resolution and figure 6 illustrates the process of conflict resolution as conceived through the PRA at HNP.

Figure 5: Venn diagram: Sources of Conflict

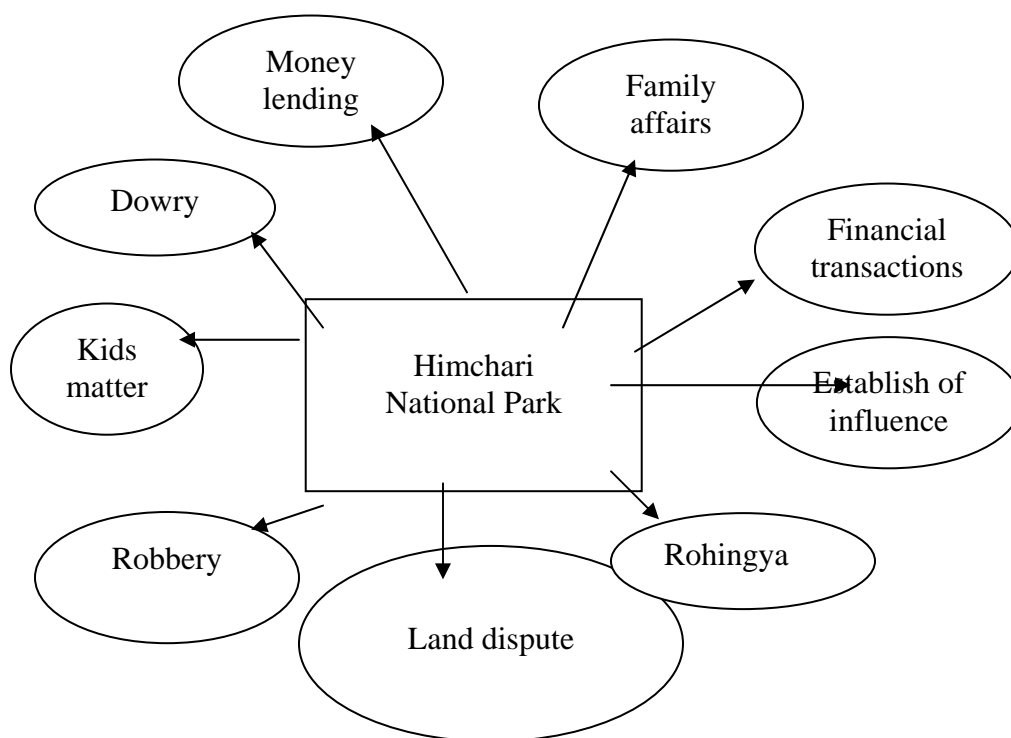
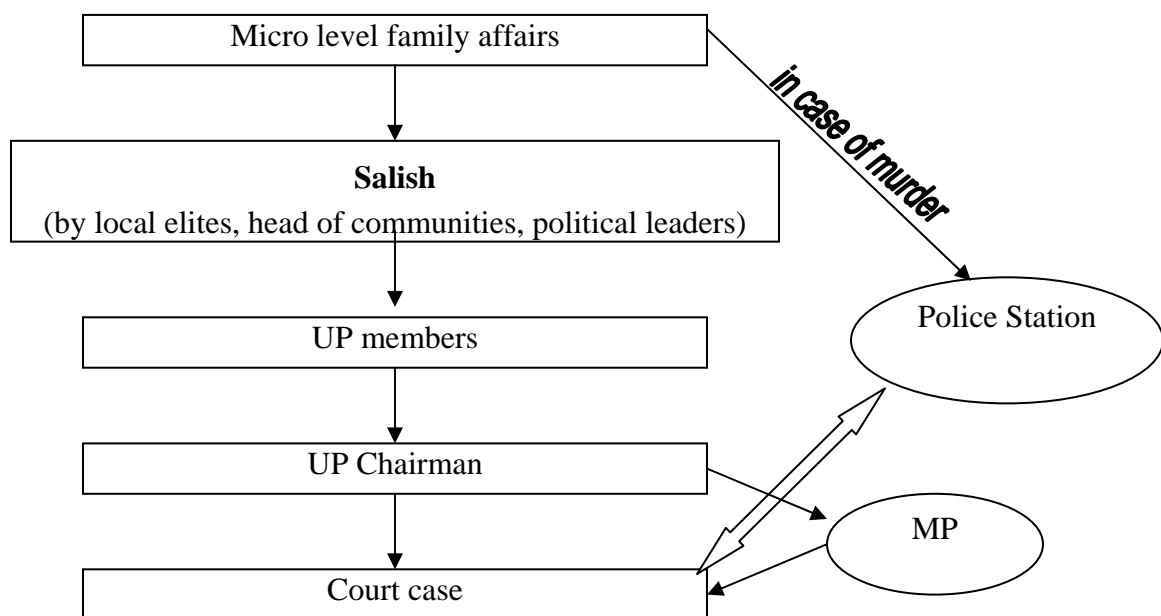


