

Asian Waterbird Conservation Fund

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PROJECT INFORMATION

Project Title:

Capacity Building and Community Based Waterbird Conservation Activity in Cox's Bazar, Bangladesh.

Project starting and finishing date:

August 2006- July 2007

Name of organisation:

Wilderness Conservation.

Project person in charge:

M. Zahirul Islam

CONTENT OF FINAL REPORT

1. Aims / Objectives

To conserve the water birds in Cox's Bazar shoreline with direct participation of local community through their capacity building, mass awareness, establishment of permanent monitoring station and by protecting water birds habitat.

2. Summary on Project Activities

- An up-to-date database on birds and water birds in the Sonadia, Moheshkhali, Cox's Bazar, To Teknaf shore and St. Martin Island.
- 430 community grassroots people have been motivated by 10 awareness program.
- 16 local young men have been trained for bird monitoring and census.
- 3 monitoring and conservation station has been installed in 3 areas like Sonadia north Zone, South Beach and at Bodormokam area of Teknaf Peninsula.
- Selection and inventory of local breeding are & establish as community based protected area.
- Local bird breeding areas identified.
- 3 area of the Sonadia & Teknaf Peninsula has been selected by community and set as community based protected areas, Viz., Bodormokam, Sonadia west village Belekerdia, Moghchar, Sonadia south west corner.
- 41 bird hunters has been identified and motivated to participate in bird conservation and minimize threats.
- Posters, T-shirts, Booklets, Picture cards, Leaflets on water birds and other awareness materials developed.
- Mass awareness raising to tourists, local elites, remote community people etc.
- 8 education programs has been conducted with school children's regarding water birds and their importance in 5 schools among local community where 3 programs conducted in 3 schools repeatedly for drawing & quiz competition

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2.1 School Education Program

Goal of the activity:

In the community school, Wilderness Conservation Biologist under this project conducted the program. In each program the color photographs of water birds has been displayed to school children. It has been described to the students what is a migratory & resident bird, about the life history & migration of birds and diversity world wide as well as Bangladesh context,



range areas including the entire coastal areas of Bangladesh. Facilitator discussed the matter why water birds are very important for wetlands ecosystem. In each program general lectures on water birds conducted and later school teacher talked about water birds. Students also encouraged to discuss the matter and to ask questions according to there curiosity. Some students made some valuable comments and questions like: how long birds live, how many they lay eggs, why the birds has to save as it is not consumed for food. In every school we gave some posters, leaflets produced in this project for students and teachers general knowledge. The questions and quiz competition held in 3 schools during March – April 2007. A total 680 students of both male and female has been participated in the entire eight program; students were from Class Five to Class Nine. School awareness organized during 25 Oct 06 – 05 Apr 07. Total 20 teachers has been participated the program.

Organising date:

Name of the school with number of participants, organized during Oct 2006 - Apr 2007

	Date	Name of School	Participants (Students)	No of Teachers
1	25 Oct 06	Sonaichari Primary School	120	2
2	30 Oct 06	Sonadia Primary School	98	3
3	12 Nov 06	Kalatoli High School	140	1
4	15 Mar 07	Pechardwip Karachi Para Primary School	125	3
5	20 Mar 07	Inani Govt. Primary School	55	2
6	26 Mar 07	Monkhali Primary School	58	4
7	01 Apr 07	Sahporirdwip Jaliapara primary school	45	2
8	05 April 07	Sahporirdwip/Bodormokam	39	3
			680	20

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Evaluation of the activity goal:

GOAL ACHIEVEMENT

The school education program was successful. We had planned to conduct 5 programs in 5 schools. Instead we conducted 8 programs with 3 repetitions in 3 former schools to conduct the quiz competition. As our goal was to educate and aware students regarding water birds it is like to enhance their attitude and inspiration. The materials distribution play an important role in this regards.



PARTICIPANTS FEEDBACKS

The students made some valuable comments and questions after the lecture in education program like: how long birds live, how many they lay eggs, why the birds has to save as it is not consumed for food. In every school we gave some posters, leaflets produced in this project for students and teachers general knowledge. Students were very much interested to take materials of bird photo and posters. Students and teachers emphasized and requested the wilderness personnel to conduct such education program regularly in their school. They are enthusiastic to participate and want to use the binoculars and scopes.

CONSTRAINS

Major constraint encountered during the education program is that of presentation tools. It could be far effective and better if we could use multimedia projector. During the first 3 program we could not use printed materials. One of the major problems also raised due to unconsciousness of their teacher regarding birds and their importance in nature that students can learn and ever got inspiration from teacher. We covered only small portion of the students. There is extreme need for the education materials like small easy booklets for students use and distribution to everyone. There is need also for the instruments those infact increase their interest. In most of the area there is no electricity and also having problem using computer and MM projector for presentation.

RECOMMENDATION

It is very important to cover all the schools and all the students in the critical areas as any portion can not be rational. The instrumental support should be in every program and adequate supply of printing materials should be perfect. It is recommended to conduct programs repeatedly to justify and ensure students knowledge. It is very important to train and educate teachers separately along with the students program. Every school should have adequate information materials and have monitoring & volunteering group to conserve birds and other wildlife in their respective areas.

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2.2 Activity: Community Awareness & Discussion

Goal of the Activity:

A total of ten awareness programs have been organized with the community people. In these programs, people from fishermen, local elites, businessmen, shopkeepers, agriculturist, dry fish & fish supplier have been participated. The Wilderness Conservation personnel emphasized the water birds role in the nature. Most of the people expressed their interest in birds.



Discussion has been made on threats water birds facing and wetlands and requested peoples not to kill birds. Community people always said that they never try to kill birds and they blame some people who act infact as hunters those who trap birds seasonally, specially in winter. The habitat destruction and use of pesticide one of the major threats as community people stretched. Most of the lands specially the wetlands have



been converted into shrimp farms in Cox's Bazar, where the water birds are facing habitat scarcity. Water birds and the bird's infact drastically declined during the last 20 years. Old members emphasized that bird's population and species number declined drastically during the last 2 decades and many birds are not sighted in Cox's Bazar coast. The gulls & terns flocks along the Teknaf peninsular beach face severe disturbances due to beach driving while the tourist drive jeep over the flocks to make photos of flying flocks. The community awareness program site has been mentioned in the Table below. A total 430 grassroots people have been participated. Community emphasized to convert the destroyed mangrove again and restore the habitat to recover water birds as it is the major habitat for their breeding. All the selected sites for community awareness program are located within the project intervention area and these are: Sonadia island, Pechardwip, Inani, Monkhali and Sahporirdwip.

Organising Date:

Actual number and group of participants:

Prog. No.	Date	Place	No of participants
01	05 Sep 06	Saplapur	42
02	12 Sep 06	Pechardwip	24
03	12 Oct 06	Sonadia west village	35
04	19 Oct 06	Monkhali Bazar	52

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05	20 Dec 06	Sahporirdwip Jaliapara	58
06	12 Mar 07	Sonarpara	42
07	25 Mar 07	Sonaichari	55
08	02 Apr 07	Sonadia West Village	39
09	13 Apr 07	Sahporirdwip, Bodormokam	62
10	25 Apr 07	Sahporirdwip/Bodormokam	21

430

Evaluation of the Activity Goal:

GOAL ACHIEVEMENT

Such awareness program always has some positive impact if it is conducted. Total 430 grassroots people participated in the program. Our goal has been achieved in this regard but it is important to conduct such program on a continuous basis and the messages have to reach to every person. People are agreed to participate in conservation awareness and prevent hunting if sighted. But to keep people's attitude agile regarding conservation and bird's preservation, awareness program should be one of the highest priority activities. It is because most of the coastal and remote community in Bangladesh are illiterate where such significant information is known only by traditional belief and not known by the publication, while the traditional belief is not much to save the birds species.



PARTICIPANTS FEEDBACKS

Within the program of awareness a number of participant specially old and aged villagers emphasized that previously water birds were in huge number in all mudflats and along sea shore. Due to habitat loss the situation changed a lot. Currently the problems occurring from the mudflats alteration into salt field and shrimp farming. A number of Teknaf peninsular participant blamed tourist and jeep driver as severe disturbance occur by the jeep driving over the terns & gulls flocks those while roosting along seashore in several areas like Inani, Sonarpara, Monkhali, Teknaf etc.

CONSTRAINS

As usual the program venue is sometime in the market and public place where full concentration is sometime difficult. Grassroots people always busy for there daily livelihood and keeping in such activity need special arrangement like attractive presentation techniques. Most of the time people ask for some gift item like T-shirt, Cap and other gifts free, thus you need adequate materials for such activity. Another major issue is that community people inform that habitat alteration is one of the major threats but it is done by the strongholds and most of the time the government party political people. Thus according to community people it is not necessary to aware them without taking initiative to save bird habitat from land gravers. Such contradictory matters infact decline

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people confidence regarding our bird and other wildlife conservation effort.

RECOMMENDATION

It is better to conduct awareness program to the same communities twice to know their spiritual change. The presentation methods should be adequately suitable in respective areas. And best achievement are achievable when moderately long time are taken with distribution of outreach and promotional materials and used posters, photos of birds for better demonstration. People always expect such conservation effort should have solution of land encroachment enough before.

2.3 Activity: Establishment of the Monitoring & Conservation Center/Station

Goal of the Activity

To install bamboo made simple stilted cottage where researcher and community people can stay for bird observation and conservation.

Organising date

The monitoring station installed during April - June 2007.

