

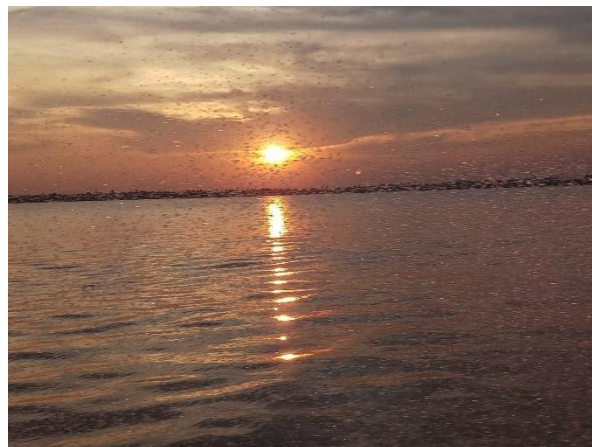
## GENERAL INFORMATION

---

- **Background**
- **Present Status**
- **Significance of Sundarban Mangroves**
- **Boundaries**

### BACKGROUND

India's globally renowned conservation scheme 'Project Tiger' was launched on 23rd December, 1973, in Sundarbans. It thus has the distinction of being one of the first nine Tiger Reserves to be declared in the country. The Sundarbans Tiger Reserve (STR) is situated in the coastal districts of West Bengal, i.e. South 24-Parganas and North 24-Parganas (Arbesi Block only). It lies at the southern-most extremity of the lower Gangetic delta bordering the Bay of Bengal. The Sundarbans can be described as a maze of estuaries, river channels, and creeks encompassing a number of islands (105) of various shapes and sizes. The Tiger Reserve has an area of 2584.89 sq. km. and along with the Bangladesh's Sundarbans forms the largest contiguous tract of mangrove forest anywhere in the world. It is the only mangrove forest throughout the world (besides Bangladesh) to harbour significant tiger population. Apart from the tiger, the Sundarban Tiger Reserve also has a rich array of biodiversity values both floral and faunal.



### PRESENT STATUS

The Indian Sundarban has a forest area of 4,263 sq. km. of which 2,584.89 sq.km. has been designated as Sundarban Tiger Reserve (STR), w.e.f. 23.12.1973. Within this Tiger Reserve, 1699.62 sq. km. has been designated as the Critical Tiger Habitat (CTH) vide Notification No. 6028-For, dated 18.12.2007. Within this CTH, lies the Sundarban National Park having an area of 1330.12 sq. km. area notified vide No. 2867-FOR, dated 04.05.1984. The area outside the CTH is known as Buffer Zone notified vide No. 615-For/11M-28/07, dated 17.02.2009. Within the buffer area is located the Sajnekhali Wildlife Sanctuary covering an area of 362.42 sq. km. vide Notification No. 5396-FOR, dated 24.06.1976. Rest of the area is the multiple use zone, which is used by the local population to fulfil their *bonafide* needs. The importance of this area was recognized by the UNESCO and the area was accorded the status of a World Heritage Site in the year 1987. (now renamed as World Heritage Property).

### SIGNIFICANCE OF SUNDARBAN MANGROVES

The Sundarbans mangrove eco-system is considered to be unique because of its species, richness due to its diverse mangrove flora, which constitutes the mangrove-associated flora, back mangrove species and several endemic typical mangrove associated

fauna of different groups. In addition to its floral richness, the Sundarbans harbors many rare and endangered animal species apart from the Royal Bengal Tiger. These include the estuarine crocodile (*Crocodilus porosus*), water monitor lizard (*Varanus salvator*), globally endangered Batagur Terrapin (*Batagur baska*), sea turtles, viz. Olive Ridley (*Lepidochelys olivacea*), Green sea turtle (*Chelony's mydus*), Hawksbill turtle (*Eretmochelys imbricata*), fishing cats (*Felis viverrina*), smooth coated otters (*Lutra perspicillata*), the Gangetic (*Platanista gangetica*) & Irrawady (*Orcaella brevirostris*) dolphins and the rare African visitor Goliath Heron (*Ardea goliath*) are some of the mentionable species among 53 such rare and endangered animals. In addition to the above, there have been recorded 20 identified species of prawns and 44 species of crabs including two edible ones. The mangrove forest acts as the nursery for the finfish and shell fish and sustains the fisheries all along the eastern coast of India. It also shelters the metropolis of Kolkata from cyclonic storms and tidal surge.

## BOUNDARIES

The Sundarbans Tiger Reserve is bound in the east by the international boundary with Bangladesh formed by the rivers Harinbanga, Raimangal and Kalindi. On the south lies the Bay of Bengal. The western border is formed by the river Matla, which acts a common boundary with the territorial Forest Division of South 24-Parganas. Towards the north-west, the area is bound by rivers Bidya and Gomdi. All the fringe villages lie outside the Tiger Reserve along the northern boundary.

There exist two distinct ecological units of mangrove vegetation as are given below:

1. The western portion lying west of river Thakuran where a trickle of sweet water reaches from the river Hooghly, i.e. mostly in the South 24-Parganas Forest Division.
2. The central mangrove patch, which is practically cut off from the upstream flow and is fed by backwaters of Bay of Bengal lying between rivers Harinbanga and Thakuran. The Sundarbans Tiger Reserve falls under this area. The salinity regime is very high here. However, on the eastern side bordering Bangladesh river Kalindi receives some sweet-water flow, as a result, the salinity levels are comparatively low.

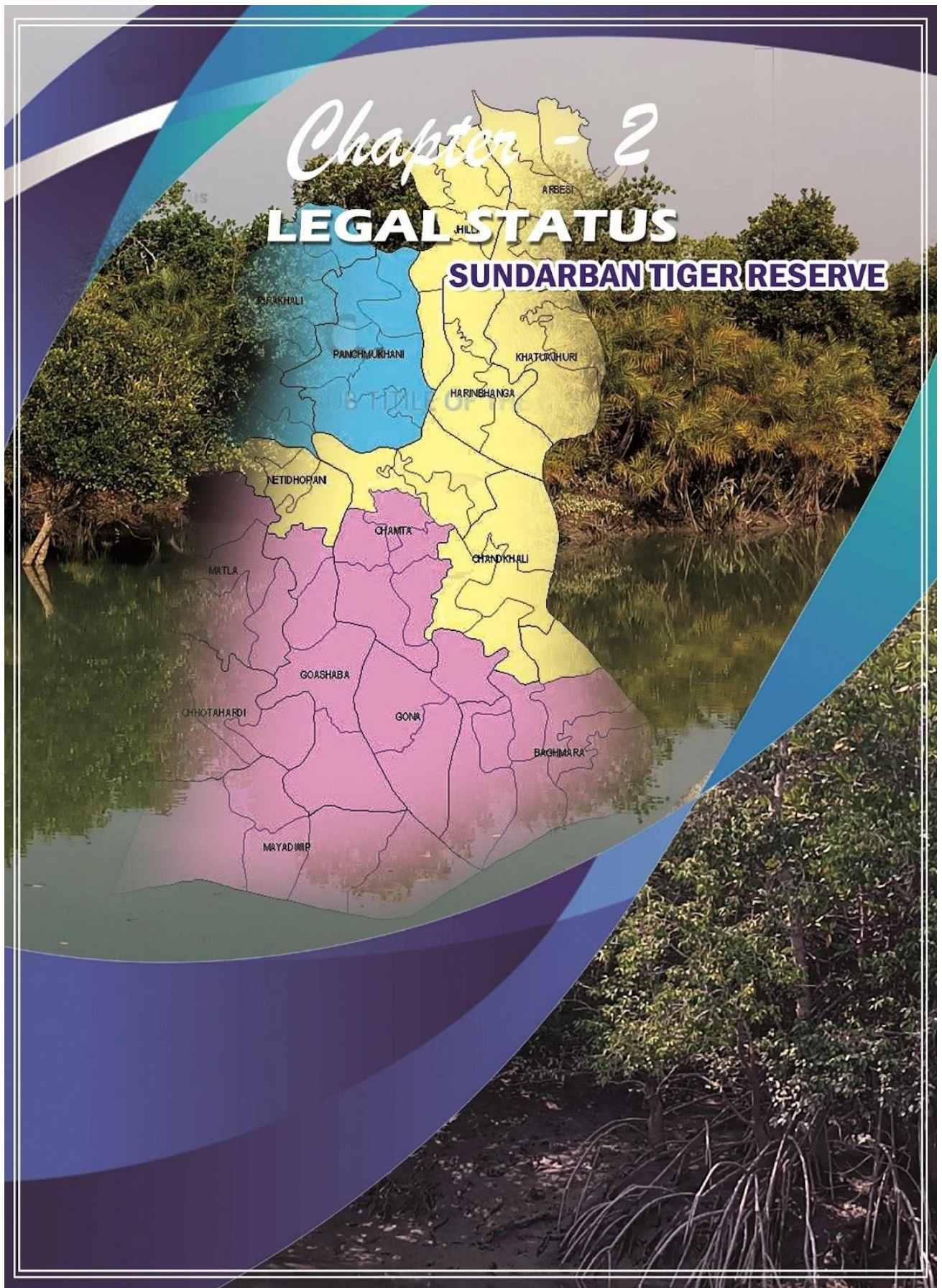
## SIGNIFICANCE OF SUNDARBAN TIGER RESERVE

- One of the first nine Tiger Reserves declared under the Project Tiger scheme in the year 1973.
- The National Park area of the Tiger Reserve is a natural World Heritage property, which was declared in the year 1985.
- The Sundarban Tiger Reserve is a part of the Sundarban Biosphere Reserve, which is one of the few globally recognised Biosphere Reserves in the country. It was declared as a Biosphere Reserve in the year 1989.
- It constitutes over 60% of the total mangrove forest area in the entire country and has 90% of the total Indian mangrove species

- There are 140 plant species under 59 families and 101 genera which have been reported from the entire Biosphere region by Naskar *et al.* These comprise of true mangroves or major elements, minor elements of mangroves or/and mangrove associates, back mangrove trees and shrubs, non-halophytic non-mangrove associates in the area, halophytic herbs, shrubs, and weeds and epiphytic and parasitic plants.
- The Sundarbans has been classified as a Tiger Conservation Landscape of global priority, as it is the only mangrove habitat (along with the Bangladesh), which support a significant tiger population.
- The Tiger Reserve is home to a large number of endangered and globally threatened species like the tiger (*Panthera tigris tigris*), fishing cat (*Felis viverrina*) and estuarine crocodile (*Crocodylus porosus*), Gangetic (*Platanista gangetica*) and Irrawady Dolphin (*Oracella brevirostris*), king cobra (*Ophiophagus hannah*), water monitor lizard (*Varanus salvator*) etc.
- It harbours significant populations of the river terrapin (*Batagur baska*), which was once believed to be extinct.
- It is the nesting ground for marine turtles like Olive Ridley (*Lepidochelys olivacea*), Green sea turtle (*Chelonia mydas*) and Hawksbill turtle (*Eretmochelys imbricata*).
- The mangroves serve as nurseries to shell fish and fin-fishes and sustain the coastal fisheries of the entire eastern coast.
- A number of heronries are formed here during monsoon, which harbour large bird populations, which come and breed here. Also, during the winters it is home for Trans-Himalayan migratory birds. Goliath heron (*Ardea goliath*) is another important bird is found in the area.
- It is known as a kingfisher's paradise as out of the 12 species of kingfishers found in the country 8 species are found here.
- Two species of horse shoe crabs (which are considered as living fossils as they are thought to be more than 400 million years old) *i.e.* *Tachypleus gigas* and *Carcinoscorpius rotundicauda* out of the four species found in the world are found here.
- The mangrove forests trap debris and silt and stabilise the near shore environment. Certain mangrove species also act as bio-filters as they have been found to bio-accumulate heavy metals. They filter ground-water and storm-water runoff which often contains harmful pesticides. They recharge the ground water by collecting rain water and slowly releasing it to the underground reservoir.

- The mangrove forests act as a natural shelter belt and protect the hinterland from storms, cyclones, tidal surges, sea-water seepage and intrusion.