Table 18: Sources of conflict and its resolution

Sl.	Sources of conflict	Resolution	Remarks
1	Land disputes	By arranging local salis through local member and chairman with the help of local elites	Land disputes are long term conflicts and seldom be resolved
2	With Partner (family affairs)	Do	
3	Vote	Thana police, court and UP	
4	Encroaching Hill	FD and local influential people make negotiation	Forest land encroachment is rapid in HNP
5	Tree Felling	Forest cases	Less in number since few

			timber trees are left in HNP
6	Money dealings	<i>Salis</i>	Often emerges from personal mistrusts
7	To establish influence in the locality	<i>Salis</i>	Political and market powers are sometimes being demonstrated locally
8	Kids matter	<i>Salis</i> by social elites	Sometimes trifling matters grows to big issues

Figure 6: Different steps followed in conflict resolution.



Usages of forest resources are diversified and local communities are dependent on these resources with varied scopes and extent. However, PRA process in the HNP identified several significant types of involvement of local people which form a vicious cycles of poverty and degradation of natural resources. PRA study reveals that amongst many issues land encroachment, collection of fuelwood, illicit timber felling and collection of non-wood forest products are remarkable one. The cause and effect ranking shows that severe poverty of communities compels for indiscriminate collection of bushy vegetations as fuelwood and NWFPs, encroachment of forest land and still people living below subsistence level. Further, land encroachment has strong influence of poverty, unemployment, involvement of local influential persons and lack of control of FD over forestlands. Similarly fuelwood collection from forest patches is influenced by severe poverty of local people, unemployment, low income and HHs use as fuel. Illicit timber

felling is influenced by involvement of local influential, lack of FD control, market demand and good transportation facilities.

Table 19: Cause and effect – Ranking

Identified problems	Land encroachment	Fuel wood collection	Illicit timber felling	Collection of NTFPs
Poverty	0000	00000	00	0000
Unemployment	000	0000	000	000
Low income	000	0000	0	00
Forest cases	00000	0	000	0
Poor forest patrol	000	00	00000	0
HH consumption	0	00000	0	00
Lack of control by FD	00000	0	0000	0
Transportation	0	00	0000	00
Involvement of influential people	00000	0	0000	0
Marketing opportunities		00	0000	0
New AIGAs			00	000
Agriculture and betel vine farming	0000		0	00

Table 20: Information on FD's plantations in the past and future (planned) in Cox's Bazar range of Himchari National Park.

Beat	Year	Planted Area	Type	Species	Remarks
Link road	1993	10 ha	LR		Partly failed
-do-	1993	16 ha	SR		Partly failed
-do-	1994	14 ha	LR		Partly failed
-do-	1994	10 ha	SR		Partly failed
-do-	1995	50 ha	-		Completely failed
-do-	2003-04	60 ha	SR		
-do-	2004-05	45 ha	LR		
-do-	2007-08	40 ha	LR		
-do-	2008-09	10 ha	SR		
-do-	2008-09	08 ha	LR		
Himchari		200 ha	LR	Garjan, Gamar	
-do-	2001-02	20 ha	Shelterbelt	Jhau	
-do-	2002-03	40 ha	-do-	-do-	
Chainda	1999-00	30 ha	SR		
-do-	2000-01	50 ha	SR		
-do-	2002-03	30 ha	SR		social forestry