Actual Number & Group of Participants

As proposed we installed 10 x 10 ft bamboo made monitoring station by local technology. Three Areas are (1) Northern most Beach & mudflat of Sonadia island, (2) South area, Moghchar of Sonadia Island, (3) Bodormokam at Sahporirdwip of Teknaf Peninsula. That has not been used much during this period as we have passed just 2 months after installation and some of the improvement as facility development still going on by Marinelife Alliance & WC those is in addition to the proposal. Several hundred people from the community has been visited the area and it has been appreciated by every visitor. One of the major problems of the monitoring station is its safeguard. In this regard we need permanent guar who can act as community bird observer.

Evaluation of the Activity Goal

GOAL ACHIEVEMENT

The monitoring station has been installed to improve monitoring activity of water birds in the remote areas where participant of bird census can stay and monitor birds for several days. It is long term goal to establish this monitoring station permanent and equipped with necessary information, books, research instruments, and solar cell facility for operating instruments and PC. The budget and the available fund infact were not enough to do such formation and this will be achieved later in future activity.

PARTICIPANTS FEEDBACKS

It has been commented by many visitors as to improve and the major process. Some of the community said to make it a bit bigger and to make it strong enough that it can withstand cyclonic storm. Community people emphasized for engaging 1- 2 monitoring personnel from the community to take care of the station and to prevent bird hunting. As traditionally some visitor said to make this station with RCC (Rod/Cement/Concrete) that is not really environmentally suitable.

It has also been emphasized by some community people to install more station like this in

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other important bird and wildlife areas to minimize threats and hunting.

CONSTRAINTS

One of the major problems during installation is that those were in remote area and installation cost higher comparing the materials cost while the proposed budget was low. As according to fund delay we had to start work in rainy season that made some problems in installation.

RECOMMENDATION

For the monitoring station we should suggest to start with more money. And some basic facilities at the initial stage. It should accommodate research volunteers and should have toilet facilities inside with ecofriendly sewage disposal system that the habitat is remaining intact.

2.4 **Activity: Training of Local People for Bird Monitoring**

Goal of the activity:

It was anticipated to train community people for conducting bird monitoring in the respective critical areas in Sonadia Island, and along Teknaf peninsula. It was our mission to build community peoples capacity to take part in bird monitoring and conservation management in near future.

Organising date:

The community training program organised and conducted in November 2006.

Actual number and group of participants:

Total 16 people have been included in both the program and later 10 persons have been recruited for data collection and bird's protection.

Training - 1

Date: 20 November 2006

	Name of the Participant	Area/Village	Venue:
1	Gias uddin	Sonadia Island	
2	Jamir Hossain	Sonadia Island	
3	Jahangir Hossain	Sonadia Island	Sonadia West
4	Ekramullah	Sonadia Island	Village: Marinelif
5	Abul Hossain	Sonadia Island	Alliance Education
6	Mojaffar	Sonadia Island	Center
7	Abdur Sukkur	Sonadia Island	
8	Abdullah	Sonadia Island	

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Training - 2

Date: 22 November 2006

	Name of the Participant	Area/village	Venue:
9	Abdur Raique	Sahporirdwip	Sahporirdwip Jaliapara Primary School
10	Eklas Uddin	Sahporirdwip	
11	Habibur rahman	Sahporirdwip	
12	Amanullah	Sahporirdwip	
13	Mohammad Ali	Sahporirdwip	
14	Bashir Uddin	Sahporirdwip	
15	Abu Jafar	Sahporirdwip	
16	Hafej Ullah	Sahporirdwip	

2 training programs have been conducted in Sonadia Island & at Sahporirdwip area. A total 16 people has been trained and 10 have been selected for our bird monitoring purposes. Some other observer was also present in the program due to their interest. Community people have been trained for Monitoring, Data Collection and bird conservation awareness. Training was in-house and field activity. One venue was MarineLife Alliance Education Center at Sonadia island and one was Sahporirdwip Jaliapara Primary School. Training included lectures on Bangladesh water birds, their diversity, role in wetland and ecosystem and biodiversity. We used our binoculars and telescope for their practical experience in this regard. Furthermore several pre-designed data sheets have been provided to them to record various data on water birds in their respective areas. We have recruited 10 personnel for bird monitoring. As proposed in the budget for six months period for the turtle activity we had to keep the personnel for eight months to continue the activity.



Evaluation of the activity goal

GOAL ACHIEVEMENT

The main goal was to build community peoples capacity that they can conduct the bird monitoring and conservation activity. It is the initiative to achieve the goal but we have to go far in this regard to fulfil the needs. Our method was not very effective since most of the people are illiterate and hardly can write their name, although there is some level of literacy but those have no idea and interest on animals to study without a handsome remuneration. But this is the initiative we have to achieve our goal in this connection. Effective methodology essential in this purpose to reveal or create community people interest to work in this side. So far we could walk through our mission and it is important to continue such effort in future and at least several years to build local capacity.

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PARTICIPANTS FEEDBACKS

Some of the participant made valuable comments on the bird identification, diversity and importance in our life. Almost every participant provided local names of the usual resident birds and also for the migratory waders, gulls & terns. But it was not easy for them to identify specifically. 10 of the trainees have been recruited for the bird monitoring



activity. The collected information was not much valuable in scientific use. But it predicts at least the group of birds recorded with dates. One of the major outputs in this regards was the conservation in the last 6 months where these community people tried to save the population from hunting pressure. Fewer occurrences happened than previous. It is very important to continue such efforts with more community people trained further. We could not provide necessary instruments like binoculars for the community people that has been sought and infact significant to locate and identify distant individuals and to keep their interest.

CONSTRAINS

Major constraint of the program was that at the moment we could not provide printing materials like ID guide during the program although those has been distributed during January with computer printed laminated copy. We faced problems with the training methods. Peoples were not interested to travel far in Cox's Bazar office since it kills their 2 days income activity. We conducted in remote areas and there was no electricity. We used some banners and the PP was not possible due to facility. The name of the birds and the locally used traditional names has some contradiction while many of the birds are called by the same local name as a group as people do not realize species diversity, thus it is difficult for them to cope the knowledge very soon in short training. The previous generation was good in birds identification and seasonal abundance, habitat etc. what is currently lacking drastically in young generation to whom we are focusing our program. We had budget constraint in this program and infact as mentioned in the budget it merged with the bird survey and census budget that has been used it in full separate way.

RECOMMENDATION

Such bird's identification and survey training should be elaborate and conduct with adequate instruments. There should be enough instruments like binoculars and telescopes that every one can use and have experience. The trainees should be provided with Bird ID and color booklets and all other materials. Similar personnel should be in regular interval training program to clarify their activities, define problems and improve capacity. Trainees should be literate although it is difficult to find perfect personnel. The budget for per person in monthly honorarium should be at least 30 \$ for keeping them in work or other livelihood opportunity based on Waterbird monitoring has to develop for sustainable conservation.

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2.5 **Activity: Motivation of Hunters by Awareness Campaign**

Goal of the Activity:

To aware people engaged in bird hunting regarding the water bird role in the wetland and environment that they can prevent themselves from this ridicules activity. It was also one of the major goals to acquaint bird hunters about the Bangladesh Wildlife Preservation Act and the punishment range for illegal bird hunting, conservation and endangered species.

Organising Date:

Program - 1.

Date: 21 Nov 2006

Venue: Sonadia West Village: Marinelife Alliance Education Center

Participant: 24 persons

Program - 2.

Date: 23 Nov 2006

Venue: Sahporirdwip Jaliapara Primary School

Participant: 21 persons

Actual number and group of participants:

Program - 1. : Participant: 24 persons

Program - 2. : Participant: 21 persons

Evaluation of the Activity Goal:

GOAL ACHIEVEMENT

Our main goal of this awareness program was to motivate hunters to change their mind to prevent bird and other wildlife hunting. Our target was achieved in this regard that hunters identified at the moment has been inspired and motivated. The entire participant assured us not to hunt any bird in future and a considerable number said they are not hunting bird any more since long time.



PARTICIPANTS FEEDBACKS

Most of the participant doesn't agree that they are hunting birds now a day. Some valuable information revealed from the hunters regarding the habitat, bird's occurrence and conservation status. They blamed the shrimp farming initiative by strong holds, mangrove destruction, development's tourism and pollution for the bird's population degradation. According to. The hunter's one of the major livelihood activities was Waterbird hunting in the passed time like 15 years before. Most of them are aware that hunting is not legal

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activity and some do not have ideas regarding nature conservation. Almost all participants express their problems with the scarce livelihood. And agreed not to make threats to birds anymore. The entire participants are interested to work for bird conservation if they are paid for their livelihood. But they are very happy that such activity and awareness program invited them that this was their first experience especially on birds hunting. We informed them the existing laws imposed by government in 1974 (Bangladesh Wildlife Preservation Amendment Act) and also the rules of Ecologically Critical Areas (1999). Various techniques used in bird trapping has been discussed by the participants with their experience and those were: monofilament net trapping, ground fowl trap, Slang shot, Airgun and mist netting.

CONSTRAINTS

One of the major problems of this program particularly the hunter's identification. Most of the people are aware that this is not legal activity and the real hunters do not feel interest to participate the program. We suspect many people incidentally hunt bird by situation and opportunity. It was a difficult task to motivate people to participate the program and they suspected that some allegation will be charged against them for punishment.