## LEGAL STATUS

### LEGAL STATUS OF SUNDARBAN TIGER RESERVE

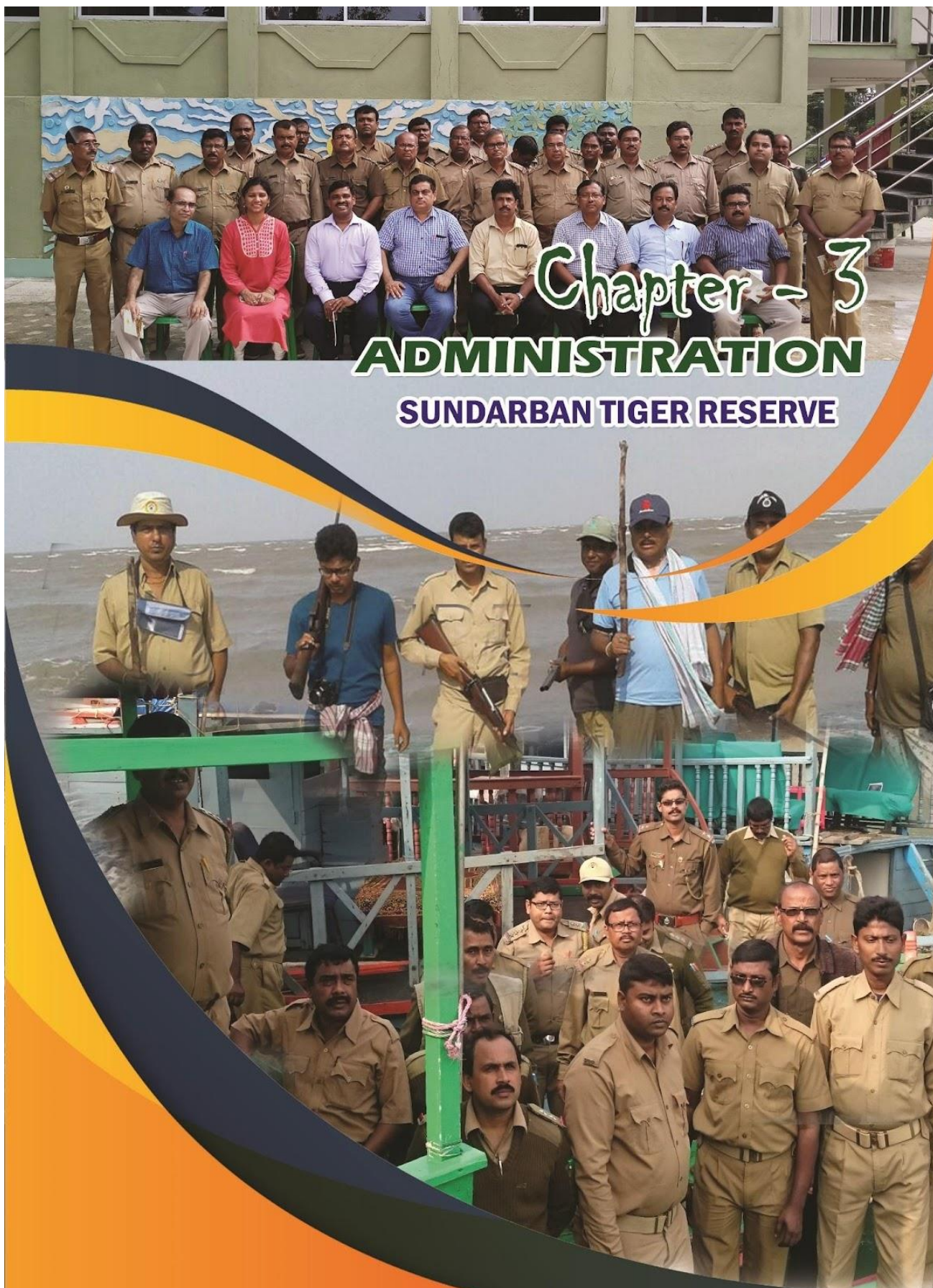
Category	Area (in sq. Km.)	Notification No.	Legislation
<b>Sajnekhali Wildlife Sanctuary</b>	362.42	5396-FOR, dt. 24.06.1976	As per sub-section (1) of section 18 of the Wildlife (Protection) Act, 1972 (53 of 1972).
<b>Sundarban National Park</b>	1,330.12	2867-FOR, dt. 04.05.1984	As per clause (b) of section 21 of the Wildlife (Protection) Act, 1972.
<b>Critical Tiger Habitat</b>	1,699.62	6028-FOR, dt. 18.12.2007	As per sub-section (4) of Section 38 V of the Wildlife (Protection) Act, 1972.
<b>Buffer Area</b>	885.27	615-FOR/11M-28/07 dt.17.02.2009	The Sanctuary area along with adjacent RA is a part of Buffer.
<b>Total Area:</b>	2584.89		

*Entire area has the status of Reserved Forest also.*

### AREA STATEMENT OF SUNDARBAN TIGER RESERVE:

<b>(a) Core Area or Critical Tiger Habitat</b>			
Sl. No.	Block and Compartment	Total Area (in sq.km.)	Legal Status
1	Matla (1-4)	176.30	NP
2(a)	Chamta (1-3)	96.32	RF
2(b)	Chamta (4-8)	124.37	NP
3	Chotahardi (1-3)	175.67	NP
4	Goasaba (1-4)	171.73	NP
5	Gona (1-3)	139.03	NP
6(a)	Bagmara (1)	24.30	RF
6(b)	Bagmara (2-8)	269.63	NP
7	Mayadwip (1-5)	273.36	NP
8	Netidhopani (1-3)	93.00	RF
9	Chandkhali (1-4)	155.91	RF
	<b>TOTAL:</b>	<b>1699.62</b>	<b>-</b>
<b>(b) Buffer Area</b>			
Sl. No.	Block and Compartment	Total Area (in sq.km.)	Legal Status
1	Panchamukhani (1-5)	176.66	WLS
2	Pirkhali (1-7)	185.76	WLS
3	Arbesi (1-5)	150.43	RF
4	Jhilla (1-6)	123.14	RF
5	Khatuajhuri (1-3)	132.41	RF
6	Harinbhanga (1-3)	116.87	RF
	<b>TOTAL:</b>	<b>885.27</b>	<b>-</b>





## ADMINISTRATION

Administrative Unit	Range/Beat/Camp		No.
<b>Range</b> <i>(Territorial)</i>	Bashirhat Range, Sajnekhali Wildlife Sanctuary Range, National Park (East) Range, National Park (West) Range		4
<b>Range</b> <i>(Functional)</i>	H.Q./AFR Range, Land and Law Cell, Research Range, Rampura Mobile Range, Eco-Tourism Range		5
<b>Beat</b> <i>(Territorial)</i>	<i>Name of Beat</i>	<i>Range</i>	14
	Chamta, Baghmara, Chandkhali (New)	National Park (East) Range	
	Haldibari, Netidhopani, Kendo	National Park (West) Range	
	Dobanki, Sajnekhali and Duttar	Sajnekhali Wildlife Sanctuary Range	
	Bagna, Burirdabri, Jhingekhali, Khatuajhuri and Harinbhanga (in Harikhali)	Basirhat Range	
<b>Beat</b> <i>(Functional)</i>	Sonakhali, Rampura H.Q., Canning H.Q., National Park H.Q. (West), National Park H.Q. (East) and Research.		6
<b>Camp</b> <i>(Land-based Camps)</i>	<i>(Details in Chapter–X)</i>		20
<b>Camp</b> <i>(Floating Camps/ Check-posts)</i>	<i>(Details in Chapter–X)</i>		11

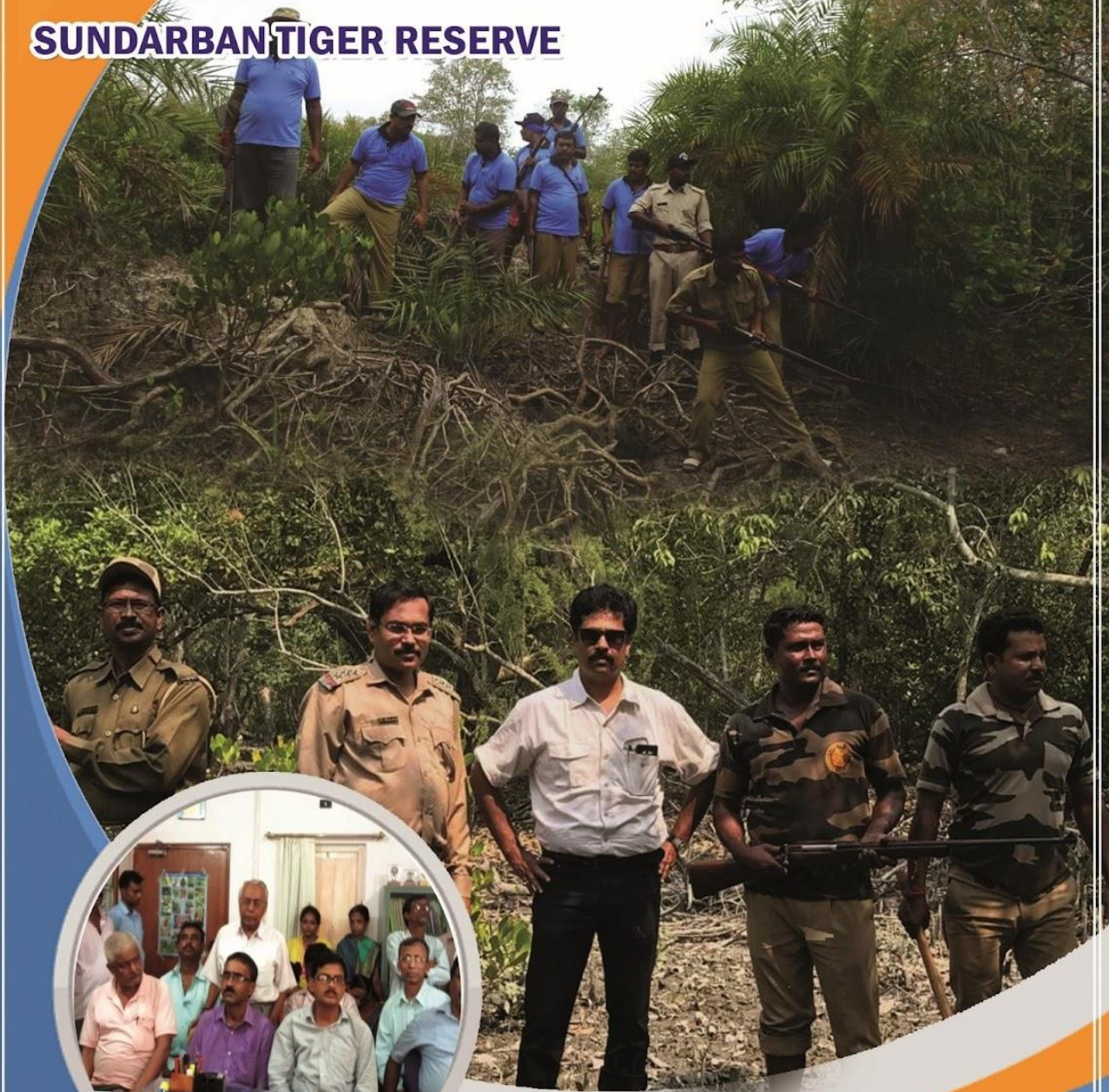




# Chapter - 4

## STAFF STRENGTH

### SUNDARBAN TIGER RESERVE



## STAFF STRENGTH:

Sundarban Tiger Reserve is headed by Field Director, an officer of the rank of Chief Conservator of Forests. He is supported by one Deputy Field Director (IFS), two Assistant Field Directors, Range Officers and other frontline staff, the details of which are given in the table below:

### EXISTING SANCTIONED STAFF STRENGTH AS ON:

Sl. No.	Category of Post	Sanctioned Strength	Existing	Vacant	Audited Against	Existing G.O. No.
1.	CCF & FD	1	1	-	-	PCCF, WB's O.O. No.20-Misc/2001 dt. 18.05.2001
2.	DFD	1	1	-	-	-do-
3.	AFD	2	2	-	-	1234-For, dt. 27.2.1974
4.	Research Officer	1	-	1	-	11343-For, dt. 21.12.1976
5.	Lab. Asstt.	1	-	1	-	4253-For, dt. 10.7.1978
6.	Veterinary Officer	1	-	1	-	1130-For/11B-22/88, dt.14.2.1991
7.	Head Clerk	1	1	-	-	PCCF, WB's O.O. No. 26-Misc/PMC/15, dt. 30.03.2015
8.	Accountant	1	1	-	-	- do-
9.	UDC	6	4	2	-	-do-
10.	PA	1	1	-	-	
11.	Clerk-cum-Typist	7	1	6	-	-do-
12.	Typist	1	-	1	-	- do-
13.	Forest Ranger	11	9	2	-	PCCF, WB's O.O. No. 20-Misc/2001, dt. 18.05.2001
14.	DR/Fr.	28	19	9	-	PCCF, WB's O.O. No. 07-Misc/PMC/2018, dt. 19.01.2018
15.	Head Forest Guard	8	3	5	-	-do-
16.	Forest Guard	110	50	60	-	-do-
17.	Majhi	21	05	16	-	CCF/WB's O.O. No. 45/S, dt. 24.9.1975
18.	Boatman	54	09	45	-	4192-For, dt. 19.9.1981
19.	Forest Watcher	1	-	1	-	769-For, dt. 9.2.1974
20.	Karmabandhu	1	1	-	-	5295-For/11B-41/80-I, dt. 21.7.1984