-do-	2003-04	60 ha	SR		social forestry
-do-	2004-05	30 ha	SR		social forestry
-do-	2005-06	60 ha	SR		social forestry
-do-	2006-07	32 ha	SR		social forestry
-do-	2007-08	20 ha	SR	Acacia, A. mangium, Gamar, Amloki, Horitoki	social forestry

Source: respective beat offices, February 2009

4.7. Gender dimension in HNP

Gendered approach to planning and management has recently come forefront in natural resources perspective. The relationship, i. e. cause and effect of human interventions in PA resource degradation largely vary according to gender role practices and division of labours. Especially women are critical both as agent and victims of loss of natural resources in the frame of ownership, access and benefits out of PAs. Hence gender mainstreaming is considered as key issue for development planning and an entry point for successful management of natural resources.

PRA in Himchari NP revealed that at primary level high representation of both young boys and girls are visible which gradually reduces as education level progress. However, at early age, girls are more (80%) present in schools at primary level (table 24); which indicates that parents are more careful about education of girl children.

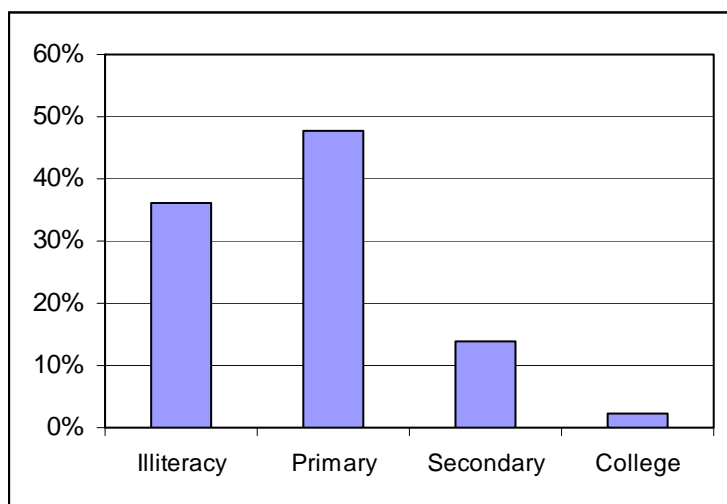


Figure 7: Literacy level of PRA responding HHs.

Table 24: Comparison of Educational Status of Male and Female in Himchari NP

	Educational Level (based on students)				
	<i>Primary</i>	<i>Secondary</i>	<i>Colleges</i>	<i>Above</i>	<i>Informal</i>
Male	75%	10%	7%	3%	5%

Female	80%	6%	3%	1%	10%
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Group discussions at settlement level as exhibited in table 21 shows that issues like outdoor mobility, participation in social events, access to IGAs and employment male members of the HHs are in advantageous position while their female counterparts are closely performing as well. In case of access to micro-credits by local NGOs female members are preferred; obviously the NGO loan process requires husband and wife to be eligible for credits.

Regarding seasonal variation in Aswin and Kartik are most lean period i.e. least work for both the gender. However, all the year round male and female members are busy with their HHs as well as outdoor activities. In case of family affairs, most of the decisions come from the HH heads though univocally respondents from both the gender affirmed that prior all the major family decisions takes place with prior consultation of spouse and senior members of the family.

Table 21: Mobility and participation in social events, access to credit and IGA by male and female in Himchari National Park.

Gender/Sex	Outdoor Mobility	Participation in Social Events	Access to Credit	Access to IGA	Education	Employment
Male	00000	00000	00	0000	000	0000
Female	000	0000	0000	000	00	0

Table 22: Seasonal workload of male and female in Himchari National Park.

Months Sex	Baishakh	Jaishta	Asshar	Shrabon	Bhadra	Ashwin	Kartik	Agrahyon	Poush	Magh	Falgun	Chaitra
Male	00 00	0000	000	000	000	00	000	0000	0000 0	00000 0	00000	000
Female	00000	0000	0000	0000 0	0000	00	000	000	000	000	000	000

Table 23: Family level decision-making role of male and female.