RECOMMENDATION

It is true that still many people opportunistically hunt water birds as well as other birds or catch for pet keeping. It would be difficult to find any young and old man those did not hunt in their lifetime. Some people keep hunting it as income source and tradition for their favourite food. It is very important to keep exploring hunters throughout the season and inventory of any hunting techniques used throughout the whole area. Our program was importantly successful as I hope this was first time in particularly with hunters. As I mentioned here along the continuous process of hunter's exploration their motivation awareness through this type of activity is very essential. Like other awareness and education activity conducted this hunter motivation also needs better presentation techniques like PP presentation in Multimedia Projector. Better and effective presentation methods can realistically change hunters attitude and provision to allocate motivated hunter to community based bird monitoring and conservation activity.

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2.6 Activity: Production of Outreach Materials

Goal of the activity:

Aim of this activity is to make available information materials to facilitate proper science based information to general public and professional bird watcher. The ID guides and the other guidelines can be distributed freely while the Identification books are not easy to reach to everyone. This type of information been printed for the first time in Bangladesh while is very important and many researcher still getting difficulties for ID books and guidelines. Hope this would be very helpful for people.

Printing Materials	Numbers & Sizes
Posters	1000 Pcs (18 X 23)
Leaflets	2000 Pcs (A4)
Folders	1000 Pcs (A4)
T- Shirts	500 Pcs (L, M, S)
Picture Cards	1000 Pcs (A4)
ID Cards/Guides	6000 Pcs (1/8 size)
Digital Print	10 Pcs (4 Ft x 5 Ft)

Water Birds ID Guide: Originally 100 Pcs of water birds ID has been proposed under one Item. But due to importance we printed 4 color IDs of both side printing of 5.85 inch X 8.5 inch paper, each item 1000 pcs covering all the Scolopacidae, Charadriidae families and total 53 species. Community people have been provided with the bird ID guides for the Identification of birds with lamination.

Folders: 1000 Pcs Color folder of A4 size has been designed and printed with information and picture of water birds and wetlands.

Posters: 1000 Pcs Color posters has been printed with 102 species of water birds found in the region and distributed to institution, personnel, GO & NGO offices more than 300 pcs. Posters sizes were 23 X 18 inch.

Picture Cards : 1000 Pcs of Picture card with resident & migratory water birds photo has been printed has been

T-Shirts: 500 Pcs with color design of water birds has been printed & distributed.

Leaflets: 2 of leaflets have been produced in Bangla & English for 2 Ecologically Critical Areas. Total 2000 thousands.

Large Digital Printing: 10 large 20 SFT (5 x 4 ft) plastic digital banners are in the process to print soon those will be used in public display in interpretation center and in future awareness program. This is including the information on existing species, Flyways covered in Bangladesh, threats and regional habitat. A total printing area would be 200 SFT.



Producing Date

All the printing materials has been developed and printed during March – April 2007.

Number of People Materials reached:

At the beginning of the project we did not have the printing materials. Thus we distributed Awareness and school program held from March 2007. within that and in addition to other

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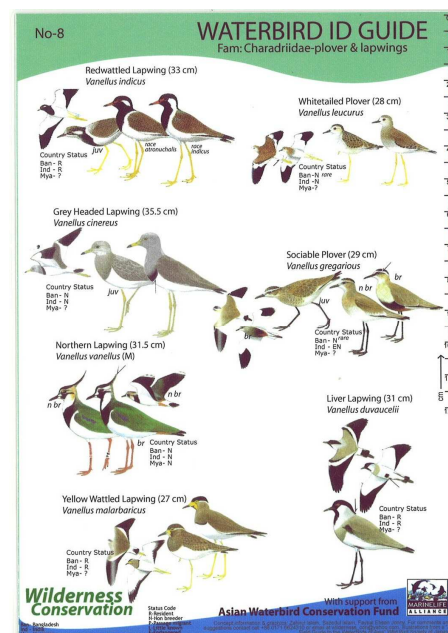
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institution so far we distributed a set of materials to 25 schools of both High & primary school in Cox's Bazar area, 21 Government offices, 15 NGO offices. And also given to local government offices like Union Chairman and commissioner personnel. Materials still being distributed whenever we are conducting other programs within our working area. Estimated viewers of those materials would be at least 4000 peoples. It is always a major demand that people would like to have materials like posters, picture cards, folders, and T-shirts. We distributed 319 T-shirts to grassroots people and to school children as those people are most destitute and poor and having great impact on this.

Evaluation of the Activity Goal:

GOAL ACHIEVEMENT

In fact the expected goal has been achieved so far. We planned previously to produce 2 ID guide but according to importance we produced 6 ID guides covering families Charadriidae, Scolopacidae, including all the species recorded so far in Bangladesh. The ID is not only use full in Cox's Bazar it can be used in India and whole Bangladesh too. We made all the planned materials but during the course of the programs we also thinking the materials of more issues and in deferent forms and specific issues should be produced> The awareness activity is a ongoing activity on WC will distribute materials all over the area in deferent program's and have plan to reproduce more with some additional corrections.



PARTICIPANTS FEEDBACKS

Community people and the personnel of GO & NGO m were very much cordial to making some feedback and the materials have been appreciated by the academics, scientists, government high officials like Director General of Department of Environment, Secretary of MOEF, District commissioner of Cox's Bazar and community people. One think is very important that everyone want those materials that we in fact are not able to distribute since it would need then several thousand of copies. It is true that we need to produce more in the connection.

CONSTRAINS

One of the major problems is that we could not manage the outreach materials at the beginning of the program. And initial stage we could not distribute. We printed the materials

During March-April 2007. Another problem is most of the institution needs that poster should be mounted on a board as they don not have funds to do that and without mounting the posters are not really sustain long time and may damage. We should produce Poster and other materials in large quantity to reach to enough people for awareness. Still there is limitation regarding outreach materials in the area. And people are getting such materials for the first time exclusively on water birds. Language problem is other major constraints

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here in Bangladesh local community using one name, in the Bangla book there is another name and we have to take in concern all the names and incorporating all names in one information sometime difficult due to space and time constraints. In addition community people have no specific names for specific birds and there is misidentification and single name for a large number of birds, which is infact less practical.

RECOMMENDATION

To relief the constraints in the outreach program we need to produce enough materials in Bangla and English with diversified items with specific needs. Local language take into consideration where community people are engaged in monitoring and long time effective training is necessary. The ID we produced here by WC is the bird time in Bangladesh. The problem should be solved in future with Bangla name and unless we have all the Bangla names we can not use only Bangla name in ID as many people emphasized on the issue in deferent NGO & GO personnel. We should produce large number ID guides and booklets posters for effective knowledge dissemination and ensure those to reach in every institution for community based conservation and management activity. More over it is important to print all the birds ID found in Bangladesh and also the possible species.

2.7 Activity: Water Birds Survey Activity

Goal of the activity:

To identify the Waterbird species occurred and counting in Sonadia, Moheshkhali, Teknaf Peninsular coast and Naf River coast.

Organising Date:

14-18 Feb 2007

Actual Number and Group of Participants:

A team of six personnel conducted the survey with boat and jeep facility.

Evaluation of the Activity Goal:

Future Development Initiative:

Currently the survey area has been recognised for certain level of threats and that has been observed to be increased day by day. Most of the impacts are being the habitat destruction as mangrove and mudflats destruction and conversion into shrimp farm and salt pans. Most of the human interference is confined to shrimp farm and salt pan activity.

Hunting and trapping has also been recorded while survey at Sonadia east village. According to local people some people engaged in hunting during winter every year and there should be some of the awareness activity to refrain them from further bird killing. The tourism development and the future shrimp farm or salt pan conversion is under way since the area of Sonadia; peninsular seashore is in extreme under pressure for future infrastructure development. At many areas land along the Sea shore from Teknaf to Cox's Bazar has been sold to out side business peoples for hatchery, and hotel resort development. The bird population has been declined drastically within one decade



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due to extreme human interference and habitat alteration along the shoreline. One of the major threats to beach birds flocks are tourist jeep drive through the gulls and terns flocks for recreation and photography a severe disturbance due rooting birds has been observed in November along sea shore.

2.8 Activity: Compilation of Existing Information and Database Creation

Goal of the Activity:

To make comprehensive information source for the birds along the wetland lands in Cox's Bazar particularly areas viz., Moheshkhali, Sonadia, Teknaf Peninsula, & St. martin island.

Organising Date:

Database conducted during the whole project time

Actual Number and Group of Participants:

3 personnel of WC & MLA

Evaluation of the Activity Goal:

GOAL ACHIEVEMENT

The compilation of the bird information is fulfilled for this area. This list also included the so far recorded birds and important bird areas have been mentioned in respective list. Proper detailed information on monthly arrival and departure and plumose information still lacking in our country. WC and Marinelife alliance is working in this regards.

PARTICIPANTS FEEDBACKS

We taken in consideration and information collected from NCS report, Marinelife Alliance Project report, CWBMP inception report conducted during the last 15 years. Total 116 species of water birds enlisted in Sonadia, Teknaf Peninsula & St. Martin Island. The previous information of the important bird areas according to experience has been used in this database. A total 64 water birds species recorded during the under the WC project. WC will publish a checklist for the areas if funding is available in near future.

CONSTRAINS

Computer program Based Database has not been created yet. There is no clear information on the birds found in specific areas of the proposed project. Previous reports has mentioned in the list the overall findings that sometimes not infact useful while comparing year to year abundance and species number for a specific area.