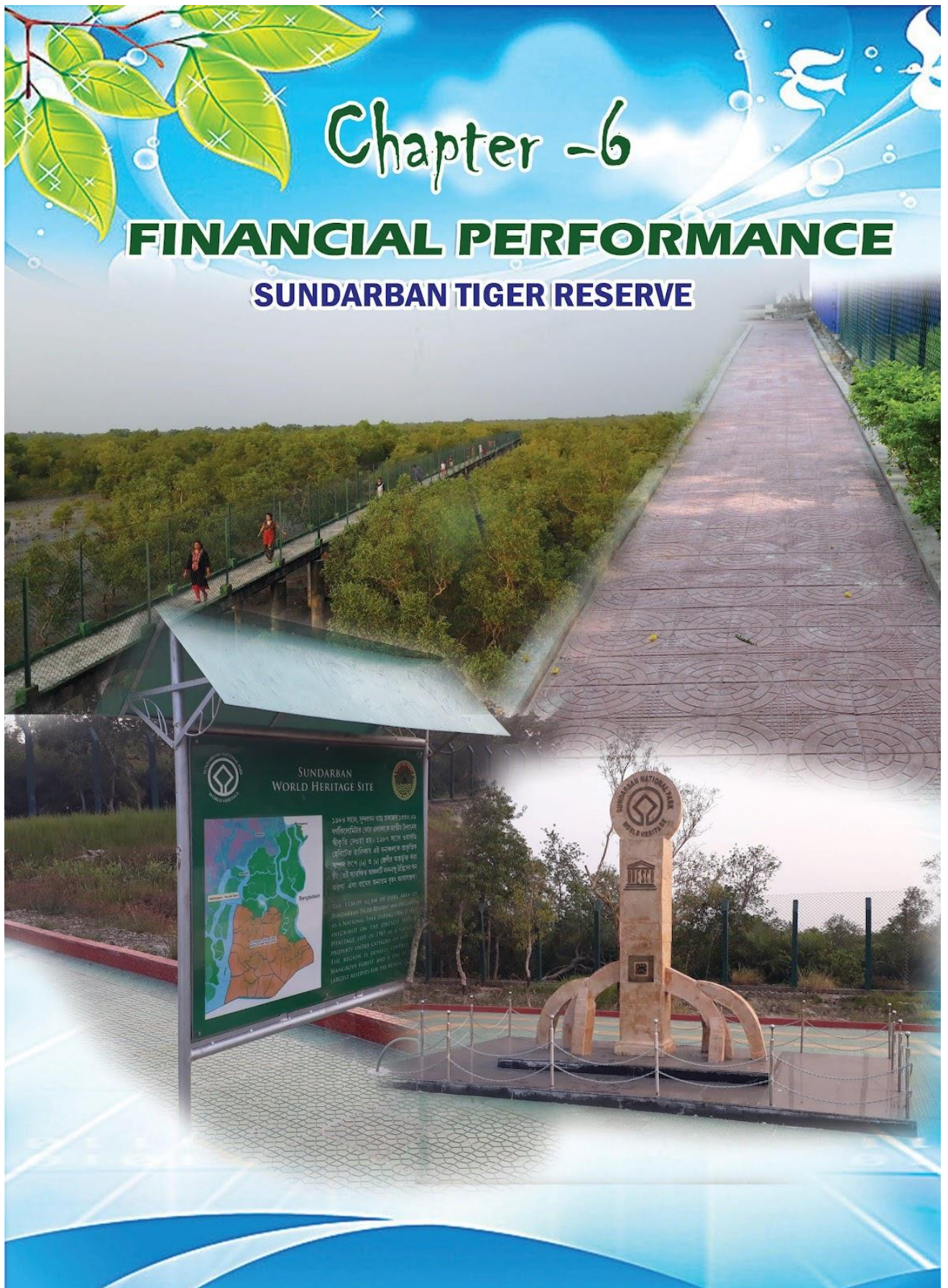
21.	Mali	1	1	-	-	769-For, dt. 9.2.1974
22.	Driver	2	1	1	-	8815-For, dt. 20.9.1976
23.	Chowkidar	2	1	1	-	769-For, dt. 9.2.1974
24.	Karmasathi	2	-	2	-	769-For, dt. 9.2.1974
25.	Peon	4	3	1	1*	*Audited against PCCF, WB. G.O. No. 760-For, dt. 9.2.1974 & 5295-For/11B-41-80-I, dt. 21.7.1984
26.	Orderly	8	3	5	-	769-For, dt. 9.2.1974 & 5926-For, dt. 2.9.1977 & 2661-For, dt. 27.4.1974
28.	Engine Driver	5	3	2	-	1170-For, dt. 17.12.76 & 4128-For, dt. 19.7.1980
29.	Sareng	3	2	1	-	4128-For, dt. 17.09.80 & 4192-For, dt. 19.09.1981
30.	Sukhani	2	-	2	-	1170-For, dt. 17.12.76 & 4128-For, dt. 19.07.1980
31.	OMG	3	-	3	-	do-
32.	Laskar	8	-	8	-	-do-
	<b>TOTAL</b>	<b>298</b>	<b>122</b>	<b>176</b>	<b>1</b>	
	Banashramik	-	12	-	-	

## STAFF STRENGTH









### FINANCIAL PERFORMANCE OF THE LAST FOUR YEARS:

CATEGORY	HEAD OF SERVICE	2016-2017 (in Rs.)	2017-2018 (in Rs.)	2018-2019 (in Rs.)	2019-2020 (in Rs.)
REVENUE		28,66,462.00	27,84,642.00		
EXPENDITURE	Non-Plan 01-NP	6,54,65,484.00	6,72,28,413.00		
	02-110-WL(NP)	2,14,59,388.00	1,91,14,358.00		
	02-800, OE NP	3,12,656.00	3,85,538.00		
	<b>Sub-total:</b>	<b>9,01,03,990.00</b>	<b>8,67,28,309.00</b>		
	2406-02-800-OE-CN (NS) CMM O/C	86,81,353.00	32,70,703.00		
	2406-02-800E(Dev)NP- ESBR-OC	12,67,000.00	17,92,061.00		
	2406-01-101-Cons. & Dev. CN-Central Sector (NS)-003-Cons. & Dev. Wetland	NIL	43,94,243.00		
	UNDP		NIL		
	<b>Sub-total:</b>	<b>99,48,353.00</b>	<b>94,57,007.00</b>		
	CSS-PT-Non-Recurring	3,43,73,114.00	3,76,61,158.00		
	CSS-PT-Recurring	2,19,79,039.00	2,34,64,614.00		
	CSS-Conservation of Natural Resources & Eco- Systems	NIL	NIL		
	<b>Sub-total:</b>	<b>5,63,52,153.00</b>	<b>6,11,25,772.00</b>		
	State Plan (AP & 10 <sup>th</sup> Plan)	1,02,81,337.00	1,25,77,425.00		
	XIII <sup>th</sup> Finance Commission	NIL	NIL		
	Integrated Forest Protection Scheme	NIL	16000.00		
	RIDF	NIL	1,00,20,096.00		
	NREGS	NIL	NIL		
	RKVY	NIL	NIL		
	<b>Sub-total:</b>	<b>1,28,47,636.00</b>	<b>2,26,13,521.00</b>		
	<b>GRAND TOTAL:</b>	<b>16,92,52,132.00</b>	<b>18,27,09,251.00</b>		

DIRECTORATE OF FORESTS									
PERFORMANCE REPORT FOR THE FINANCIAL YEAR 2018-2019									
CIRCLE : SUNDARBAN TIGER RESERVE					SCHEME :		WEST BENGAL STATE CAMPA		
Detailed Head of Service :			WEST BENGAL STATE CAMPA						
Sanction No.									
					SANCTION AMOUNT RS.				
Sl. No.	Item of Works	Division		Location	Target		Achievement		Remarks if any
					Phy.	Fin.	Phy.	Fin	
1	Construction of Toilets in JFMCs	STR			20 nos	1000000.00	20 nos	1000000.00	
2	Implementation of Micro Plan activities in JFMCs (i)Solar Street Light double unit (ii)Re-digging of sweet water pond	STR			10 nos 10 nos	500000.00 500000.00	10 nos 10 nos	494550.00 500000.00	
3	Wildlife & bio-diversity Management (Creation of Nylon Net Fencing)	STR			10 Km.(approx)	4000000.00	10 nos	3997804.00	
PERFORMANCE REPORT FOR THE FINANCIAL YEAR 2019-20									
Detailed Head of Service :			WEST BENGAL STATE CAMPA						
SL N O.	Item of Works	Division		Location	Target		Achievement		Remarks if any
					Phy.	Fin.	Phy.	Fin.	
					Nil	Nil	Nil	Nil	

	<b>PROJECT : AFFORESTATION ALONG THE GANGA RIVER,</b>	
--	-------------------------------------------------------	--

	WEST BRNGAL		
	DIVISION : Sundarban Tiger Reserve (2018-2020)		
Treatment Model	Physical Progress 2017-18	Division wise Physical Target (in Ha).	
		Physical	Financial
	Component/Activity		
NL/H/12	Nursery and Advance Works		NIL
	Creation		
NL/P/13	Nursery and Advance Works		NIL
	Creation		
NL/P/16	Nursery and Advance Works		NIL
	Creation		
UL/E/01	Nursery and Advance Works		NIL
	Creation		
	Maintenance		
UL/I/01	Nursery and Advance Works	NIL	NIL
	Creation	NIL	NIL
	Maintenance	NIL	NIL
UL/A/01	Nursery and Advance Works		NIL
	Creation		
	aintenance		

**Allotment and Expenditure for WBFBCP (JICA) of Sundarban Tiger Reserve DMU during 2018 - 2019 as on 31.03.2019.**

Sl. No.	Code	Description	Unit	Allotment	Total Fund received as on 31.03.2020.	Expenditure
<b><u>Reimbursable Expenses</u></b>	-	-	-	-		
1	R.2B3.11.NF	Tiger in Sundarbans - New Fence	Km.	51,11,930.00	51,11,930.00	38,75,055.00
2	R.2B3.11.OF	Tiger in Sundarbans - Old Fence	Km.	29,45,102.00	29,45,102.00	12,82,636.00
3	R.2B3.13.BP	Tigers in Sundarbans- Mobile Squad - Boat Purchase	No.	18,00,000.00	0.00	0.00



4	R.2B3.13.VH	Tiger in Sundarbans - Mobile Squad - Vehicle / Boat hire	No.	56,98,821.00	56,98,821.00	44,07,807.00
5	R.2B3.13.EQ	Tiger in Sundarbans - Mobile Squad - Equipment	LS	3,47,759.00	3,25,000.00	87,316.00
6	R.2B3.13.LB	Tiger in Sundarbans - Mobile Squad - Labour	MD	23,44,911.00	15,92,000.00	14,89,136.00
7	R.2B4.VH	Smaller Animals in Central Bengal Capture / Rescue- Vehicle / Boat Hire	No.	0.00	0.00	0.00
8	R.2B4.EQ	Smaller Animals in Central Bengal Capture / Rescue- Equipment	LS	0.00	0.00	0.00
9	R.2B4.LB	Smaller Animals in Central Bengal Capture / Rescue - Labour	MD	0.00	0.00	0.00
10	R.2B4.VS	Smaller Animals in Central Bengal Capture / Rescue - Veterinary Services	LS	1,00,000.00	0.00	0.00
11	R.4C4.52.SW	Incremental Staff DMU - Skilled (2 no.) @243000/-	MY	2,60,001.00	2,60,000.00	2,60,930.00
<b>TOTAL</b>				<b>1,86,08,524.00</b>	<b>1,59,32,853.00</b>	<b>1,14,02,880.00</b>
<b><u>Non-Reimbursable Expenses</u></b>						
1	N.57.OC	DMU -Operational Costs -Other Charges	LS	36,000.00	2,000.00	0.00
2	N.57.PO	DMU-Operational Costs-Hire / POL	Month	25,000.00	0.00	0.00
3	N.58.C.GST.9	Other Expenses - GST	LS	1,00,000.00	1,00,000.00	38,040.00
4	N.58.S.GST.9	Other Expenses - GST	LS	0.00	0.00	0.00
5	N.58.ST	Other Expenses - Service Tax	LS	0.00	0.00	0.00
6	N.58.PB	Publications / Publicity	LS	10,000.00	0.00	0.00
<b>TOTAL</b>				<b>1,71,000.00</b>	<b>1,02,000.00</b>	<b>38,040.00</b>
<b>GRAND TOTAL</b>				<b>1,87,79,524.00</b>	<b>1,60,34,853.00</b>	<b>1,14,40,920.00</b>

**Allotment and Expenditure for WBFBCP (JICA) of Sundarban Tiger Reserve DMU during 2019 - 2020 as on 31.03.2020.**

Sl. No.	Code	Description	Unit	Allotment	Total Fund received as on 31.03.2020.	Expenditure
<b><u>Reimbursable Expenses</u></b>						
	-	-	-	-		
1	R.2B3.11.NF	Tiger in Sundarbans - New Fence	Km.	26,68,838.00	26,50,000.00	26,03,265.76
2	R.2B3.11.OF	Tiger in Sundarbans - Old Fence	Km.	21,12,466.00	21,00,000.00	20,67,876.90
3	R.2B3.13.BP	Tigers in Sundarbans-Mobile Squad - Boat Purchase	No.	18,00,000.00	0.00	0.00

4	R.2B3.13.VH	Tiger in Sundarbans - Mobile Squad - Vehicle / Boat hire	No.	42,91,014.00	40,00,000.00	38,96,013.84
5	R.2B3.13.EQ	Tiger in Sundarbans - Mobile Squad - Equipment	LS	4,10,443.00	2,00,000.00	1,92,055.48
6	R.2B3.13.LB	Tiger in Sundarbans - Mobile Squad - Labour	MD	13,55,775.00	12,20,000.00	11,81,023.88
7	R.2B4.VH	Smaller Animals in Central Bengal Capture / Rescue- Vehicle / Boat Hire	No.	0.00	0.00	0.00
8	R.2B4.EQ	Smaller Animals in Central Bengal Capture / Rescue- Equipment	LS	0.00	0.00	0.00
9	R.2B4.LB	Smaller Animals in Central Bengal Capture / Rescue - Labour	MD	0.00	0.00	0.00
10	R.2B4.VS	Smaller Animals in Central Bengal Capture / Rescue - Veterinary Services	LS	1,00,000.00	0.00	0.00
11	R.4C4.52.SW	Incremental Staff DMU - Skilled (2 no.) @ 243000/-	MY	2,64,000.00	2,64,000.00	2,54,062.98
<b>TOTAL</b>				<b>1,30,02,536.00</b>	<b>1,04,34,000.00</b>	<b>1,01,94,298.84</b>
<b><u>Non-Reimbursable Expenses</u></b>						
1	N.57.OC	DMU -Operational Costs -Other Charges	LS	36,000.00	1,000.00	12.00
2	N.57.PO	DMU-Operational Costs-Hire / POL	Month	25,000.00	0.00	0.00
3	N.58.C.GST.9	Other Expenses - GST	LS	5,00,000.00	5,00,000.00	4,08,116.08
4	N.58.S.GST.9	Other Expenses - GST	LS	5,00,000.00	5,00,000.00	4,08,116.08
5	N.58.ST	Other Expenses - Service Tax	LS	0.00	0.00	0.00
6	N.58.PB	Publications / Publicity	LS	0.00	0.00	0.00
<b>TOTAL</b>				<b>10,61,000.00</b>	<b>10,01,000.00</b>	<b>8,16,244.16</b>
<b>GRAND TOTAL</b>				<b>1,40,63,536.00</b>	<b>1,14,35,000.00</b>	<b>1,10,10,543.00</b>