Family affairs	Husband**	Wife	Father	Mother	Son	Daughter
Marriage	00000	00	000	00	0	0
Sowing crops	00000	00	000		00	
Land	00000	00	00	0	000	
Land selling	00000	00	000	0	000	
Treatment	00000	0000	000	000	00	00
Trees planting	00000	000	00	00	000	0
House making	00000	000	000	00	00	
Cattle Purchase	00000	000	00	0	000	
Loan	00000	000	000	0	00	

Savings	00000	000	000	0	000	
Vote casting	0000	0	0000	0	00	
General expenditure	00000	0000	000	00	00	0
Resource collection from the forest	00000	000	000	0000	00	0000

** Husband is the head of the family, N.B. 5 circles have used to indicate highest intensities

4.8. Local problems and their resolution

PRA general discussions in surveyed settlements identified remarkable problems with respect to their extent, probable reasons and the way out at table 25 below. In HNP context, severe and rapid loss of biodiversity and forest resources and rapidly increasing population are identified to be the most depressing issues at local level. Due to heavy destruction in natural resource base and influx of migrating settlers the overall livelihood of the community are challenged. Other significant problems are poverty, unemployment, early marriage, dowry and polygamy, drinking water, health and sanitation, rohinga migrants and human–wildlife conflict (table 25).

Besides, FD with current manpower, financial strength and traditional patrol-dominated forest management are facing big challenges to conserve biodiversity of the HNP. Due to close proximity from Cox’s Bazar Sadar thana and rapid growth of tourism, this NP has both challenges and opportunities. Rohingya settlers and others from off-shore islands, local elites, business men, political leaders and sometimes FD personnel as well as forest villagers involve in degradation of remnant forest resources of HNP.

With all these threats and challenges, a mass programme for HNP area demarcation, developing multi-stakeholder platform at local level comprising inside and landscape settlements, awareness campaign, developing capacity of FD offices, strict enforcement of laws, promotion of skill development training and AIGAs for local people etc are the priority interventions to be taken through IPAC project.

Table 25: Ranking of local problems and enquiry into its solution.

Name of Problem	Ranking	Reason	Solution
Loss of forests and biodiversity	00000	Unregulated extraction of forest resources and land encroachment with the influence of local influential, political and business elites, forestry administration, forest villagers.	Developing multi-stakeholder platform at local level and awareness campaign; developing capacity of FD offices, strict enforcement of laws, promotion of skill development training and AIGAs for local people.
Over population	00000	Large family size (e.g. 6persons/HH) and high increasing rate of population often cause additional resources; due to lower income	Population increase should be regulated through providing more education, awareness, promotion of family planning facilities and law

		capacity and poverty, people are largely dependent on public forest resources in the hills and fisheries in the sea. A large and increasing population of local communities are dependent on forests and the Bay for their livelihood. Rohingya settlers are also creating additional pressure to the natural resources of this region.	enforcement during early marriage, dowry and polygamy.
Poverty	00000	the vicious circle of poverty exists in full length in the HNP; un/under employment, lower capital for investment, lack of education and AIGAs etc. strengthen each other and causes a wide spread situation of poverty.	Providing life skill/ AIGA trainings, micro-credit with micro-plans for business,
Unemployment	000	Over population, lack of education, lack of skills and opportunity to work.	Providing education and technical skill development and credit facilities.
Early marriage, dowry and Polygamy	000	Due to high population pressure, religious/ social issues, lack of education and employment these problems are being practiced	Education, social awareness, breaking religious superstitions and law enforcement on early marriage.
Drinking water	000	Forest dwelling communities lack pure drinking water. Lack of tube well and fresh water ponds.	More attention needs in this context from GOB and NGOs for setting up deep tube wells and its management.
Health and sanitation	00	Due to high level of poverty and lack of clinics/hospitals/doctors at closer proximity, local communities are unable to access to health services. HNP forest settlers are often suffering from Malarial outbreaks. Most of the HHs use <i>kacha</i> latrines.	GOB and NGO efforts should concentrate in this issue especially providing community clinics/doctors/sanitary latrines and awareness building.
Rohinga migrants	000	Large and increasing populations from Myanmar are settling in the hilly areas of the HNP who are almost entirely dependent on forests and/or fisheries in the Bay.	Identify definite refugee camps and rehabilitate the migrants with humanitarian aids and employment opportunities; UN and NGOs should come forward in this effort.
Human-wildlife conflict	00	Due to destruction of wildlife habitat, elephants often attack settlements and agricultural fields in search of food; besides monkey, wild boar, porcupine also destroy paddy-fields during harvesting period	Habitat restoration and stop land encroachment in forest areas; fencing the agricultural lands and settlements; Awareness building among local settlers about how to stray elephants back to the forests.