RECOMMENDATION

The area wise database should have acceptable clarity according to species diversity and population. Most of the work in Bangladesh is infact not reach the international standard rather it depicts the abundance overall and areas important for birds habitat. The Waterbird census is still not clear in Bangladesh as some non-professional people are working on this too while making reports and lists with extra unreal data. For a clear cut status understanding on habitat, species and population monthly or major seasonally monitoring is very important what has been lacking in Bangladesh due to funds, Decision and lack of communication between field researcher and the International scientific community like *Asian Waterfowl Census* etc. Some of the people conduct census has no communication with the filed based authentic researcher. And there is lot of biased and

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false information published. Enough information according to monthly and seasonal changes in water birds breeding & non breeding plumose should be incorporated and details status information have to published. Any survey team should communicate the existing field based researcher for participation and information to work effectively. Finally international scientific community and bird related organization should support area based scientist & researcher to conduct census and research, banding to maintain proper authentic census and database. In this regards proper instrumentation is also necessary.

3.0 Activity: Overall Evaluation of the Project

3.1 Achievement of the aim/objective:

The major objective of the project has been achieved. 3 important bird areas have been taken in communities concern where monitoring station has been installed. Further intervention from the community is not going happen any more. Moreover the area also declared by the government as **Ecologically Critical Area** in 1999. Also the future activity in this regard will impact significantly to keep the conservation status with overall improvement. Other activities, like outreach and educational materials, Awareness campaign, school education conducted properly and peoples participation were enormous. It was planned to create peoples consensus.

3.2 Implementation of the project:

We could finally finish our activity by July. As such it is mentionable that there were some problems with the fund collection. It delayed the monitoring installation and printing materials production. But finally we could manage from our own funding. Funding delay resulted the field work in full rainy season what made some difficulties but we finally made it happen. We could not conduct the bird festival that does not need much funding but during Jan - February we could not manage to print our materials hence it could not be happened. In addition the Website also not been developed. We infact, having some funding constraint at the moment to use our own funding for website development. Financial estimate and expenditure has been mentioned in the Financial Statement. There has been slight fluctuation in expenditure of deferent activities from the estimate mentioned in the proposal but the overall expenditure is within the budget. The excessive funding needed will be managed by WC own fund and will not be claimed from the donor.

3.2.1. We could not conduct Bird festival as time did not allow the program whereas it did not need much funding, we have plan the next December for this purposes and financial assistance is necessary.

3.3 Constrains and problem:

One of the major problem with the small funding is to difficult manage banking formalities that we have to spend some money before and sometime it takes time and difficulties. There are not much problems in overall implementing the project. One thing mentionable that, handful activities mentioned in the proposal and during implementing, we realised budgetary constraints. But we were able to manage since we have some field based facilities like meeting center, office area, other manpower for sea turtle conservation work those helped a lot in this work. Community based conservation area establishment is easier if there is no stronghold in the respective area. In our project location there are some muscle men including some relatives of MP (member of Parliament) those who try

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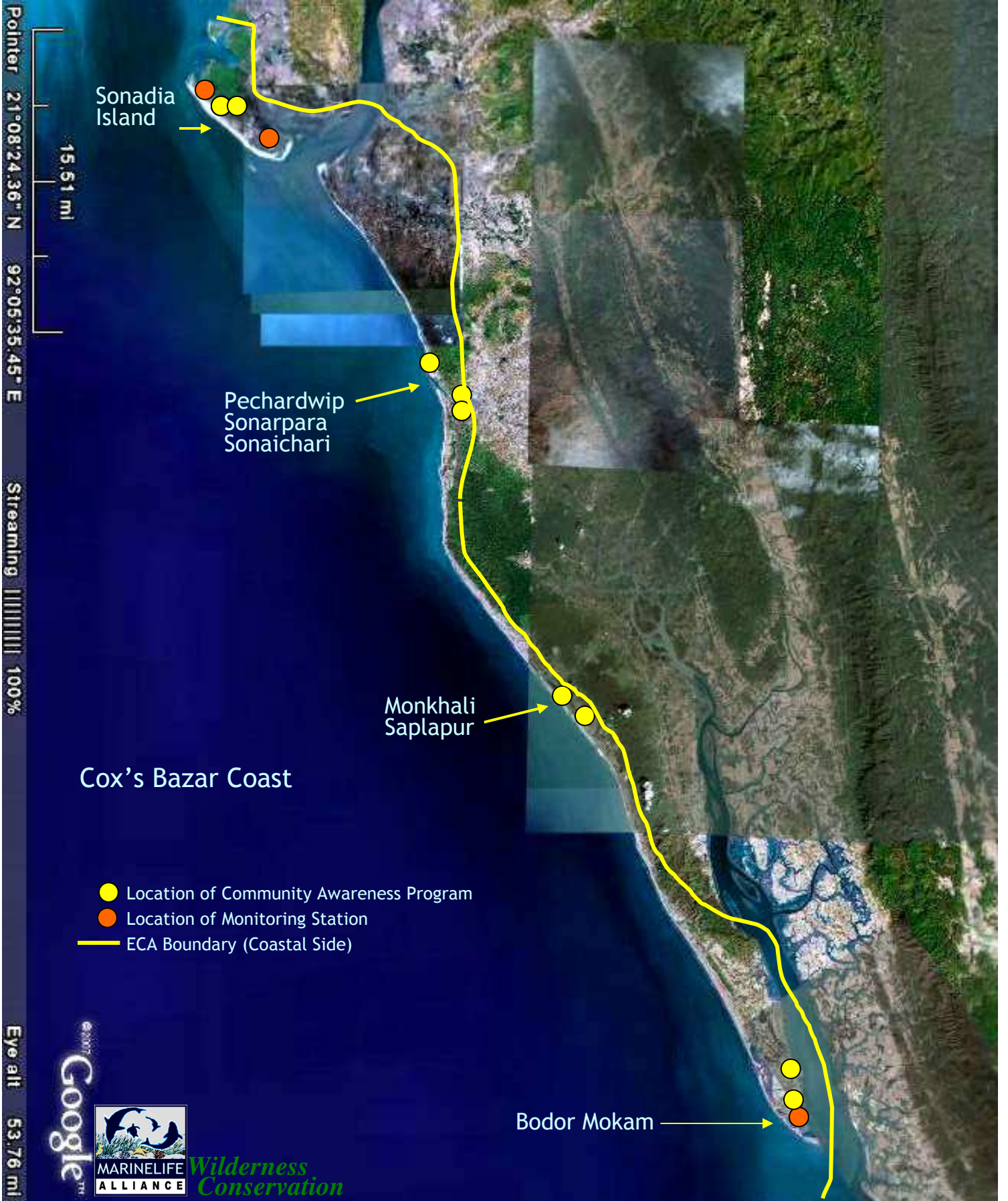
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to expand their shrimp farming area. They never want such conservation initiative what can impact their land graving activity. Some organizational problem created during meeting and succession in this regards. Still form the government, community based conservation area establishment rules and formalities are not easy and not usual practice. Thus we in the near future will propose to respective authority for the protected area recognition. At this time we moved from the bottom and so far it's being realised by community.

3.4 Recommendation:

It is better to take fewer activities with proper budget to implement without constraints. The *Wilderness Conservation* Waterbird project infact contributed some field based intervention. At the moment it needs some nursing like more training of community people, facility development of the monitoring station, protected area monitoring regularly and government endorsement. The most effective conservation work is conducting with the community, if we can continue some farther up to certain period to make the activity sustainable. This sustainability needs some development of community based ecotourism, handicraft and souvenir production facility. Then optimum position of the ecotourism facility not yet achieved. But ExploreWild is trying to get eco-tourist or volunteer with camping facility. One or two year support from the project will help us to attain our goal in this regard. My recommendation and request to AWCF to continue support for 2 years for the past project to make it sustainable and more community involvement. In root level AWCF can link us to international community regarding volunteer support and communication that can help in ecotourism. Publish our outreach and educational materials through internet that people round the world can share and take advantage. For the water bird project we urge to AWCF to support instrument like Binoculars, Scopes, Birds Rings and other devices for conservation management and research. It is difficult for 3rd world people to manage expensive equipment.

Finally I express my deep gratitude to AWCF coordinator and respective officers of this program for cordial cooperation in fund sending, report suggestions, and overall supervision. Without such cooperation and help it was not possible to implement our activity.