**SUNDARBAN TIGER CONSERVATION FOUNDATION TRUST**  
**(S.T.C.F.T.)**  
**P.O. Canning Town. Dist. South 24 Parganas.**  
**ECO-DEVELOPMENT ACTIVITIES**

## ACCOUNTING YEAR 2018– 2019

Sl. No.	Description of work	Fund in Rs.	Expenditure in Rs.
	Renovation of Nylon Net fencing.	10,81,150	9,21,283
	Maintenance of emergency services.	11,970	11,970
	Procurement of camp Equipments.	17,584	17,584
	Implementation of e-patrolling in the Ranges.	14,03,691	14,03,691
	Repairing of departmental Vessel.	1,13,168	97,613
	Procurement of Camera Trap casing, Battery, Memory card and repairing of Camera.	6,83,800	6,83,800
	Maintenance of Tourist Spots including signage.	3,42,678	3,42,678
	Deploying Tourist Volunteers.	3,81,700	3,81,616
	Plastic cleaning drive.	6,74,000	6,73,957
	Making of Banners and publicity materials.	1,50,428	1,50,428
	Widening of existing Jetty at Dobanki	6,55,575	6,55,575
	Maintenance of existing Jetty at Dobanki	1,13,831	1,13,831
	Creation of Nature Club – 15 Nos.	2,67,222	2,67,222
	Chain-link fencing at Netidhopani for Batagur Baska	4,00,000	4,00,000
	Satellite tagging of Batagur Baska – 2 Nos.	4,00,000	4,00,000
	Water Treatment plant at Kalitala, Basirhat Range. 1 Unit.	16,00,000	15,71,873
	Socio-economic study involving J.F.M.C.s	2,80,000	2,71,600
	Continuation of Medical Camp by S.H.I.S.	4,50,000	4,50,000
	Re-excavation of irrigation canal at Basirhat – 200 Rmt, Sajnekhali – 150 Rmt.	6,00,000	5,71,541
	Monobloc Pump – 1 H.P. at N.P.W. Range – 15 Nos. and at Basirhat Range – 18 Nos.	2,31,000	2,31,000
	Motor Dheki - 1 No.	52,572	52,572
	Construction of Brick paved road at N.P.W. Range – 208 Rmt., at SWLS Range – 306 Rmt.	10,00,000	9,64,025
	Organising Veterinary Camps at J.F.M.C. areas.	2,80,000	2,30,500
	Gitanjali Housing Scheme.	28,50,500	1,70,100
	Crude Honey collection for Sundarban Tiger Reserve.	21,00,000	21,00,000
	Crude Honey collection for D.F.O. 24-Parganas (South).	18,53,000	18,53,000
	Banya Pran Sathi Prkalpa.	3,39,000	1,59,900
	TOTAL	18,332,869	15,145,359

## ACCOUNTING YEAR 2019– 2020

Sl. No.	Description of work	Fund in Rs.	Expenditure in Rs.
	Renovation of Nylon Net fencing.	12,20,828	7,54,086
	Maintenance of emergency services.	1,00,000	17,500
	Implementation of e-patrolling in the Ranges.	9,00,000	3,39,754
	Repairing of departmental Vessel.	4,32,000	1,69,930
	Procurement of Camera Trap casing, Battery, Memory card and repairing of Camera.	8,00,000	7,64,550
	Food for Batagur baska, crocodile, rescued animals.	13,68,000	13,67,475
	Maintenance of Tourist Spots including signages.	3,35,519	3,03,327
	Deploying Tourist Volunteers.	6,23,703	6,23,703
	Repairing of existing Jetty at Netidhopani.	2,50,000	2,50,000
	Plastic cleaning drive.	7,19,248	7,19,248
	Celebration of Gobal Tiger Day	86,240	86,240
	Safe Shed for Batagur baska at Sajnekhali.	5,20,000	4,88,601
	Satellite tagging of Batagur Baska – 2 Nos.	4,00,000	3,33,113
	Water Treatment plant at Mitrabari, Basirhat Range.	17,00,000	2,68,161
	Organising meetings, workshops with JFMC and microplan.	4,00,000	3,96,651
	Continuation of Medical Camp by S.H.I.S.	4,50,000	2,70,000
	Shallow Pumping station at Bijoyanagar, NPW Range.	5,00,000	4,97,500
	Re-excavation of irrigation canal at Basirhat –Rs.3,00,000.00 for 300 Rmt. Sajnekhali –Rs.2,99,808.00 for 300 Rmt.	6,00,000	5,99,808
	Various A.L.P. including training and input to JFMCs.	6,33,208	81,360
	Construction of Brick paved road at N.P.W. Range – 520.6 Rmt., Bali JFMC. Rs. 10,00,000 at SWLS Range – 312 Rmt. Lahiripur Santigachi JFMC, Rs.5,99,953, at Basirhat Range - 150 Rmt., Hentalbari JFMC Rs.2,99,940.00	20,00,000	18,99,893
	Organising Veterinary Camps at J.F.M.C. areas.	3,16,792	3,16,792
	Gitanjali Housing Scheme.	26,70,400	56,700
	Crude Honey collection for Sundarban Tiger Reserve.	26,70,000	26,70,000
	Crude Honey collection for D.F.O. 24-Parganas (South).	18,00,000	18,00,000
	Banya Pran Sathi Prkalpa.	3,99,100	51,600
	Banmahotsab	10,19,058	10,19,058
	Assurance colony for Batagur baska at Dobanki, Harikhali.	21,00,000	13,00,057

**Note :**

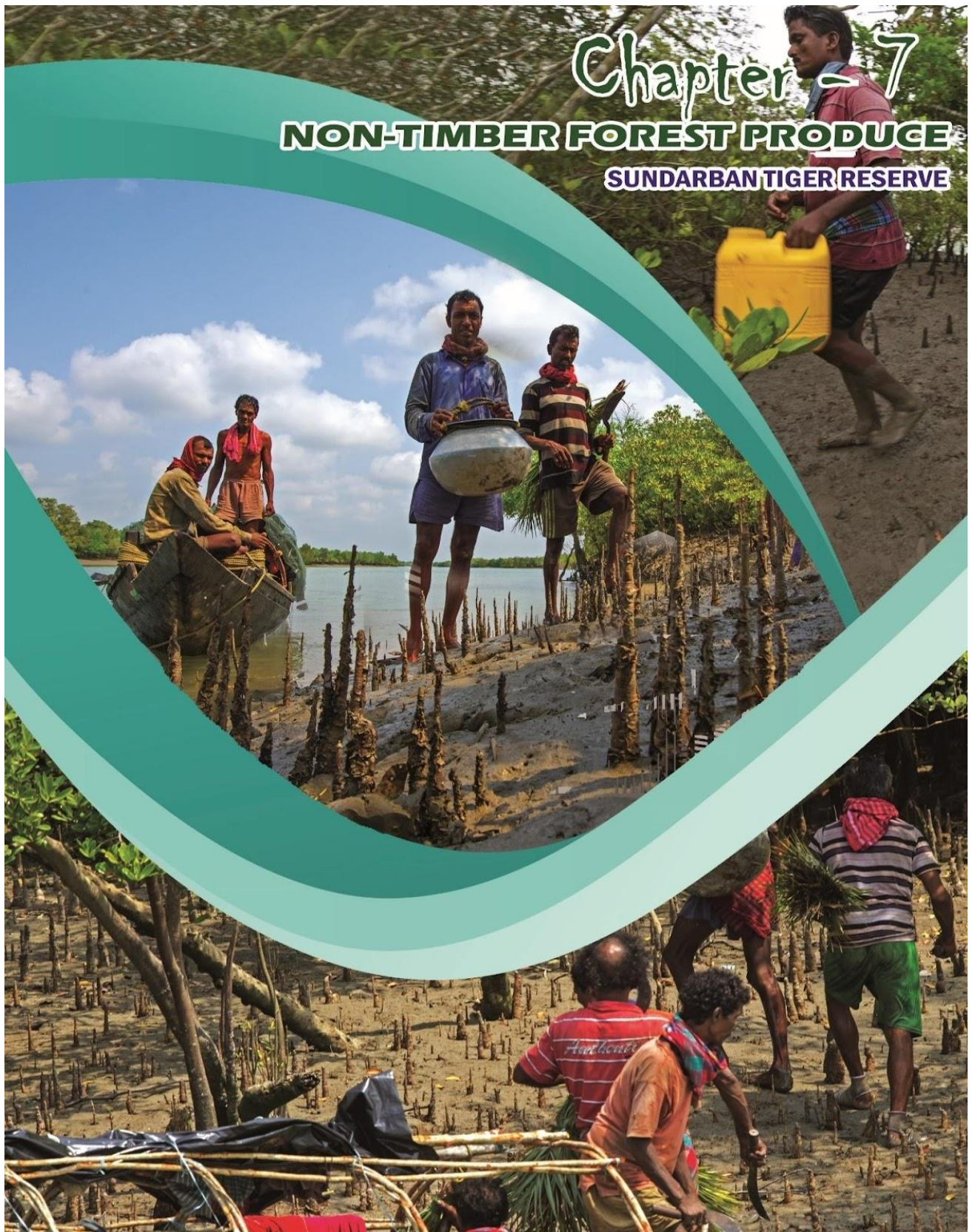
1. Water treatment plant could not be completed within March 2020 due to lockdown for the pandemic disease COVID – 19.
2. Medical camp bill for the month of February 2020 and March 2020 for Rs.1,57,500.00 by Southern Health Improvement Samity (S.H.I.S.) could not be submitted within March 2020 due to lock down.
3. Nylon rope of value Rs.8,84,604.00 could not be supplied within March 2020 due to lockdown.

STATUS OF GITANJALI HOUSING SCHEME					
Under Sundarban Tiger Reserve from beginning : - as on					31.03.2019.
Fund through Sundarban Tiger Conservation Foundation Trust (S.T.C.F.T.)					
Total fund received					Rs. 93,508,000
	( Rs.1,94,000 X 482 Dwelling units )				
Less disbursed : -		Amount	Nos.	Amount	
1	1st Installment	Rs. 75,600	472	Rs. 35,683,200	
2	2nd installment	Rs. 56,700	470	Rs. 26,649,000	
3	3rd installment	Rs. 56,700	462	Rs. 26,195,400	
		Total disbursed		Rs. 88,527,600	
4	Less : Contingency allowed for -		462		
	Dwelling units have received 3rd. installment	Rs. 5,000	462	Rs. 2,310,000	
		Total expenditure			Rs. 90,837,600
	As on	31.03.2019.	closing balance		Rs. 2,670,400
RANGEWISE SANCTION AND DISTRIBUTION OF FUND					
Sl. No.	Name of Range	No. of Dwelling unit sanctioned	Disbursed		
			1st installment	2nd installment	3rd installment
1	S.W.L.S.	187	178	178	173
2	Basirhat	161	160	158	156
3	N.P.W.	103	103	103	103
4	N.P.E.	31	31	31	30
	Total	482	472	470	462
BALANCE INSTALLMENT TO BE DISBURSED : -					
			1st installment	2nd installment	3rd installment
1	S.W.L.S.	187	9	9	14
2	Basirhat	161	1	3	5
3	N.P.W.	103	0	0	0
4	N.P.E.	31	0	0	1