5. Threats and challenges of HNP

- ❑ HNP has significantly lost its tree cover and ability for natural regeneration. Tremendous human interventions since 1990 have turned it to a stake. On-going land use pattern and resource extraction regime, in large, is a threat to biodiversity conservation, especially habitats for wildlife.
- ❑ Pressure from fuelwood collectors, sungrass collectors, coal makers, grazing and conversion of forest land for settlements are rampant in the HNP
- ❑ Forest lands are being treated as waste land by the local administration and political elites.
- ❑ Increasing pressure for tourism is expanding towards southward from Cox's Bazar.
- ❑ FD's plantation raising techniques, including clearing and burning and monoculture plantation of exotic species are threats to biodiversity conservation.
- ❑ Influx of Rohingya migrants, their expanding settlements and livelihood supports are entirely dependent on HNP and its resource base.
- ❑ At current stage of degradation, HNP has completely lost its power to natural regeneration.
- ❑ Unsustainable resources exploitation from the HNP has degraded the tracts leaving the hills completely barren.
- ❑ Settlers from offshore islands and Myanmar are deteriorating the scope for developing eco-tourism in the HNP area. Some of them are involved in robbery.
- ❑ Local elites have not only captured and enjoyed resources from some portion of HNP, but also facilitating the new migrants to settle into the HNP.
- ❑ Local administration, law enforcing agencies and FD is visibly inactive to prevent encroachment and illegal extraction of forest resources.
- ❑ Forest villagers are expanding their territories and often involved in encroachment
- ❑ Lack of awareness among local people regarding benefits of biodiversity conservation and needs mass campaign
- ❑ Overall, the poverty scenario in the HNP is acute and livelihood improvement programme is urgently needed to arrest the current trend of resource use.



Chapter six

6. Suggestions and Recommendations

- 6.1. Strengthening FD capacity: FD field offices, particularly Beat Offices, are the potential entry points for ensuring co-management of natural resources for biodiversity conservation. Deploying adequate manpower and logistic supports with arms/ammunitions, vehicle, communication materials and adequate budget for mobilizing field staff should be ensured. Recently HNP Beat Office at Kolatoli is abandoned and a check station is being used as Beat Office. HNP would require a full-fledged Park office to be undertaken by IPAC.
- 6.2. Zonation of the PA is vital and it should be undertaken based on natural features and existing landuse. Separate management strategies should be undertaken for different zones.
- 6.3. Administrative and political support needed: Declaration of a particular forest patch as National Park is entirely a technical issue from forest management perspective; it has other dimensions as well namely administrative and obviously political. Fill-up vacant positions of forestry personnel, capacity building training and special training on collaborative forest management. Political elites are seldom consulted during this process, which eventually creates problems like rehabilitation of poor slum dwellers into a forest or politicians favours the encroachers during election campaign. Hence during and after declaration of a PA, rigorous discussion and campaign should be carried out alongwith forestry technical procedures.
- 6.4. The HNP is a heavily degraded forestland and without further intervention it cannot be restored. Further since no mother trees of indigenous species are left, natural regeneration is not possible. At this stage, mass plantation programme of local species and fodder plantation for elephants should be undertaken.
- 6.5. In accordance with the proximity from Cox's Bazar and potentiality of eco-tourism based on unique landscape, HNP should be taken special care of to develop community based eco-tourism facilities. In this effort eco-tourism specialist, Ms. Megan Eplerwood should be further assisted to collaborate private sector, VCG-based endeavour from CWBMP while developing Teknaf Peninsula eco-tourism strategy.
- 6.6. Non-wood forest produces in the NHP like sungrass, bamboo, cane needs special attention to share with the project beneficiaries and should be brought under social forestry program under benefit sharing agreement. Considering the dependence of the local poor on forest resources, sustainable use of NWFPs may be allowed.
- 6.7. FD's mandate for strict law enforcement and access is necessary. FD should be strengthening with vehicle and arms. To stop further encroachment strong liaison with FD, local elites and law enforcing agencies. Promote awareness among politicians and administrative elites regarding the conservation and environmental concerns of PAs to prevent further encroachment of PA lands.
- 6.8. Existing groups of CWBMP and ECFC projects from DoE and DoF respectively should be incorporated within IPAC interventions.