WATERBIRD LIST FOR COX'S BAZAR AREA

Annexure-2

	GENERIC NAME	ENGLISH NAME	TEKNAF PENINSULA	SONADIA ISLAND	ST. MARTIN ISLAND	R/M
	Dendrocygnidae					
1.	<i>Dendrocygna bicolor</i>	Fulvous Whistling-duck	■	■	■	R
2.	<i>Dendrocygna javanica</i>	Lesser Whistling-duck	■	■	■	R
	Anatidae					
3.	<i>Anser indicus</i>	Bar-headed Goose		■		M
4.	<i>Tadorna ferruginea</i>	Ruddy Shelduck	■	■	■	M
5.	<i>Tadorna tadorna</i>	Common Shelduck	■	■	■	M
6.	<i>Sarkidiornis melanotos</i>	Comb Duck	■	■		R
7.	<i>Nettapus coromandelianus</i>	Cotton Pygmy-goose		■		R
8.	<i>Anas strepera</i>	Gadwall	■	■		M
9.	<i>Anas falcata</i>	Falcated Duck	■	■		M
10.	<i>Anas Penelope</i>	Eurasian Wigeon	■	■		M
11.	<i>Anas platyrhynchos</i>	Mallard	■	■		M
12.	<i>Anas poecilorhyncha</i>	(Indian) Spot-billed Duck		■		R
13.	<i>Anas clypeata</i>	Northern Shoveler	■	■		M
14.	<i>Anas acuta</i>	Northern Pintail	■	■		M
15.	<i>Anas querquedula</i>	Garganey	■	■		M
16.	<i>Anas crecca</i>	Common Teal	■	■	■	M
17.	<i>Netta rufina</i>	Red-crested Pochard		■		M
18.	<i>Aythya ferina</i>	Common Pochard	■	■		M
19.	<i>Aythya nyroca</i>	Ferruginous Pochard NT	■	■		M
20.	<i>Aythya fuligula</i>	Tufted Duck		■		M
21.	<i>Aythya marila</i>	Greater Scaup		■		MV
	Rallidae					
22.	<i>Amaurornis phoenicurus</i>	White-breasted Waterhen	■	■	■	R
23.	<i>Porzana pusilla</i>	Eastern' Baillon's Crake	■	■	■	R
24.	<i>Porzana fusca</i>	Ruddy-breasted Crake	■	■	■	R
25.	<i>Gallicrex cinerea</i>	Watercock	■	■	■	R
26.	<i>Porphyrio porphyrio</i>	Purple Swamphen	■	■	■	R
27.	<i>Gallinula chloropus</i>	Common Moorhen	■	■	■	R
28.	<i>Fulica atra</i>	Common Coot	■	■	■	R
29.	<i>Porzana porzana</i>	Spotted Crake	■	■	■	M
30.	<i>Rallus aquaticus</i>	Water Rail	■	■	■	M
	Scolopacidae					
31.	<i>Gallinago stenura</i>	Pintail Snipe		■	■	M
32.	<i>Gallinago Gallinago)</i>	Common Snipe Fantail Snipe	■	■	■	M
33.	<i>Rostratula bengalensis</i>	Greater Painted-snipe	■	■	■	R
34.	<i>Limosa melanuroides</i>	Eastern' Black-tailed Godwit	■	■	■	M
35.	<i>Limosa lapponica</i>	Bar-tailed Godwit	■	■	■	M
36.	<i>Numenius phaeopus</i>	Whimbrel	■	■	■	M
37.	<i>Numenius arquata</i>	Eurasian Curlew	■	■	■	M
38.	<i>Tringa erythropus</i>	Spotted Redshank	■	■	■	M
39.	<i>Tringa tetanus</i>	Common Redshank	■	■	■	M
40.	<i>Tringa stagnatilis</i>	Marsh Sandpiper	■	■	■	M
41.	<i>Tringa nebularia</i>	Common Greenshank	■	■	■	M
42.	<i>Tringa guttifer</i>	Nordmann's Greenshank EN	■	■		M
43.	<i>Tringa ochropus</i>	Green Sandpiper	■	■	■	M
44.	<i>Tringa glareola</i>	Wood Sandpiper	■	■	■	M
45.	<i>Xenus cinereus</i>	Terek Sandpiper	■	■	■	M
46.	<i>Actitis hypoleucos</i>	Common Sandpiper	■	■	■	M
47.	<i>Arenaria interpres</i>	Ruddy Turnstone	■	■	■	M
48.	<i>Limnodromus semipalmatus</i>	Asian Dowitcher NT	■	■		M
49.	<i>Calidris canutus</i>	Red Knot	■	■	■	M
50.	<i>Cakidris tenuirostris</i>	Great Knot	■	■	■	M
51.	<i>Calidris alba</i>	Sanderling	■	■	■	M
52.	<i>Calidris pygmea</i>	Spoon-billed Sandpiper EN	■	■		M
53.	<i>Calidris minuta</i>	Little Stint	■	■	■	M
54.	<i>Calidris ruficollis</i>	Red-necked Stint	■	■	■	M
55.	<i>Calidris temminckii</i>	Temminck's Stint	■	■	■	M
56.	<i>Calidris subminuta</i>	Long-toed Stint	■	■	■	M
57.	<i>Calidris ferruginea</i>	Curlew Sandpiper	■	■	■	M
58.	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	■	■	■	M
59.	<i>Philomachus pugnax</i>	Ruff	■	■	■	M
	Rostratulidae					
60.	<i>Rostratula benghalensis</i>	Greater Painted-snipe	■	■	■	R
	Jacaniidae					

61.	<i>Hydrophasianus chirurgus</i>	Pheasant-tailed Jacana	■	■	■	R
62.	<i>Metopidius indicus</i>	Bronze-winged Jacana	■	■	■	R
	Charadriidae					
63.	<i>Himantopus himantopus</i>	Black-winged Stilt	■	■	■	R
64.	<i>Recurvirostra avosetta</i>	Pied Avocet	■	■	■	M
65.	<i>Pluvialis fulva</i>	Pacific Golden Plover	■	■	■	M
66.	<i>Pluvialis squatarola</i>	Grey Plover	■	■	■	M
67.	<i>Charadrius hiaticula</i>	Common Ringed Plover	■	■	■	M
68.	<i>Charadrius dubius</i>	Little Ringed Plover	■	■	■	M
69.	<i>Charadrius alexandrinus</i>	Kentish Plover	■	■	■	M
70.	<i>Charadrius mongolus</i>	Lesser Sand Plover	■	■	■	M
71.	<i>Charadrius leschenaultia</i>	Greater Sand Plover	■	■	■	M
72.	<i>Vanellus cinereus</i>	Grey-headed Lapwing	■	■	■	M
73.	<i>Vanellus indicus</i>	Red-wattled Lapwing	■	■	■	R
74.	<i>Vanellus malabaricus</i>	Yellow-wattled Lapwing	■	■	■	R
75.	<i>Vanellus duvauceli</i>	River Lapwing	■	■	■	R
	Glareolidae					
76.	<i>Glareola lactea</i>	Small Pratincole	■	■		R
	Laridae					
77.	<i>Rynchops albicollis</i>	Indian Skimmer VU	■	■		R
78.	<i>Larus heuglini</i>	Heuglin's Gull	■	■	■	M
79.	<i>Larus [heuglini] barabensis</i>	'Steppe' Gull	■	■	■	M
80.	<i>Larus ichthyaetus</i>	Pallas's Gull	■	■	■	M
81.	<i>Larus brunnicephalus</i>	Brown-headed Gull	■	■	■	M
82.	<i>Larus ridibundu</i>	Black-headed Gull	■	■	■	M
83.	<i>Gelochelidon nilotica</i>	Gull-billed Tern	■	■	■	R
84.	<i>Sterna caspia</i>	Caspian Tern	■	■	■	M
85.	<i>Sterna aurantia</i>	River Tern	■	■	■	R
86.	<i>Sterna bengalensis</i>	Lesser Crested Tern	■	■	■	R
87.	<i>Sterna bergii</i>	Great Crested Tern	■	■	■	R
88.	<i>Sterna sandvicensis</i>	Sandwich Tern		■		M
89.	<i>Sterna hirundo</i>	Common Tern	■	■	■	M
90.	<i>Sterna albifrons</i>	Little Tern	■	■	■	R
91.	<i>Chlidonias hybridus</i>	Whiskered Tern	■	■	■	M
92.	<i>Chlidonias leucopterus</i>	White-winged Tern		■		M
93.	<i>Sterna acuticauda</i>	Black belied Tern	■	■	■	R
94.	<i>Sterna sumatrana</i>	Black Naped Tern	■	■	■	M
95.	<i>Anous tenuirostris</i>	Lesser Noddy			■	M
96.	<i>Anous minuts</i>	Black Noddy			■	M
	Phalacrocoracidae					
97.	<i>Phalacrocorax niger</i>	Little Cormorant	■	■	■	R
98.	<i>Phalacrocorax carbo</i>	Great Cormorant	■	■	■	R
	Ardeidae					
99.	<i>Egretta garzetta</i>	Little Egret	■	■	■	R
100.	<i>Ardea cinerea</i>	Grey Heron	■	■	■	R
101.	<i>Ardea goliath</i>	Goliath Heron	■			R
102.	<i>Ardea purpurea</i>	Purple Heron	■	■	■	R
103.	<i>Casmerodius albus</i>	Great Egret	■	■	■	R
104.	<i>Mesophoyx intermedia</i>	Intermediate Egret	■	■	■	R
105.	<i>Bubulcus (ibis) coromandus</i>	(Eastern) Cattle Egret	■	■	■	R
106.	<i>Ardeola grayii</i> Indian	Pond Heron	■	■	■	R
107.	<i>Butorides striatus</i>	Little Heron	■	■	■	R
108.	<i>Nycticorax nycticorax</i>	Black-crowned Night Heron	■	■	■	R
109.	<i>Ixobrychus cinnamomeus</i>	Cinnamon Bittern	■	■	■	R
110.	<i>Ixobrychus minutus</i>	Little Bittern	■	■	■	R
111.	<i>Ixobrychus sinensis</i>	Yellow Bittern	■	■	■	R
112.	<i>Dupetor flavicollis</i>	Black Bittern	■	■	■	R
	Threskiornithidae					
113.	<i>Threskiornis melanocephalus</i>	Black-headed Ibis NT	■	■	■	R
114.	<i>Platalea leucorodia</i>	Eurasian Spoonbill		■	■	R
	Ciconiidae					
115.	<i>Anastomus oscitans</i>	Asian Openbill		■		R
116.	<i>Leptoptilos javanicus</i>	Lesser Adjutant	■	■		R

Reported by M. Zahirul Islam, Wilderness Conservation. Produced for the project "Community Based Protected Area Establishment for Waterbird Conservation" activity supported by "Asian Water Bird Conservation Fund".