	<b>Total</b>	<b>482</b>	<b>10</b>	<b>12</b>	<b>20</b>
<b>Balance fund to be disbursed : -</b>					
	<b>Installment</b>	<b>Amount</b>	<b>No. of unit</b>	<b>Amount</b>	
<b>1</b>	<b>1st</b>	<b>Rs. 75,600</b>	<b>10</b>	<b>Rs. 756,000</b>	
<b>2</b>	<b>2nd</b>	<b>Rs. 56,700</b>	<b>12</b>	<b>Rs. 680,400</b>	
<b>3</b>	<b>3rd</b>	<b>Rs. 56,700</b>	<b>20</b>	<b>Rs. 1,134,000</b>	
					<b>Rs. 2,570,400</b>
<b>Add contingency</b>		<b>Rs. 5,000</b>	<b>20</b>		<b>Rs. 100,000</b>
	<b>TOTAL FUND TO BE DISBURSED</b>				<b>Rs. 2,670,400</b>
<b>Total 3rd installment issued during this year 2018 - 19</b>				<b>2</b>	
<b>Therefore contingency Rs.5,000.00 X</b>			<b>2</b>	<b>Rs. 10,000</b>	
<b>Total balance including contingency</b>			<b>Rs. 2,680,400</b>		
<b>Fund received on</b>		<b>28.03.2014.</b>	<b>46,754,000</b>	<b>on 08.07.2015.</b>	<b>46,754,000</b>
<b>STATUS OF GITANJALI HOUSING SCHEME</b>					
<b>Under Sundarban Tiger Reserve from beginning : - as on</b>					<b>31.03.2020.</b>
<b>Fund through Sundarban Tiger Conservation Foundation Trust (S.T.C.F.T.)</b>					
<b>Total fund received</b>					<b>Rs. 93,508,000</b>
	<b>( Rs.1,94,000 X 482 Dwelling units )</b>				
<b>Less disbursed : -</b>		<b>Amount</b>	<b>Nos.</b>	<b>Amount</b>	
<b>1</b>	<b>1st Installment</b>	<b>Rs. 75,600</b>	<b>472</b>	<b>Rs. 35,683,200</b>	
<b>2</b>	<b>2nd installment</b>	<b>Rs. 56,700</b>	<b>470</b>	<b>Rs. 26,649,000</b>	
<b>3</b>	<b>3rd installment</b>	<b>Rs. 56,700</b>	<b>463</b>	<b>Rs. 26,252,100</b>	
		<b>Total disbursed</b>		<b>Rs. 88,584,300</b>	
<b>4</b>	<b>Add : contingency allowed for -</b>		<b>463</b>		
	<b>Dwelling units have received 3rd.</b>				
	<b>installment</b>	<b>Rs. 5,000</b>	<b>463</b>	<b>Rs. 2,315,000</b>	
		<b>Total expenditure</b>			<b>Rs. 90,899,300</b>
	<b>As on</b>	<b>31.03.2020.</b>	<b>closing balance</b>		<b>Rs. 2,608,700</b>

RANGEWISE SANCTION AND DISTRIBUTION OF FUND					
Sl. No.	Name of Range	No. of Dwelling unit sanctioned	Disbursed		
			1st installment	2nd installment	3rd installment
1	S.W.L.S.	187	178	178	174
2	Basirhat	161	160	158	156
3	N.P.W.	103	103	103	103
4	N.P.E.	31	31	31	30
	Total	482	472	470	463
BALANCE INSTALLMENT TO BE DISBURSED					
			1st installment	2nd installment	3rd installment
1	S.W.L.S.	187	9	9	13
2	Basirhat	161	1	3	5
3	N.P.W.	103	0	0	0
4	N.P.E.	31	0	0	1
	Total	482	10	12	19
Balance fund to be disbursed					
	Installment	Amount	No. of unit	Amount	
1	1st	Rs. 75,600	10	Rs. 756,000	
2	2nd	Rs. 56,700	12	Rs. 680,400	
3	3rd	Rs. 56,700	19	Rs. 1,077,300	
					Rs. 2,513,700
Add contingency		Rs. 5,000	19		Rs. 95,000
	TOTAL FUND TO BE DISBURSED				Rs. 2,608,700
Total 3rd installment issued during this year 2019 - 20				1	
Therefore contingency Rs.5,000.00 X			1	Rs. 5,000	
Total balance including contingency			Rs. 2,613,700		
Fund received on		28.03.2014.	46,754,000	on 08.07.2015.	46,754,000





# NON-TIMBER FOREST PRODUCE

Honey and bees-wax are the minor forest produce, which are collected during the months of April and May. Sundarban Tiger Reserve issues permits every year for honey collection. The honey so collected is deposited at different godowns of the Tiger Reserve for storage and subsequent disposal by handing over the same to West Bengal Forest Development Corporation Limited. Earlier, Golpata (*Nypa sp.*) and Hental (*Phoenix sp.*), which were collected by the fringe villagers was discontinued in 1978 and 1991 respectively. The coupe operation has been discontinued since the year 2001.

## Non-timber Forest Produce (wild honey collection):

Year	2014-2015	2015-16	2016-17	2017-18	2018-19	2019-20
Crude Honey Collection in Kg	47,412	33,515	19050	15000	15000	17800
Total Permit Issue	160	91	82	68	61	79
Total Man Involvement	1155	979	604	486	449	605

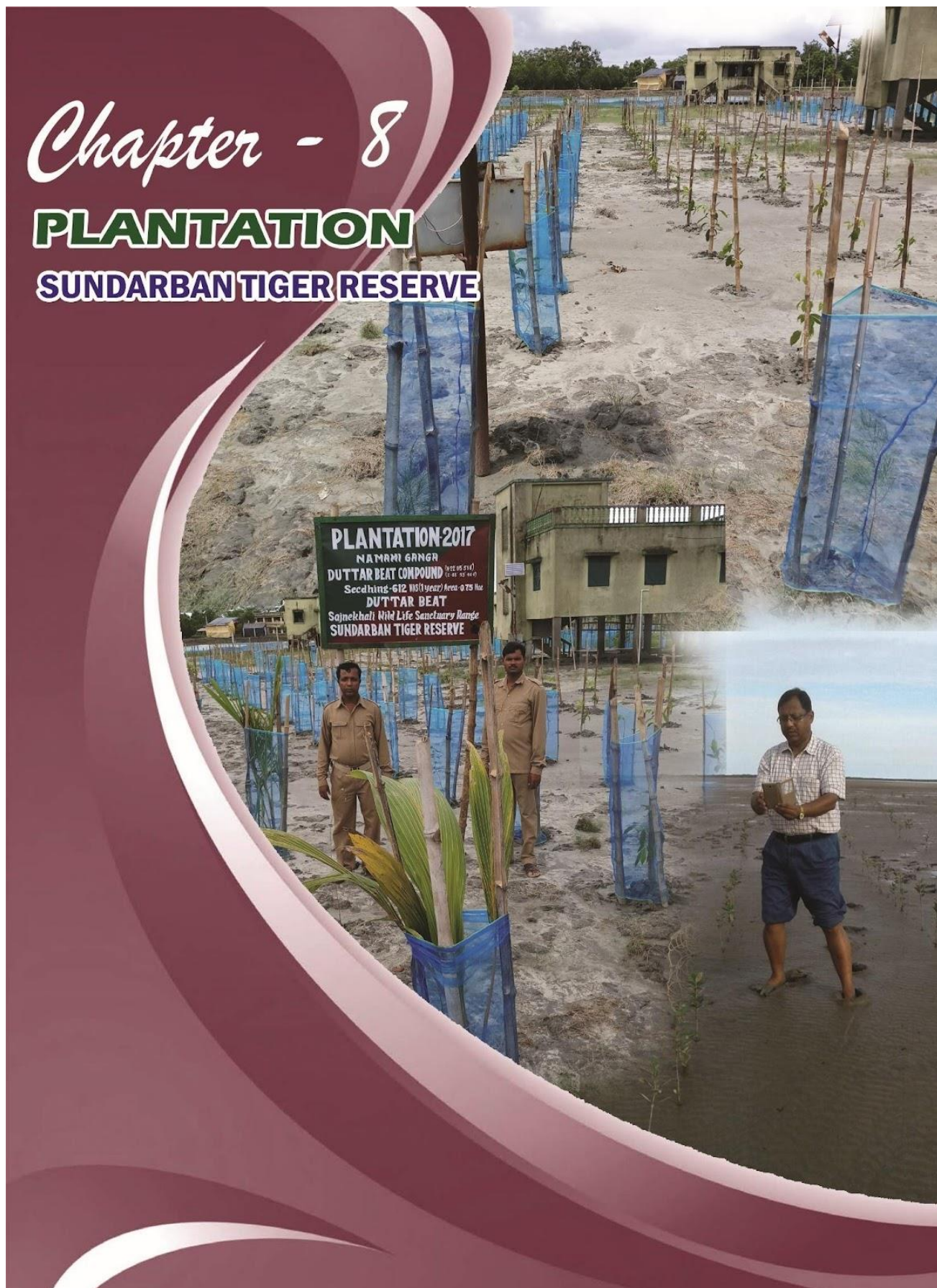




# Chapter - 8

## PLANTATION

### SUNDARBAN TIGER RESERVE





# PLANTATION

- **MANGROVE PLANTATION**
- **NON-MANGROVE PLANTATION**

To meet the local demand of small-wood and fuel-wood, mangrove plants are artificially regenerated on the mud-flats adjoining the fringe villages of the Tiger Reserve. Non-mangrove plantations are also raised along village roads and earthen embankments to cater to the needs of the local people. Plantations (Mangrove and Non-mangrove) rose by Sundarban Tiger Reserve during last 8 (*eight*) years are given below:

## **Mangrove Plantation:**

Year	Range	Area (in Ha.)	Location
2015-2016	BHT	8	Jhila-3, Khatuajhuri-1
	NPE	12	Chandkhali-4, Chandkhali-3 & Bagmara-4
	SWLS	2	Dulki-2
	NPW	3	Netidhpani-1
Total		25	
2016-17	SWLS	2	Chargheri
	NPW	5	Kanchanchar
	NPE	3	Chandkhali-2
Total		10	
2017-18	SWLS	4	Dayapur and Lahiripur
	NPW	6	Kanchan Char
Total		10	
2018-19	NPE	10	Chamta- 7
	NPW	10	Kanchan Char
Total		20	
2019-20	NPE	10	Chamta-8
	BHT	5	Arbesi -1
	NPW	15	Kanchan Char, Harintana Char
Total		30	

## **Non-Mangrove Plantation:**

Year	Range	Area (in Ha.)	Location
2012-2018	-	NIL	-
2018-2019	-	NIL	-
2019-2020	-	NIL	-









## Chapter - 9

# JOINT FOREST MANAGEMENT SUNDARBAN TIGER RESERVE

## JOINT FOREST MANAGEMENT

### DETAILS REGARDING JFMC:

• No. of JFMCs	26
• No. of JFMCs registered	26
• No. of Revenue villages covered	38
• No. of Family members	9,098
• No. of SC Family members with percentage	8,174(89.84%)
• No. of ST Family members with percentage	370(4.066%)
• Total Forest area covered (in ha.)	26,474
• No. of JFMC having Women as Executive Committee Members	26

### STATUS OF ACTIVE SELF-HELP GROUP IN SUNDARBAN TIGER RESERVE:

Name of Range	Year						
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
National Park (W) Range	10	20	20	20	20	20	20
Sajnekhali Wildlife Sanctuary Range	11	41	38	38	38	38	38
Basirhat Range	35	49	85	85	85	85	85
<b>Grand Total:</b>	56	110	143	143	143	143	143

**Works & Expenditure for JFMC Beneficiaries (Last 4 Years):**

Sl No.	Item of works	Location	2016-2017		2017-18		2018-19		2019-20	
			Phy.	Finan. (Rs. in Lakhs)	Phy.	Finan. (Rs. in Lakhs)	Phy.	Finan. (Rs. In Lakhs)	Phy.	Finan. (Rs. in Lakhs)
1										
2										
3										
4										
5										
6										
7										
8										
27	J.F.M.C. Share									
		<b>Total:</b>								





## **Infrastructure development and capacity building**



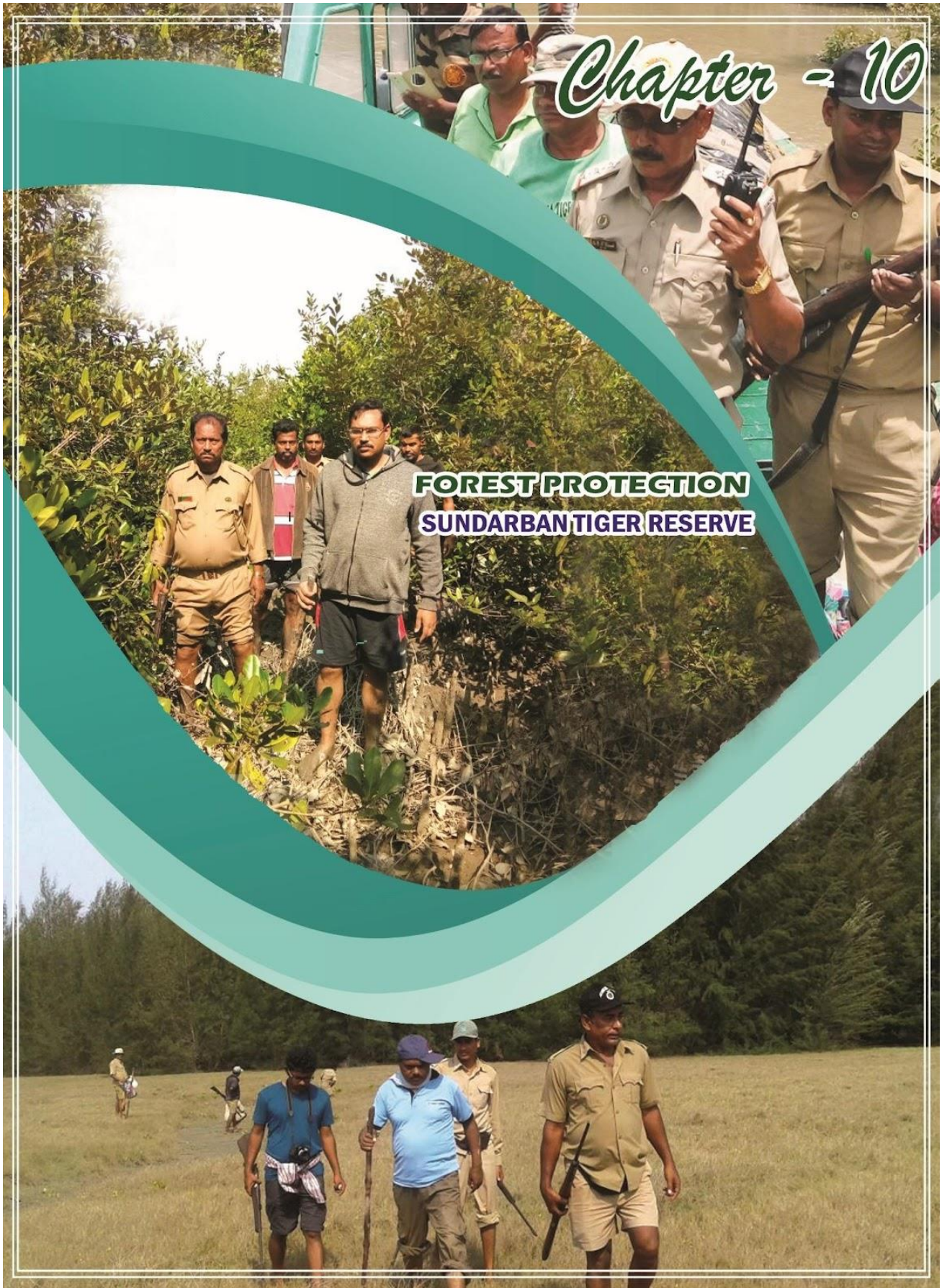
**Construction of irrigation channel and providing support to farmers**