- 6.9. Introduction of fuel-efficient stoves in forest surrounding villages. Promote bio-gas plants for institutions.
- 6.10. Sporadic settlements within the PA should be evicted and/or rehabilitated at the periphery of the HNP. Most of these settlements are Rohingya migrants.
- 6.11. Awareness campaign and miking should be continued, especially to prevent illegal fishing during breeding period and that of shrimp fry collection; similarly, awareness about forest fire, encroachment, hunting, grazing, sand and stone collection, fuelwood collection and law enforcement should be ensured.
- 6.12. Forest villagers agreement should be reviewed and encroached lands should be enumerated with details of encroachers and trend of encroachment.

Appendix "C"
THE BANGLADESH GAZETTE, MARCH 6 1980

MINISTRY OF AGRICULTURE AND FOREST

Section XX

NOTIFICATION

Dacca, the 15th February 1980

No. XX/For-63/79/89. – In exercise of the power conferred by section 23 of Bangladesh Wildlife (Preservation) Act, 1973, the Government of the People's Republic of Bangladesh, is pleased to declare the forest area measuring about 4,471.15 acres situated within the boundaries specified in the Schedule below at Cox's Bazar in the district of Chittagong to be a National Park with effect from the date of publication of this notification to increase the facilities of tourists and recreation in the area:

Name of district	Name of subdivision	Name of Forests	Area in acres
Chittagong	Cox's Bazar	Bhangamura R.F.	2155.00
		Part of Chainda R.F.	150.00
		Part of Zhilonga P. F.	1966.15
		Total	4,271.15

Description of boundaries

North: Light house, Forest boundary of Jhilonja PF, Jhilonja BDR Camp, Forest boundary in the Southern side and Cox's Bazar, Ramu road, Cox's Bazar College, Link Road, Beat Office.

South: Himchari chara, Khuniapalong Himchari Road upto Baniarchara

East: Baniarchara, Chainda chara, Jhilonja-Chainda Mouza boundary

West: Forest boundary of Jhilonja mouza; C&B office and Residential plots, Bhangamura R.F. boundary; all more or less parallel and facing the Cox's bazaar sea beach.

By order of the President
A.Z.M. OBAIDULLAH KHAN
Secretary

Himchari National Park Cox's Bazar

COX'S BAZAR
SCALE: 1/2" = 1 MILE

NATIONAL PARK AREA

KALATALI BEAT	R.F.	2155.0 ACRES	
CHAINDA	"	150.0 "	
KALATALI	"	734.95 "	
LINK ROAD	"	788.0 "	
JHILONJA	"	443.20 "	
TOTAL		4271.15 ACRES	

REFERENCES

- REST HOUSE
- NATIONAL PARK AREA
- AREA
- TOP CIRCUIT HOUSE
- DER
- HT HOUSE
- NATIONAL PARK OFFICE
- TTAGE
- ETALLED ROAD
- A BEACH AREA
- AL & CHARA
- AW PLANTATION
- CHIC CENTRE
- TING BENCH
- OP. PARK ROAD
- OP. UMBRELLA
- OP. OBSERVATION TOWER
- OP. AERIAL ROPE WAY
- OP. CROSS DAM
- OP. LAKE
- OP. SWIMMING STAIR
- OP. FOOT RAIL
- EAT BOUNDARY
- NCROACHMENT AREA