SHORT REPORT ON MIGRATORY BIRD SURVEY

Submitted by

M. Zahirul Islam

Wilderness Conservation

Email: wilderness_con@yahoo.com

Feb 20, 2007

Wilderness team has conducted migratory bird's survey with some biologists and community people. The survey area included the 2 of the Ecologically Critical Areas (ECA) of Cox's Bazar project area viz., Moheshkhali-Sonadia Island, Teknaf peninsular area up to Shahporir Dwip. The major goal of the survey was to find out the globally threatened wader like Spoonbill Sandpiper (*Calidris pygmea*), Asian Dowitcher (*Limnodromus semipalmatus*) and Nordmann's Greenshank (*Tringa guttifer*). The spoonbill sandpiper which has only very little population throughout the whole world. As the St. Martin Island habitat severely degraded due to recent tourism development, we discarded the program from St. Martin Island; it will be covered in separate program. The survey expenditure has been supported by the generous support from Asian Water birds Conservation Fund, Hong Kong.

Bird Survey Duration:

14-18 Feb 2007

We travelled with a country powered boat to get into the area for the water bird survey and where the water birds particularly the shorebirds survey would be fruitful. I have recorded 14 spoonbill sandpipers in 2005 at the area south of Sonadia east village. Our team surveyed the area again. Almost whole areas are under ECA Moheshkhali-Sonadia. The mudflats of the Shahporir Dwip area and was not previously visited in details for birds survey in particular. We used 2 birding Telescope of 25X and binoculars for each if the observer. There are possibilities of new bird information and possibilities of new records in this area. Due to instrumental lacking it was our only hope to recognise and find small waders for which, survey extremely depends on high power telescope. Team member of the survey are:

- M. Zahirul Islam
- Faysal Ehsan
- Faridullah Kaysar
- M. Sazedul Islam
- Mijanur Rahman
- Amirul Islam
- And 2 community persons for field assistance.

TRIP RECORD & SURVEY AREA:

Date	Location	Area
14 Feb 2007	<ul style="list-style-type: none"> Survey at South west Mudflats of Moheshkhali Main Island Survey at Vanga Khal North end of the Ghati vanga canal Survey at Sonadia northern portion 	Sonadia
15 Feb 2007	<ul style="list-style-type: none"> Survey south portion in between East village and Moghchar: vast areas of grassy mudflats. West village mangrove mudflat and shrimp farm Majher Dhar (canal) of Sonadia -Moheshkhali 	Sonadia
16 Feb 2007	<ul style="list-style-type: none"> Travel to Teknaf through beach Survey on shore birds Survey at Jolirdia Dwip in After noon 	Cox's Bazar- Teknaf Peninsula
17 Feb 2007	<ul style="list-style-type: none"> Survey along Naf river bank from Nittong Para to Shahporir Dwip Details time survey at Badar Mokam : Sahporirdwip 	Cox's Bazar- Teknaf Peninsula
18 Feb 2007	<ul style="list-style-type: none"> Survey along Naf river bank from Nittong Para to Sahporirdwip Back to office and expedition over 	Cox's Bazar- Teknaf Peninsula

METHODOLOGY OF THE SURVEY:

The survey conducted everyday from the early morning 0700 started from the 6 # Jetty at Bakkhali river boat harbour. One 26 HP powered boat has been hired for whole survey duration at Moheshkhali - Sonadia area conducted during 12-13 Feb 2007.

Counting started in the late morning and extended to evening. Counts in adjacent parts were adjusted when birds moved between areas. Even at high tide, much of the intertidal mudflats were uncovered and the counting technique involved walking just inland of the tide edge and counting roosting and feeding birds. Binocular (10-20 X) and Telescope (20 - 45 X) Telescope, with tripod were used during field observation. Several pictorial field guide books (Ali, 1979; Ali & Ripley, 1983; Grimmett et al. 1998; Grewal et al. 2002 and Howes, J. & Bakewell, D. 1989) have been used for confirmation of species identification. Secondary information from several literatures was also used to know the other records. Moreover, a four-wheel drive with speed of 10 km per hour was also used for Cox's Bazar to Teknaf sea shore survey. Birds flying over the split were taken into account. Weather conditions throughout the count period were generally favourable, only early morning of a day it was slightly foggy.



The major purpose of the bird survey by the team was to record the yearly shorebirds and other migratory water birds. On 21 Jan, last year (2006) team recorded the species at the grassy mudflats of the Shahporir Dwip of Teknaf Upazila. The whole area suitable for shorebirds and about 100-150 hectors. The team recorded on first day

of survey (21 JAN 2006) 6 spoonbill sandpiper and 2nd day total 8 individual. During Dec 2006 Survey we also recorded spoonbill in the same area. We visited the area during this survey too. The other bird species found in deferent areas mentioned in the Table. -1.

SURVEY AREAS:

The area surveyed, can be divide into 3 major areas:

- ⇒ Moheshkhali - Sonadia
- ⇒ Teknaf - Shahporir Dwip (Eastern Coast)
- ⇒ Sea shore: Cox's Bazar - Teknaf

The previous information of the important bird areas according to experience has been used in this survey activity.

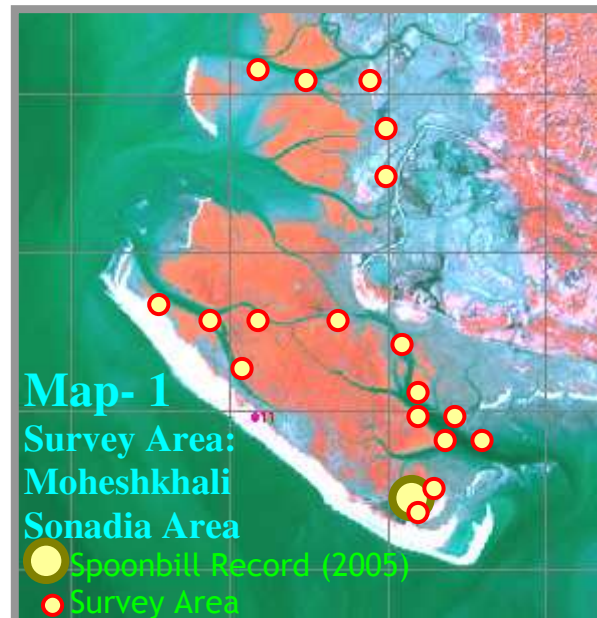
MOHESHKHALI - SONADIA

In Moheshkhali Sonadia area visited areas are mudflats of Moheshkhali and Sonadia Island, viz., Bara Dhar, Majher dhar, Moheshkhali south mudflat, Baradia to Vanga Khali at the north, northern portion of the Sonadia west village, and southern portion of the east village of Sonadia.

(See satellite image: *Map-1*)

There are numerous mudflats fringed with grass and mangrove saplings. The many areas are used as grazing field. We travelled by boat from the mouth of Bara Dhar and used both of the canal, Bara Dhar and Majher Dhar, and observed either banks of the canal. The irritating sound of the boat engines obviously hampered the roosting, feeding birds along the coast.

The Sonadia south portion mudflat is situated south of east village up to Moghchar (dry fish zone). The northern portion of the whole area has already been converted to shrimp farm. The remaining areas fringed with intertidal grassy vegetation with some mangrove saplings. This area extends from Moghchar to east village and up to Bara Dhar (canal) or main canal in between Sonadia and Moheshkhali Island. (See Image Map -1). Approximate size of the mudflat extends from 1.5 to 2.0 kms east west and 1 to 1.5 kms south northward. We spread into 2 teams during the survey and one moved toward north east and another moved north west and spent in details survey in areas where last years we have recorded some spoonbills during a habitat mapping visit near



the area south of Badarkhali Para.

TEKNAF - SHAHPORIR DWIP (EASTERN COAST)

At Teknaf we visited the Jolirdia Dwip at north which is not included in ECA declared by Government. Survey area included the Naf riverbank from Teknaf Nittong Hill area to Shaporir Dwip up to the southern tip of Bangladesh Mainland Badar Mokam. The intertidal mudflat along the Naf River is suitable wader feeding ground and only suitable for survey during low tide. We visited along the river during low tide and low water position of tide time. The Badar Mokam area of Shaporir Dwip was visited while the water level was high. We surveyed Naf riverbank and Badar Mokam in 2 consecutive days. From the Shaporir Dwip Jaliapara (fishers village) 7.5 kms northward along the WDB (Water Development Board) dam has been tracked by 3 members for birds' survey.

Along the Naf River bank, many waders and water birds have been recorded including black headed Ibis. At Badar Mokam area the main wader feeding and roosting ground was area between Golar Para and the Badar Mokam last sandy circular ground. This was the place where 8-spoonbill sandpiper has been recorded during the expedition. The area previously was within land protection dam, which has been built 3 decades back. Due to tidal surge and circular waves it has been destroyed long time before. Only some remaining of the earthen dams is remaining. Before destruction it was a rice field. The present situation is fairly suitable for migratory shorebirds and other resident water birds. The area is used as roosting place observed during the last several years while travelling from St. Martin Island. The nearest village of the spoonbill record area is Golar Para of Sahporirdwip. There is a tidal canal in between the village and the mudflat has made some natural boundaries from the children's from the village. Fishermen also used the canal as boat harbour for limited use.