**Construction of village roads and jetties**





## FOREST PROTECTION

- *List of anti –poaching camps*
- *Protection strategy*
- *Offence scenario during last few years*
- *Introduction of E-Patrolling at STR*
- *Works and Expenditures on Protection and Conservation in last 3 years.*

Land-based Camps			Floating Camps/ Check-Posts		
Sl.No.	Location	Range	Sl.No.	Location	Range
1	Pakhiralaya	Sajnekhali Wild Life Sanctuary Range	1	Kakmari	Bashirhat Range
2	Sajnekhali			Chilmari	
3	Duttar				
4	Dobanki		2	Chilmari	
5	Sudhanyakhali				
6	Jhilla	Bashirhat Range	3	Pirkhali	Sajnekhali Wild Life Sanctuary Range
7	Bagna		4	Sadakkhali	
8	Jhingekhali		5	Tentultola	
9	Khatuajhuri-Harinbhanga		6	Chayan (Moving Patrolling Camp)	
9	Burirdabri				
10	Harikhali		7	Banaraj (Moving Patrolling Camp)	NP East Range
11	Samsernagar				NP West Range
12	Kaksa				
13	Canning H.Q.	H.Q Range	8	Ludhirduani	NP East Range
14	Chamta	National Park (East)	9	Havati	NP West Range
15	Bagmara				
16	Gosaba H.Q.				
17	Sonakhali				
18	Chandkhali				
19	Haldibari	National Park (West)			
20	Netidhopani				
21	Bidya				
22	Kendo				
23	Rampura	Rampura Mobile Range			

One State Armed Police Camp posted at Jhila under Bashirhat Range headquarters. It also functions as a Special Strike Force and assists the field staffs in patrolling, raids and tiger rescue operations.

- **State Armed Police Force Camp established in the year: 2000**
- **No. of State Armed Police personnel posted:5+1**

**Rank of highest ranked officer posted in the Camp:Head Constable**

Two BSF camps have been established at Khatuajhuri and Bagna camps under Bashirhat Range.They along with the field staff carry out joint patrolling operations besides performing their day to day duties.

**No. of BSF personnel posted:6+1(Khatuajhuri)and 9+1(Bagna Camp)**

**Name of highest ranked officer posted in the Camp: Sub-Inspector**

#### **PROTOCOL FOR CREATION AND MAINTENANCE OF NYLON NET FENCING:**

##### **Details of Offence & Seizure:**

Sl. No .	FOREST OFFENCE	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	<b>POR (in Nos.)</b>	3	6	2	2	NIL	<b>4</b>
2.	<b>COR (in Nos.)</b>	3080	3050	2872	2581	2254	<b>2090</b>
3.	<b>UDOR (in Nos.)</b>	13	20	20	14	5	<b>11</b>
4.	<b>No. of Persons Arrested</b>	2	20	7	4	NIL	<b>24</b>
5.	<b>Incidences of Firing by Staff (in Round)</b>	NIL	5	NIL	12	NIL	<b>NIL</b>
6.	<b>No. of Offender Died</b>	NIL	NIL	NIL	NIL	NIL	<b>NIL</b>
7.	<b>No. of Offender Injured</b>	NIL	NIL	NIL	NIL	NIL	<b>NIL</b>
8.	<b>No. of Forest Staff Killed</b>	NIL	NIL	NIL	NIL	NIL	<b>NIL</b>
9	<b>No. of Forest Staff Injured/Assaulted</b>	1	NIL	NIL	NIL	NIL	<b>NIL</b>
10.	<b>Total Compensation Realised (in Rs.)</b>	24,66,230.00	23,00,350.00	22,15,630.00	20,54,850.00	17,36,400.00	<b>16,71,850.00</b>
11 .	<b>Quantity of Timber Seized</b>	1.725m3	4.073 m³	73.165 m³	0.36m³	NIL	<b>5.6385 m³</b>



	(Sawn & Log)						
12	No. of Vehicle Seized	NIL	Nil	NIL	NIL	NIL	<b>NIL</b>
13	No. of Dingi Seized	10	7 Nos	12	13	5	<b>7</b>
14	No. of Mechanised Boat / Trawler Seized	NIL	9Nos	5	1	NIL	<b>NIL</b>
15	No. of Cattle Seized	NIL	45	22	17	2	<b>21</b>

### ***Introduction of E-Patrolling at STR:***

*Age-old pattern, procedure and practise of traditional patrolling and wildlife monitoring had some limitations with only use of manual pen, pencil and papers along with prolonged and time-bound use of RT system. Main constraints were time dependency on RT network, errors and time-consumptions in manual entry, possibilities of data manipulation and absence of real-time data. It was to overcome all of these limitations E-patrol/ Smart patrolling was introduced in Sundarban Tiger Reserve.*

In this new system every camp has been given a smart phone with a mobile application (written in Java language) installed on it for monitoring and patrolling purpose.

With this software/application the front-end staffs are recording their every possible activity like patrolling, fencing checking, night patrols, offence detections wildlife sightings etc.

Those real time recorded data will directly be going into main database which is made by MySQL RDBMS (Relational Database Management System) via a server mobile app which receives SMSs from the field phones and converts and sends them to the main server database in the form of raw data

That real time patrolling data, which has been well tabulated, analysed and synchronised into the main server database, can directly be monitored instantly by the monitoring applications loaded in the smart phones of senior hierarchy.

Other than that multiple reports of versatile types and patterns can easily be fetched out from that said database at any time through the web.

Sl No.	Item of works	Location	2016-2017		Ph y.	Fina n.	2018-19		2019-20	
			Ph y.	Fina n.			Ph y.	Fina n.	Ph y.	Finan .
				2017-18				(Rs. in Lakhs)		(Rs. in Lakhs)
1	Electric connection at Pakhiralaya with wiring, Fans, Lights & Street Light (Nos)	Pakhiralaya under SWLS Range, Jhingekhali, Basirhat Range.								
2	Construction of Wireless Control Tower (nos) and maintenance ## Maintenance of Wireless Network all over STR	Chamta under NP(E) Range			21	2.52				
3	Installation of Solar Power Plant (1.5 KVA) (3 KVA)(nos) including solar electrification and systems	Chandkhali under NP(E) Range, Kanksa under BHT Range, Chandkhali under (NPE) Range, Chamta under NP(E) Range, Baghmara under NP(E) Range, Kendo under NP(W) Range, Netidhopani under NP(W) Range, Burirdabri & Khatuajhuri under BHT Range and Sudnanyakhali under SWLS Range Haldibari & Kendo under NP(W) Range, Sajnakhal under SWLS Rang, Samsernsgsr, Pakhirala and Jhila. # Dobanki, Khatuajhuri, harikhali	4	27.54	4	9.99				

		and Chamta including wiring at Harikhali and Khatuajhuri								
4	Construction of raised Tube-well(nos), deep tubewell	Kanksa under BHT Range, Bidya under NP(W) Range, Pakhiralaya under SWLS, Khatuajhuri & Adibasipara under BHT Range, Sudhanyakhali under SWLS Range, Bagna & Harikhali under BHT Range (2013-14) Lahiripur & Dobanki under SWLS Range Bidya under NP(W) Range (2014-15), Netidhopani under NP(W) Range & Baghmara under NP(E) Range, Rampura under Rampura Range, Haldibari, Netidhopani, Dulki, Bashirhat and Bidya (2016-17)	7	28.68						
5	Excavation of Sweet Water Pond(nos)/Water harvesting structure	Kanksa under BHT Range, SWLS, BHT, NP(W) & NP(E) Range; Neti, Kumirmari, Bidya, Jhila, Bagna, Lahiripur, Sonagaon, Emblibari, Bagnapara, Satyanarayanpur, NP(E) 7 NP(W) # Chamta, Haldibari	12	14.51	2	5.39				

6	Staff Barrack including approach path (no)	Rampura under supervision of BH ,Netidhopani under NP(W) Range, Kanksa under BHT Range, Chamta under NP(E) Range, Chandkhali under NP(E) Range ## Maintenance All over STR Camps			16	24.73				
7	Construction of Jetty	Kanksa under BHT Range, Dobanki under SWLS Range & Gosaba under NP(E) Range (2013-14) Jhinakhali under BHT Range, Baghmara under NP(E) Range, Chandkhali under NP(E) Range; # Harikhali and Jhila			3	27.2				
8	Construction of Brick Paved Road (265 Rmt.)	Jhingakhali under BHT Range								
9	Construction of Watch Tower(nos)	Netidhopani under NP(W) Range # Maintenance of watch tower and renovation at Haldibari and Sajnekhali	2	33.7	2	17.32				
10	Construction of Samsernagar Floating Camp into land based camp. (total )	Samsernagar under BHT Range								
11	Extension of existing Jetty (Nos)	Sudhanyakhali under SWLS Range & Satyanarayanpur under (NPW) Range and Haldibari under NP(W) Range, 2017-18- bagmara, haldibari, netidhopani, chamta, kendo, chandkhali - all over STR	5	4.71	14	53.04				
12	Extension of Barrack (Nos)	Chandkhali under NP(E) Range 2017-18- All over STR Burirdabri, Jhila, Jhingekhali etc. Extension in Sudhanyakhali, Bagna and Canning HQ	9	10	3	13.1				



13	Compound development of existing old camps & Compound fencing .	Sudhanyakali under SWLS Range, Bagna under BHT Range, Netidhopani under NP(W) Range & Baghmara under NP(E) Range Sajnakali under SWLS Range, Jhila under BHT Range, Haldibari under NP(W) Range Baghmara under NP(E) Range (2014-15) .# Compund Development all over STR	5	14.46	21	67.7				
14	Maintenance of compound chain link fencing	Sajnakali, Khatuajhuri under SWLS Range, Burirdabri under BHT Range and Bidya under NP(W) Range # Harikhali, Burirdabri, Haldibari, Chamta, Chandkhali	3	2.35		10.18				
		<i>Total:</i>	47	135.9 5	86	231.1 7				

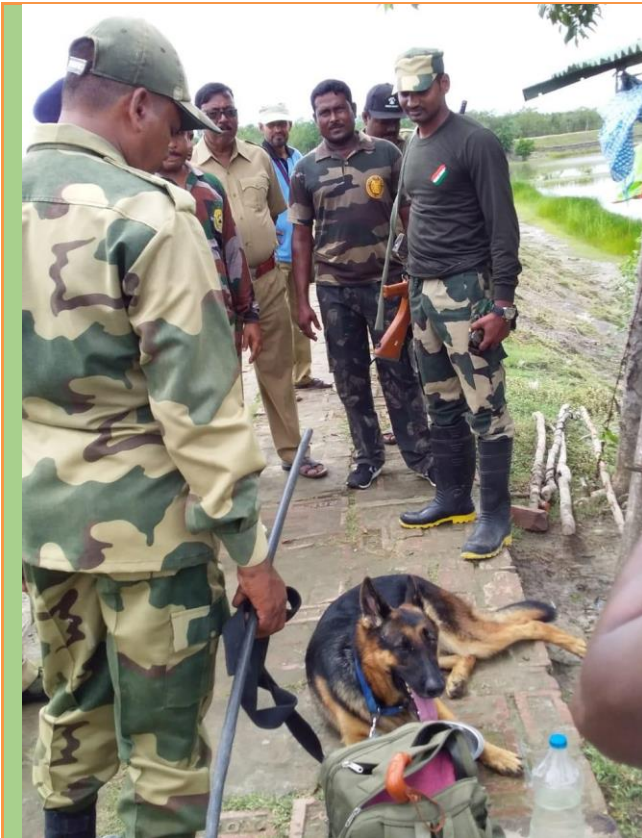
### Protection measures taken in Sundarban Tiger Reserve