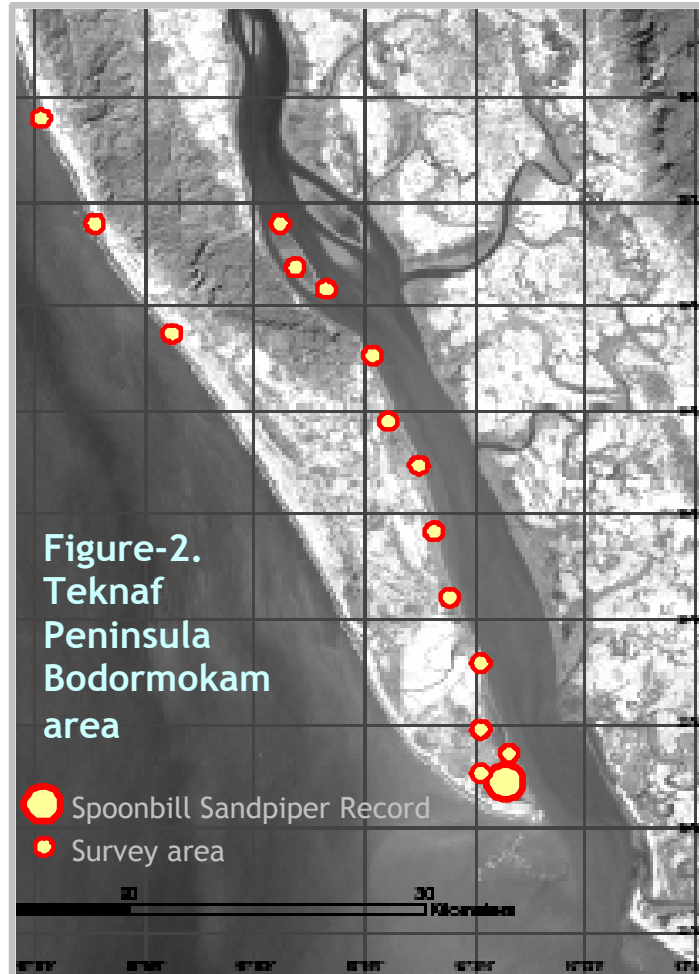


SEA SHORE: COX'S BAZAR - TEKNAF

The seashore is still a suitable habitat for Pallas gull, Terns Pratincole, Kentish plovers, brown-headed gull. We have recorded 3 areas of bird flocks on 21 Jan 2006. We recorded Pallas gull, great crested tern, lesser crested tern, small Pratincole, Kentish plovers, lesser sand plover, whisker tern, common tern, little tern etc.

The huge number fishing activity observed during visit from the area Monkhali to Teknaf area. All were beach seine with 20-25 fishermen in a single gear effort. The birds and fishing activity has been observed with a symbiotic relation since birds flocks were close to fishing activity and congregate net deployment area while fishermen were harvesting from the beach.

Due to time constraint we could not stay long time for details survey along the seashore. There are some impacts on human interference on the shorebirds population as beach has been tremendously used for motor driving by tourists and locals, beach development like, shrimp hatchery installation, marine drive construction, disturbance due to tourism, shrimp fry collection by thin monofilament netting perpendicular to shore line.



IMPORTANT BIRD AREAS WITHIN THE SURVEY FOUND INCLUDING:

IN SONADIA-MOHESHKHALI

- ⇒ Sonadia North West grassy mudflats along the mangrove formations situated north of west village.
- ⇒ Mudflats in between Moheshkhali and Sonadia through Majher Dhar, Bara Dhar, south end mudflat, mangrove mudflats of Baradia - Vanga Khal at Moheshkhali Upazila.
- ⇒ The mudflats at Sonadia south portion between Moghchar to Sonadia east village; a very big grassy, muddy intertidal zone.

IN COX'S BAZAR

⇒ The area along Bakkhali River from Boat harbour to river mouth.

COX'S BAZAR -TEKNAF SEASHORE

⇒ Some areas along the seashore from Daria Nagar to Teknaf (within our survey covered)

TEKNAF - SHAHPORIR DWIP

⇒ The Naf river bank during low tide

⇒ The northern mudflat area of Badar Mokam under Shahporir Dwip.

PROPOSED BIRD SANCTUARY/PROTECTED AREA:

- According to the findings of the SBS survey the mudflats of Badar Mokam and the Sonadia east and west and between Baradia to Vanga Khal should be taken in conservation consideration within short time to prevent further deterioration. The main spoonbill record area at Shahporir Dwip is still not interfered by human activity since it is within intertidal zone hence least suitable for any sort of land alteration. The area previously was within land protection dam which has been built 3 decades back. Due to tidal surge and circular waves it has been destroyed long time before. Only some remaining of the earthen dams is remaining. Before destruction it was a rice field. The present situation is fairly suitable for migratory shorebirds and other resident water birds. The area is used as roosting place observed during the last several years while travelling from St. Martin Island. The nearest village of the spoonbill record area is Golar Para of Shahporir Dwip. There is a tidal canal in between the village and the mudflat has made some natural boundaries from the children's from the village. Fishermen also used the canal as boat harbour for limited use. (Map-2)
- The Sonadia south portion mudflat situated south of east village up to Moghchar (dry fish zone). The northern portion of the whole area has already been converted to shrimp farm. The remaining areas fringed with intertidal grassy vegetation with some mangrove saplings should take into consideration.



This area extends from Moghchar to east village and up to Bara Dhar (canal) or main canal in between Sonadia and Moheshkhali Island. Map (1.). Size of the mudflat approximately 3-4 square km.

- Some area of the sea shore from Daria Nagar > Teknaf > Shahporir Dwip > Badar Mokam should be selected and protected.

MAJOR THREATS TO THE BIRD AREA:

Change of bird area/mudflats into shrimp farm and salt pan observed in Baradia, vanga Khal, Sonadia west village, west village and near Badarkhali Para, along the Naf river bank mangrove has been destroyed and converted to shrimp farm/salt pan. In our survey we visited Naf riverbank through the narrow stripe of mangrove the mangrove is 150-200 meter wide and majority of the areas has been converted into shrimp farm. Some areas still remain as mudflats and some political muscleman has got lease vast area for shrimp farming. From the Naf River the mangrove s vegetation are visible but inside all most of them has been converted and mangrove has been destroyed since long time. The Water development board just repaired the embankment during 2001-2003 from Sahporirdwip to Teknaf area. Along Naf river, Shrimp farms has been developed both side of the embankment, other portion of the dam is mangrove stripe and shrimp initiator make another dam at river side by their won cost and clear the trees for farming. Most of the farms were more than one km long.

Future Development Initiative:

Currently the survey area has been recognised for certain level of threats and that has been observed to be increased day by day. Most of the impacts are being the habitat destruction as mangrove and mudflats destruction and conversion into shrimp farm and salt pans. Most of the human interference is confined to shrimp farm and salt pan activity. Hunting and trapping has also been recorded while survey at Sonadia east village. According to local people some people engaged in hunting during winter every year and there should be some of the awareness activity to refrain them from further bird killing. The tourism development and the future shrimp farm or salt pan conversion is under way since the area of Sonadia; peninsular seashore is in extreme under pressure for future infrastructure development. At many areas land along the Sea shore from Teknaf to Cox's Bazar has been sold to out side business peoples for hatchery, and hotel resort development. The bird population has been declined drastically within one decade due to extreme human interference and habitat alteration along the shoreline. One of the major threats to beach birds flocks are tourist jeep drive through the gulls and terns flocks for recreation and photography a severe disturbance due rooting birds has been observed in November along sea shore.

FUTURE HABITAT DESTRUCTION POSSIBILITIES IN IMPORTANT BIRD AREAS:

- Tourism Development: hotel resort construction along Cox's Bazar to Teknaf seashore;
- Hatchery Infrastructure Development;
- Marine drive construction and beach sand dune destruction;
- Shrimp farm development at Sonadia island where in mudflats still natural condition present;
- Mudflats and mangrove along Naf river may convert into shrimp farm;
- Badar Mokam to Golar Para area where spoonbill found can be converted into shrimp farm in future;
- Sonadia Island is at the edge of mass tourism development possibilities as 2 major bridges already nearly constructed for communication from the mainland through the Matarbari area;