### Protection measures taken in Sundarban Tiger Reserve





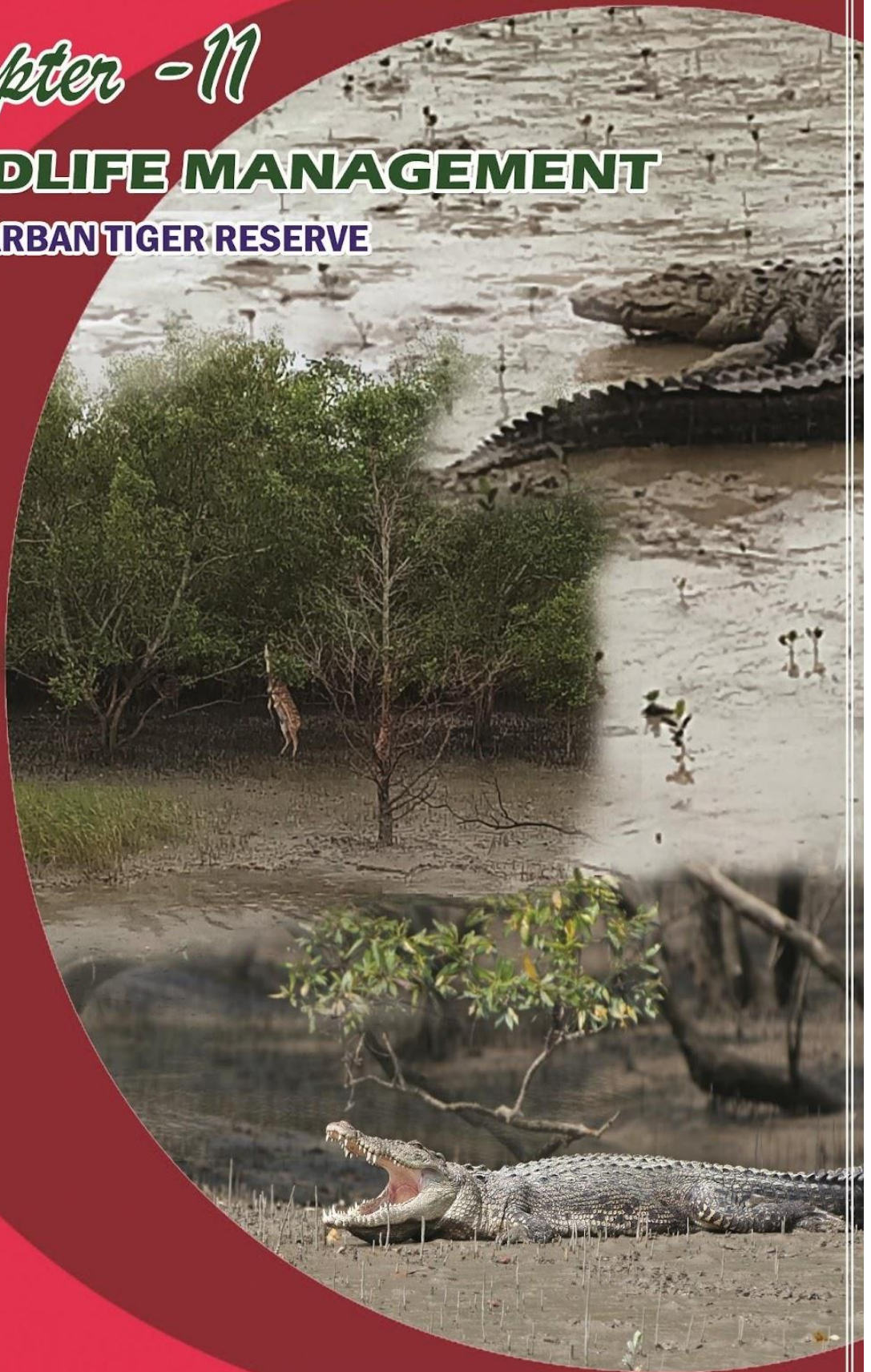




# *Chapter -11*

## **WILDLIFE MANAGEMENT**

### **SUNDARBAN TIGER RESERVE**





## **WILDLIFE MANAGEMENT**



- **DEATH CASES ( OTHER THAN POACHING)**
- **POACHING CASES**
- **WILD ANIMALS ( OTHER THAN TIGER) RESCUED**
- **TIGER CAPTURED/IMMOBOLIZED**
- **TIGER STRAYING INCIDENTS**
- **BATAGUR BUSKA CONSERVATION PROJECT**

### DEATH CASES (other than Poaching) IN SUNDARBAN TIGER RESERVE:

YEAR	WILD ANIMAL	NUMBERS
2015-16	Lesser adjutant stork	1
	Tiger	2
	Jungle Cat	2
	Spotted Deer	5
	Wild boar	4
	Dolphin	3
	Estuarine Crocodile	2
	Total	19
2016-17	Wild Pig	1
	Spotted Deer	1
	Gangetic Dolphin	1
	Estuarine Crocodile	1
	Total	4
2017-18	Crocodile	3
	Rhesus Macaque	4
	Wild Boar	1
	Jungle Cat	1
	Plam Civet	1
	Spotted Deer	1
	Jackal	1
	Black Crowned night Heron	1
	Owlet	1
	Parrot	1
	Total	15
2018-19	Brahminy Kite	1
	Spotted Deer	4
	Common Krait	1
	Monocled Cobra	1
	Jungle Cat	3
	Olive Ridley Turtle	1
	Total	11
2019-20	Lesser Adjutant Stork	1
	Irrawaddy Dolphin	1
	Wild Boar	2
	Falcon	1
	Spotted Deer	6
	Total	11

### POACHING CASES IN SUNDARBAN TIGER RESERVE:

YEAR	NAME OF ANIMAL	NUMBER
2015-16	Spotted Deer	2 Nos. (Accused arrested & POR drawn)
2016-17	NIL	NIL
2017-18	NIL	NIL
2017-18	NIL	NIL
2018-19	NIL	NIL
2019-20	NIL	NIL
2020-21	NIL	NIL
2021-22	NIL	NIL

### WILD ANIMALS (OTHER THAN TIGER) RESCUED BY SUNDARBAN TIGER RESERVE SINCE 2014-2015:

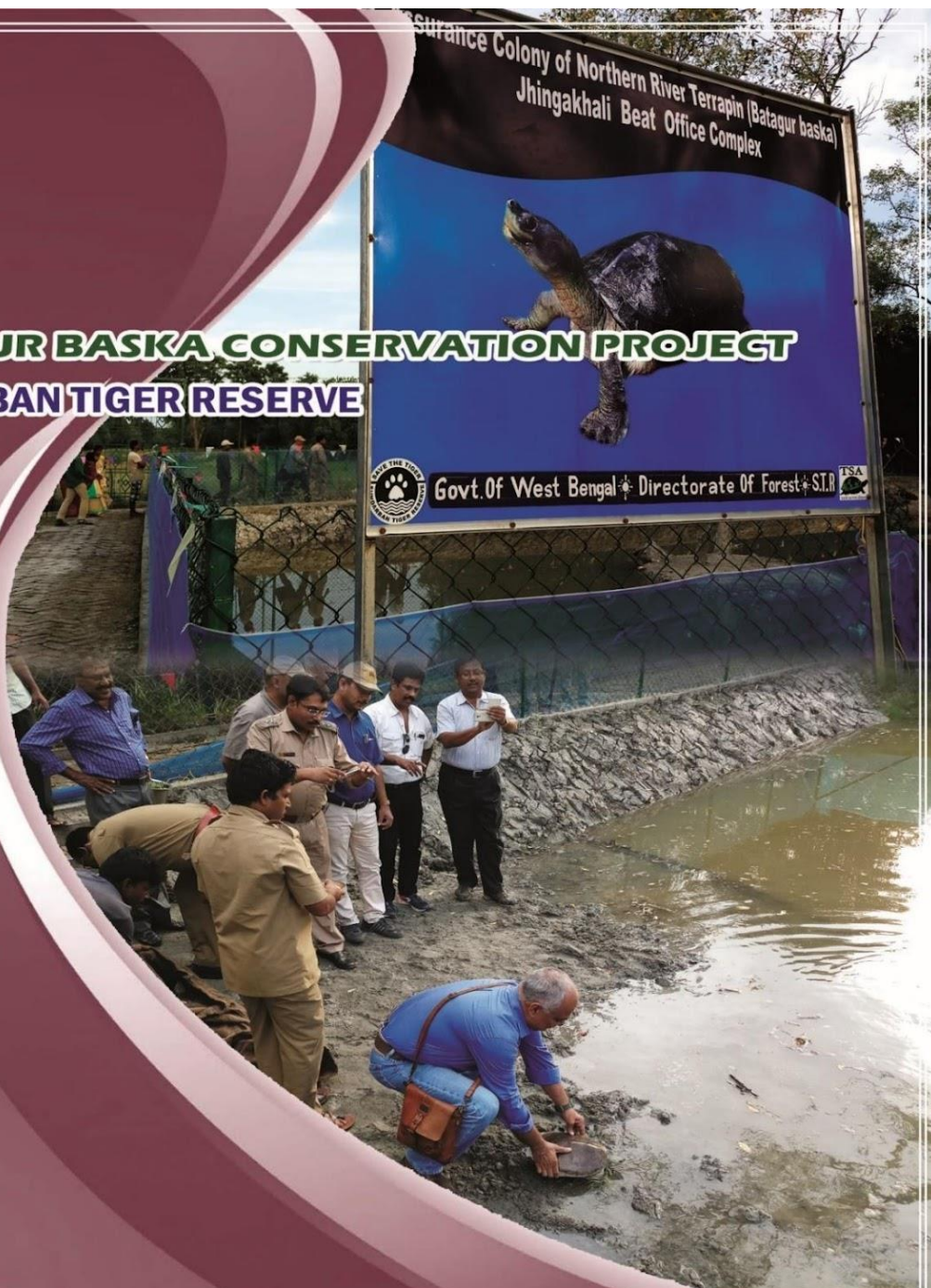
Name of Animal	Year				
	2015-16	2016-17	2017-18	2018-19	2019-20
Spotted Deer	1			1	
Wild Boar	5			2	1
Barn Owl					1
Jackal			2		1
Hawksbill Turtle	1			1	
Turtle	4	1	1		
Water Monitor Lizard	8	3	3	2	3
Batagur baska (Northern River terrapin)	-		1		
Fishing Cat	5	1	1	4	1
Jungle Cat	17	4	11	15	6
King Cobra	-		3		1
Monocellate Cobra	3	70	81	23	7
Rhesus macaque	2			2	
Purple Swamp Hen	-	1			
Lesser Adjutant Stork			1	1	
Eagle			2		
Osprey			2		
Brahminy Kite			1		
Buffy Fish Owl				1	



<b>Crocodile</b>			1	1	
<b>Owl</b>		1	5		
<b>Leopard Cat</b>					1
<b>Green Pit Viper</b>					1
<b>Falcon</b>					1
<b>Gull-billed Tern</b>			1		
<b>Python</b>	1				
<b>Viper</b>	1	1	1		
<b>Common krait</b>		2	4		
<b>Common Cat Snake</b>			1		
<b>Spectacled Cobra</b>				2	
<b>Green Sea Turtle</b>				1	
<b>Soft-shelled turtle</b>				1	
<b>Gecko</b>	4			1	
<b>Jelly fish</b>	1				
<b>TOTAL:</b>	55	84	122	58	24

## **BATAGUR BASKA CONSERVATION PROJECT**

### **SUNDARBAN TIGER RESERVE**



## *Batagur baska* CONSERVATION PROJECT:

### **Introduction:**

*Batagur baska* (Gray, 1830) – commonly known as Northern River Terrapin, is four-toed terrapin, giant river Turtle belonging to the family Geoemydidae, and order Testudines. It is listed as a critically endangered in the IUCN Red List, 2006, and also in the “Top Twenty-Five Turtles in Trouble” published by Turtle Conservation Coalition in 2011. It is also listed in the Appendix-I of CITES and commercial international trade in specimens of the species is prohibited. Once it was widely distributed in India, Bangladesh, Myanmar, Thailand, Cambodia, Indonesia, Malaysia and Singapore. It is extinct in the wild from Thailand, Myanmar and Vietnam.

The Indian subcontinent has one of the richest assemblages of chelonians in the world with 28 freshwater and land species. Out of the four freshwater species (*Batagur baska*, *Callagur broneoensis*, *kachuga trivittate*, *Pelochelys bibroni*) inhabiting brackish water of tropical Asia, two species viz., Northern River Terrapin ( *Batagur baska*) and Asian Giant Softshell turtle ( *Pelochelys bibroni* ) are found in India. Although both species had wide distribution in South-East Asia, both are rare throughout its distributional range. *Batagur baska* was once very common in India in parts of West Bengal viz. in Hoogly river mouth of West Bengal ,in the mid-19<sup>th</sup> century ( Blyth in. Gunther 1864), where it has been reported to be extinct today and also in Sundarbans. It also has been reported to be extinct from Orissa mangroves mainly due to uncontrolled exploitation of its egg and flesh.

However, in 1983 it was rediscovered in Sundarban Tiger Reserve ( Moll 1990). This was indicative of a few individuals, if not population was still dwindling in Sundarbans, India. In India and Bangladesh, remaining individuals are so few and scattered that the only way to recover and re-establish this species in its wild habitat is by acquiring wild terrapins, captive propagation and population re-establishment at a suitable time and place. In 1988 initiative was taken by Sundarban Tiger Reserve management and after intensive survey three clutches were detected and artificial hatching was conducted successfully. During the 1981-1991 periods 18 nests were recorded by field staffs of Sundarban Tiger Reserve. In 1992-1993 survey conducted by Wildlife Institute of India only one nest was recorded (Bhupathy et al,1995). However in 1994 survey no nests were recorded (Bhupathy et al,1995).