THREATS MATRIX:		
AREA	Critical Area	Major Threats
South west Mudflats of Moheshkhali Main Island	Moheshkhali Sonadia	<ul style="list-style-type: none"> • Habitat alteration into shrimp farm along the area close to dam. • Hunting/trapping water bird • Siltation over the mudflats
Baradia to Vangakhal (North end of the ECA: Sonadia)	Moheshkhali Sonadia	<ul style="list-style-type: none"> • Habitat alteration into shrimp farm along the area close to dam. • Hunting/trapping water bird. • Siltation over the mudflats.
Mudflat between East village and Moghchar	Moheshkhali Sonadia	<ul style="list-style-type: none"> • Habitat alteration into shrimp farm and salt pan along the area close to Badarkhali Para and Sonadia east village. • Hunting/trapping water bird.
West village to northern grassy mudflats Sonadia	Moheshkhali Sonadia	<ul style="list-style-type: none"> • gradual Habitat alteration into shrimp farm along the area close river bank and close to Sonadia west village. • Hunting/trapping water bird. • Siltation over the mudflats.
West village mangrove mudflat & shrimp farm	Moheshkhali Sonadia	<ul style="list-style-type: none"> • Habitat alteration and inaccessibility within the shrimp farm area due to high water level. • Hunting/trapping water bird
Majher Dhar (canal) of Sonadia -Moheshkhali	Moheshkhali Sonadia	<ul style="list-style-type: none"> • Habitat alteration into shrimp farm along the area Majher Dhar to Bara Dhar converted into shrimp farm. • Extremely noise pollution from motor boat operated. along the Majher Dhar and Bara Dhar. • Hunting/trapping water bird. • Siltation over the mudflats originated from hill cutting.
Cox's Bazar to Teknaf sea shore	Cox's Bazar Teknaf Peninsula	<ul style="list-style-type: none"> • Seashore habitat is drastically changed by the tourism development. • Beach alteration and pollution by the shrimp hatcheries, infrastructure, inlets/outlets through the beach most severe in Kalatoli- Daria Nagar, Sonar Para to Inani, Teknaf. • Beach drive : disturbance drive close to the birds flocks • Beach netting by monofilament gears used perpendicular to beach serves as bird trap. • Excessive human interpretation & habitat loss. • Shell collection along the Major Baharchara union.
Jolirdia Dwip island at Teknaf	Cox's Bazar Teknaf peninsula	<ul style="list-style-type: none"> • Habitat complete changed into shrimp farm inside the island and only outer intertidal mudflats remaining.
Nittong Para - Shahporir Dwip (Naf river bank)	Cox's Bazar Teknaf Peninsula	<ul style="list-style-type: none"> • Severe Deforestation of the mangrove in most of the areas. • Mudflat has been converted into shrimp farm from the outer most possible edge from the river. • Many of the remaining mangroves have also been allocated for shrimp farming leased by the DC Cox's Bazar to some muscle man according to local community.
Badar Mokam to Golar Para (Mudflats) (Shahporir Dwip) SPOON BILL SIGHTING AREA	Cox's Bazar Teknaf Peninsula	<ul style="list-style-type: none"> • The area facing less disturb regarding the shrimp farming activity. The fishing activity nearby boat harbour moderately serves as major disturbing source. Hunting and trapping may occur according to local people. • Area within the local children and shrimp fry collectors tracks the area regularly to reach their village. • Area vulnerable as Future shrimp farming activity may occur if some strong hold can manage sufficient fund.

Table-1. Preliminary Bird List Found in the Survey (Feb 2007)				Count	
	Scientific Name	English Name	Status	Sonadia Island	Teknaf Peninsula Sahporirdwip
1	<i>Actitis hypoleucos</i>	Common Sandpiper	M	51	43
2	<i>Arenaria interpres</i>	Ruddy Turnstone	M	16	29
3	<i>Calidris minuta</i>	Little Stint	M	211	125
4	<i>Calidris ruficollis</i>	Red necked Stint	M	26	24
5	<i>Calidris temminckii</i>	Temminck's Stint	M	7	2
6	<i>Calidris tenuirostris</i>	Great Knot	M	2	1
7	<i>Tringa glareola</i>	Wood Sandpiper	M	8	7
8	<i>Tringa nebularia</i>	Greenshank	M	34	55
9	<i>Tringa stagnatilis</i>	Marsh Sandpiper	M	7	3
10	<i>Tringa totanus</i>	Common Redshank	M	45	23
11	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	M	65	15
12	<i>Vanellus indicus</i>	Red-wattled Lapwing	R	3	
13	<i>Glareola lactea</i>	Small Pratincole	R	65	
14	<i>Charadrius alexandrinus</i>	Kentish Plover	M	1756	320
15	<i>Charadrius dubius</i>	Little Ringed Plover	M	31	21
16	<i>Charadrius leschenaultii</i>	Greater Sand Plover	M	34	22
17	<i>Charadrius mongolus</i>	Lesser Sand Plover	M	3122	2600
18	<i>Vanellus cinereus</i>	Grey-headed Lapwing	M	1	
19	<i>Pluvialis dominicus</i>	Pacific Golden Plover	M	36	18
20	<i>Numenius arquata</i>	Eurasian Curlew	M	47	15
21	<i>Numenius phaeopus</i>	Whimbrel	M	23	9
22	<i>Gallinago gallinago</i>	Common Snipe	M	4	
23	<i>Gallinago stenura</i>	Pintail Snipe	M	1	
24	<i>Rostratula bengalensis</i>	Greater Painted-snipe	R	1	
25	<i>Philomachus pugnax</i>	Ruff	M	3	
26	<i>Sterna albifrons</i>	Little Tern	R	210	1500
27	<i>Sterna aurantia</i>	River Tern	R	35	25
28	<i>Chlidonius hybridus</i>	Whiskered Tern	M	312	360
29	<i>Gelochelidon nilotica</i>	Gull billed tern	M	26	24
30	<i>Sterna bengalensis</i>	Lesser crested tern	M	213	520
31	<i>Sterna bergii</i>	Greater crested tern	M	8	16
32	<i>Sterna hirundo</i>	Common Tern	M	56	35
33	<i>Chlidonius leucopterus</i>	White-winged Tern	M	1	
34	<i>Larus argentus</i>	Herring Gull	M	9	7
35	<i>Larus ichthyaetus</i>	Great Black-headed Gull	M	31	29
36	<i>Larus ridibundus</i>	Black-headed Gull	M	165	320
37	<i>Larus brunnicephalus</i>	Brown Headed Gull	M	326	2300
38	<i>Tachybaptus ruficollis</i>	Little Grebe	R	1	
39	<i>Phalacrocorax niger</i>	Little Cormorant	R	69	36
40	<i>Ardea purpurea</i>	Purple Heron	R	1	
41	<i>Ardeola grayii</i>	Indian Pond Heron	R	89	215
42	<i>Bubulcus ibis</i>	Cattle Egret	R	26	8
43	<i>Casmerodius albus</i>	Great Egret	R	25	34
44	<i>Mesophoyx intermedia</i>	intermediate Egret	R	81	93
45	<i>Egretta garzetta</i>	Little Egret	R	123	163
46	<i>Nycticorax nycticorax</i>	Night Heron	R	19	36
47	<i>Ardea cinerea</i>	Grey heron	R	35	39
48	<i>Ixobrychus cinnamomeus</i>	Cinnamon Bittern	R	12	1
49	<i>Ixobrychus minutus</i>	Little Bittern	R	15	
50	<i>Anas clypeata</i>	Shovellar	M	223	
51	<i>Tadornatadorna</i>	Ruddy Shellduck	M	126	
	Unidentified				
	<i>waders</i>			5000	1000
	<i>Gulls & Terns</i>			400	700
	<i>Ducks</i>			600	
				13836	10793

SONADIA ISLAND

Baradia, Pokkhirchar, Belekerdia, Moghchar

WATERBIRD SITE

WORLD CLASS WETLAND



Waterbird Viewing

- Sonadia Island is one of the significant water bird areas where resident waterbird can be seen along the seashore, mudflats, canals, mangrove, round the year.
- Migratory water birds only can be seen during August to April each year.
- Waterbird watching is best during high tide as they congregate on high sand bars,
- High power binocular & telescope needed for bird watching,
- Please remember only take photos and leave footprints,
- Please make no fire, no camping, boat land or chase birds; watch from distance.
- Guided bird watching can be arranged: contact Wilderness Conservation, MarineLife Alliance or ExploreWild Ecotour operator; call +88 0171 662 4310.

Waterbird Diversity

About 96 Waterbird currently inhabit the Sonadia island mudflats, canals and mangrove habitat. Out of that 49 are migratory & 47 are resident. All water birds are facing tremendous habitat degradation caused by shrimp farming due to alteration of typical habitat like mudflat, mangrove; pollution, human disturbances & hunting. We need to protect all the areas to ensure that birds can safely follow their yearly life cycle.

Migratory Flyways

There are 8 flyways throughout the world that in fact followed by migratory birds. In the Asia 2 major flyways are: East Asian-Australasian Flyways & Central Asian-Indian Flyways. Sonadia as well as Bangladesh lies within the middle of these 2 flyways and that's why these areas are valuable stop over/resting place for the birds those follow these two flyways during there long migration to south.

Major Threats

Important bird habitat of Sonadia & Moheshkhali is under severe threats due to habitat degradation for the last 10 years. Most damage occurred by the indiscriminate habitat alteration into shrimp farm by over mudflats and mangrove. In addition, siltation over the mudflat originated from hill cutting in Moheshkhali, excessive sound due to engine boat traveling through Majherdhar & Khaperkhal, some Moheshkhali people hunts water birds in peak season. Canal systems of Sonadia main land mark has been disrupted/closed for shrimp farming, embankment has been constructed over Baradia canal in the name of tidal protection in fact it is not eco-friendly that also interrupted dolphin movement.

Waterbird Conservation

Currently habitat restoration is a major priority and urgent measure to restore water birds diversity and population. Awareness raising, community based enforcement and conservation area establishment can play a positive role. The Sonadia and Moheshkhali adjacent areas have been declared as Ecologically Critical Area (ECA) by Bangladesh Government under the Environmental Conservation Act 1995. Any sort of activity that relates to habitat degradation & threats to biodiversity is strictly ban under the rules of ECA. Please help to protect water bird. Pay your time to participate awareness and protection activity & support conservation work.

Useful Link:

Wilderness Conservation: www.wildernesscon.org

MarineLife Alliance: www.marinelifealliance.org

Explorewild: www.explorewild.org

Coastal & Wetland Biodiversity Management Project: www.doe-bd.org/cwbmp

Department of Environment: www.doe-bd.org



Wilderness Conservation

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Photo & Illustration, Zahirul Islam.