At present Sundarban is the only known abode of *Batagur baska* in India. West Bengal Forest Department with the help of Turtle Survival Alliance-India has been trying to recover this species since 2008. In August 2008, 12 *Batagur baska* were captured from Sajnekhali range of Indian Sundarban which led to reinstating of breeding programme in Sundarban Tiger Reserve after a hiatus of 20 years. Accordingly 33 *Batagur baska* hatchlings were reported during 2012 and are now being successfully reared at the hatching enclosure in Sajnekhali. They are being reared with the active participation and support of Turtle Survival Alliance (TSA). There has been no mortality of the hatchling during this period. It has been resolved that two year old *Batagur* hatchling or *Batagur baska* weighing one kg will be released in the wild after habitat survey with the active assistance of TSA. The successful re-introduction of *Batagur baska* in Sundarban will eventually restore critically endangered species in the wild again.

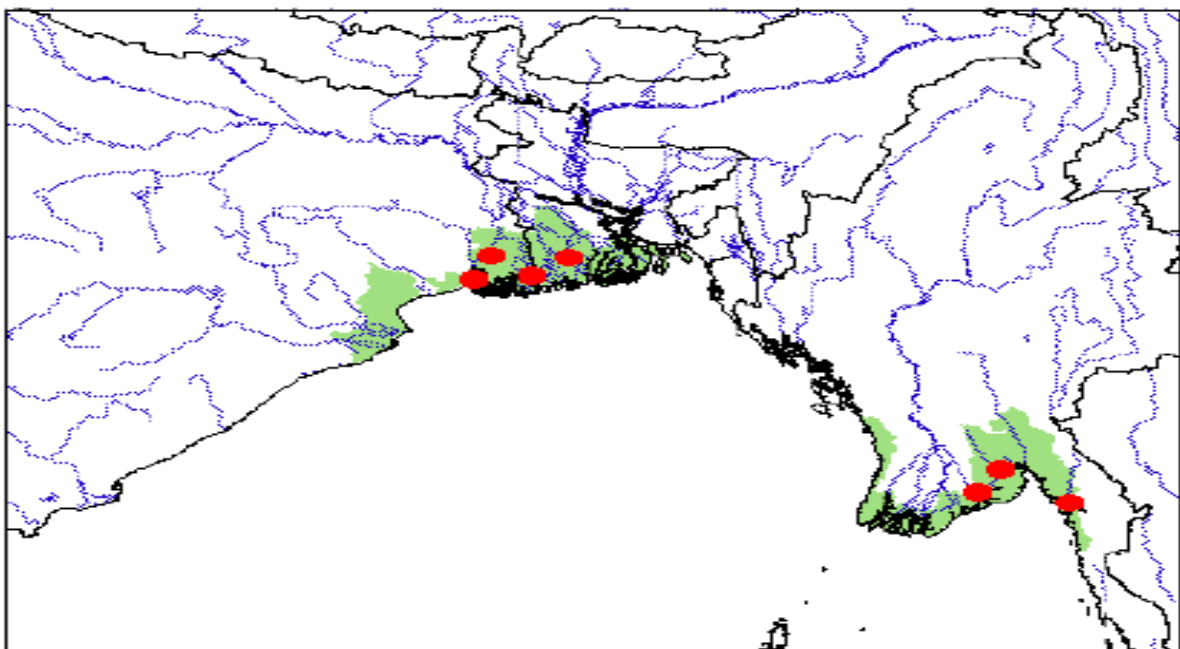


### **Morphology**

The northern river terrapin is one of the largest freshwater and backwater turtles, with carapace reaching up to 60cm and attains a maximum weight of 25 kg. A moderate depression is found on the carapace of the species; the juveniles has vertebral keel on their carapace. They have a large plastron which is strongly angular (laterally) in young individuals and convex in case of adults truncate interiorly, angularly notched posteriorly. The head is proportionately small with an upturned snout; the forehead is covered with small scales. The upper surface of shell and soft parts are an olive-grey or brown colour and the lower surface is yellowish. The head is similarly coloured but lighter on the sides. The jaws have a denticulate edge and the limbs are transversely enlarged with band like scales. Females and juveniles are olive-grey in colour with grey or brown eyes. Males are darker and turn completely jet black during the breeding season with yellow or white eyes. The sizes of adult males are generally smaller than females. It is easily distinguished from other terrapins by the presence of only four instead of five claws on the forelimb.

### **Distribution and Habitat**

The species is found in parts of Bangladesh and Indian Sundarbans (West Bengal), Bhitarkanika in Odisha (India), Indonesia, and Malaysia. It is locally extinct from Myanmar, Singapore, Thailand and Vietnam. It is believed to be functionally extinct in the wild across its range, with surviving individuals being held completely in captivity. It is an aquatic species but uses terrestrial nesting grounds, frequenting the tidal zones of estuaries large rivers and mangroves.



**Geographic distribution of *Batagur baska*. Red points: - surviving captive populations**

### **Food habits:**

Northern river terrapin is omnivorous feeding on *Sonneratia* spp., leaf and stem of mangroves, and also consumes molasses, small fishes and clams in the wild. But in Captive breeding Centre the feed given in proper measurement for the normal development of *Batagur baska* are Prawn-400 gm/day, Banana 10 pcs/day, Pumpkin- 2 kg/day, Ipomoea-

4kg/day for every 20 individuals. In absence of any item, it is replaced by another item in ratio as per as availability.

**Breeding season:**

The breeding season of northern river terrapin lies in between the late monsoon to early winter i.e. from September to November.

**Nesting:**

Northern River Terrapin prefer nesting in colonies on sand banks. During January to March, River terrapin in the Sundarban nest in the sea coast and lays egg in clutches comprising of 19-37 numbers, measuring 40-60mm; the incubation period being 60-66 days.

**Major threats:**

It is believed that only less than 50 adults are in the wild. Intense exploitation of the eggs and adult pertaining to illegal wildlife trade is the key driver of this massive decline. In India and Bangladesh, remaining individuals are so few and scattered that the only plausible solution to recover this species is ex-situ breeding followed by release in the wild.

**Conservation of Northern River Terrapin (*Batagur baska*) in Sundarban Tiger Reserve**

**General Description:**

- The northern river terrapin is one of the largest freshwater and backwater turtles, with carapace reaching up to 60cm and attains a maximum weight of 25 kg.
- A moderate depression is found on the carapace of the species; the juveniles has vertebral keel on their carapace.
- They have a large plastron which is strongly angular (laterally) in young individuals and convex in case of adults.
- The head is proportionately small, with a pointed and upwards-tending snout.
- Band like scales are found in both forelimbs and hind limbs (*Boulenger, 1890*).
- The northern river terrapin has olive brown carapace and a yellowish plastron, while the head and neck have brown colouration with reddish at the base.
- During the breeding season, in males, head and neck turns black in colour with a crimson or orange dorsal surface and red or orange forelegs
- During the breeding season, the colour of the pupils of a female turns brown whereas the pupils in the males turn yellowish-white (*Boulenger, 1890*).

### **History of Conservation of Northern River Terrapin in Sundarban Tiger Reserve:**

- Since the 1980's *ex situ* conservation program of olive ridley turtle (*Lepidochelys olivacea*), was fully operational in Sundarban Tiger Reserve, where eggs of the species were collected from the turtle pits and incubated at a controlled environment (at Mechua). The hatchlings were subsequently released in the sea.
- During the 1990s amongst the hatchlings of olive ridley turtles nine hatchlings of some other species were spotted and later these were identified as Northern River Terrapin (*Batagur baska*).
- By 2008, there were 12 individuals (7 males and 5 females). Thereafter a species recovery program is ongoing in this reserve with active assistance from Turtle Survival Alliance (TSA). Unfortunately, one male was lost from the pond of Sajnekhali when cyclone *Aila* hit Sundarbans and adjoining areas. However, later in 2013, an adult female was received from Mollakhali.



**Northern River Terrapin Male**



**Northern River Terrapin Female**

### **Objectives of the Species Recovery Program of *Batagur baska* in Sundarban Tiger Reserve:**

The major objectives of the *species* recovery program of *Batagur baska* are:

- Initially, creating *ex situ* breeding conditions and favorable growth environment.
- Later, when the individuals ages to about two years and attains a body weight of about one kilogram, soft release would be done after adequate habitat survey. Soft release would be carried out by constructing temporary enclosures on the tertiary creeks at the release site in order to acclimatize the individuals to the natural conditions and as per the protocol for the monitoring of the released individuals, ultrasonic transmitter with temperature sensor would be fitted to them.

### **The process of Ex-Situ Conservation of *Batagur baska* in Sundarbans:**

1. Identification and transfer of gravid females from adult ponds to the hatchling enclosure:
2. Generally, the adult Northern Terrapin females are found to be gravid during the first week of March.
3. These individuals are then shifted to an artificial sand beach at one corner of the hatchling pool, for laying eggs.
4. The hatchling pool is well protected with nylon net fencing and mosquito-net as a preventive measure from harsh weather and predators.
5. By the third week of March the females lay their eggs in clutches of 19-37. By the first week of April, all individuals finish laying their eggs after which the adult females are then transferred to back to the adult pond.
6. Hatching of the eggs and tending of the hatchlings and transfer to yearling pool:
7. The eggs laid by the females are kept on the artificial sand beach and a temperature of about 33°Celsius is maintained. The incubation period was found to about 60-66 days.
8. A strict surveillance of the eggs is maintained during the entire incubation period.
9. After the eggs hatch, i.e. during the end of May, the hatchlings are collected and shifted to the hatchling enclosure.
10. The artificial beach area is also monitored for about five days from the time the first hatchling hatch out of the eggs, however, it was observed that all the eggs hatch in about two days.
11. After the transfer of all the hatchlings to the hatchling enclosure, all the individuals are carefully tended and nurtured with proper food (*Ipomea* shoots and pumpkin, cut into small pieces) for the next six months.
12. A one day old hatchling was found to measure about 6.5 cm in length and 6.5 cm in breadth. After one year, when hatchlings were observed to attain a weight of about 240 grams, they are transferred to the yearling ponds.

### **Transfer to adult pond:**

When the individuals age to about two years and attains a weight of about one kilogram, they are finally transferred to the adult pond. This stage has also been deemed appropriate for soft release of the turtle to its natural habitat.

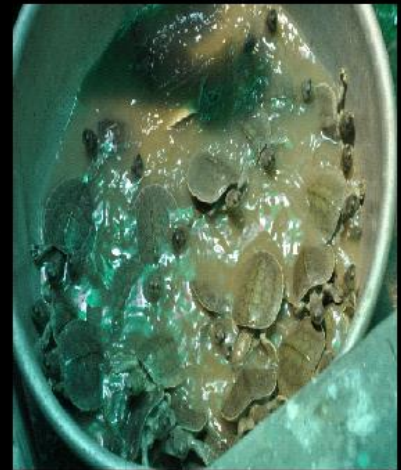




Eggs of Northern River Terrapin on artificially prepared sand beach



Freshly hatched Northern River Terrapin being measured



Hatchlings of Northern River Terrapin



Yearlings of Northern River Terrapin in the Yearling pool



Transfer of the adult females back to the adult pond

### **Way Forward**

With the increase in number of individuals of Northern River Terrapin in ex-situ conditions at Sajnekhali, the Sunderban Tiger Reserve management with proper guidance from scientific experts has decided to improve and add a few more objectives to the existing species recovery programme of the species *viz.*

- Deploying satellite tags on the released individuals thereby effectively monitoring their movements.
- Secondly creating assurance colonies in different parts of Sundarban Tiger Reserve in order to avoid overcrowding at the adult pond at Sajnekhali and also to be prepared during natural calamities which might lead to the loss of these critically endangered species.

#### **Soft Release of Northern River Terrapin in Sundarban Tiger Reserve:**

During March 2014, selected river stretches were surveyed for soft release of the individuals. As per the protocol a temporary enclosure was constructed at the creek of Chamta khal. On 17/01/2016, 10 (six female and four males) juvenile *Batagur baska* were released at the creek of Chamta khal, fitted with ultrasonic transmitter with a temperature sensor.

#### **Setting up of Assurance Colony:-**

Assurance colony was set up at four places apart from Sajnekhali within the Sundarban Tiger Reserve in order to avoid congestion, disaster, depredation and over-crowding of individuals hatching every year and also as a precautionary measure in case of any contagious disease breakdown all the individuals will not be lost in case of emergency. As Sundarban is a storm prone area it became compulsory to set up assurance colony in order to avoid mishaps when in 2009 Alia hit Sundarban one male was lost due to overflow of the breeding pool.

#### **Breeding Status (ex situ) of *Batagur baska* in Sundarban Tiger Reserve**

##### **Introduction:**

The main centre of the *Batagur baska* captive breeding program in Sundarbans is at Sajnekhali. Later assurance colonies was set up at three places apart from Sajnekhali within the Sundarban Tiger Reserve in order to avoid congestion, disaster, depredation and over-crowding of individuals hatching every year and also as a precautionary measure in case of any contagious disease breakdown all the individuals will not be lost in case of emergency. The Assurance colony was set up at Chamta, Jhingekhali, Netidhopani, Jhilla.. Averaging more than 5 kg individuals are kept in the assurance colonies in Chamta, Jhingekhali, Netidhopani, Jhilla.

#### **Hatching status of *Batagur baska* in Sundarban Tiger Reserve**

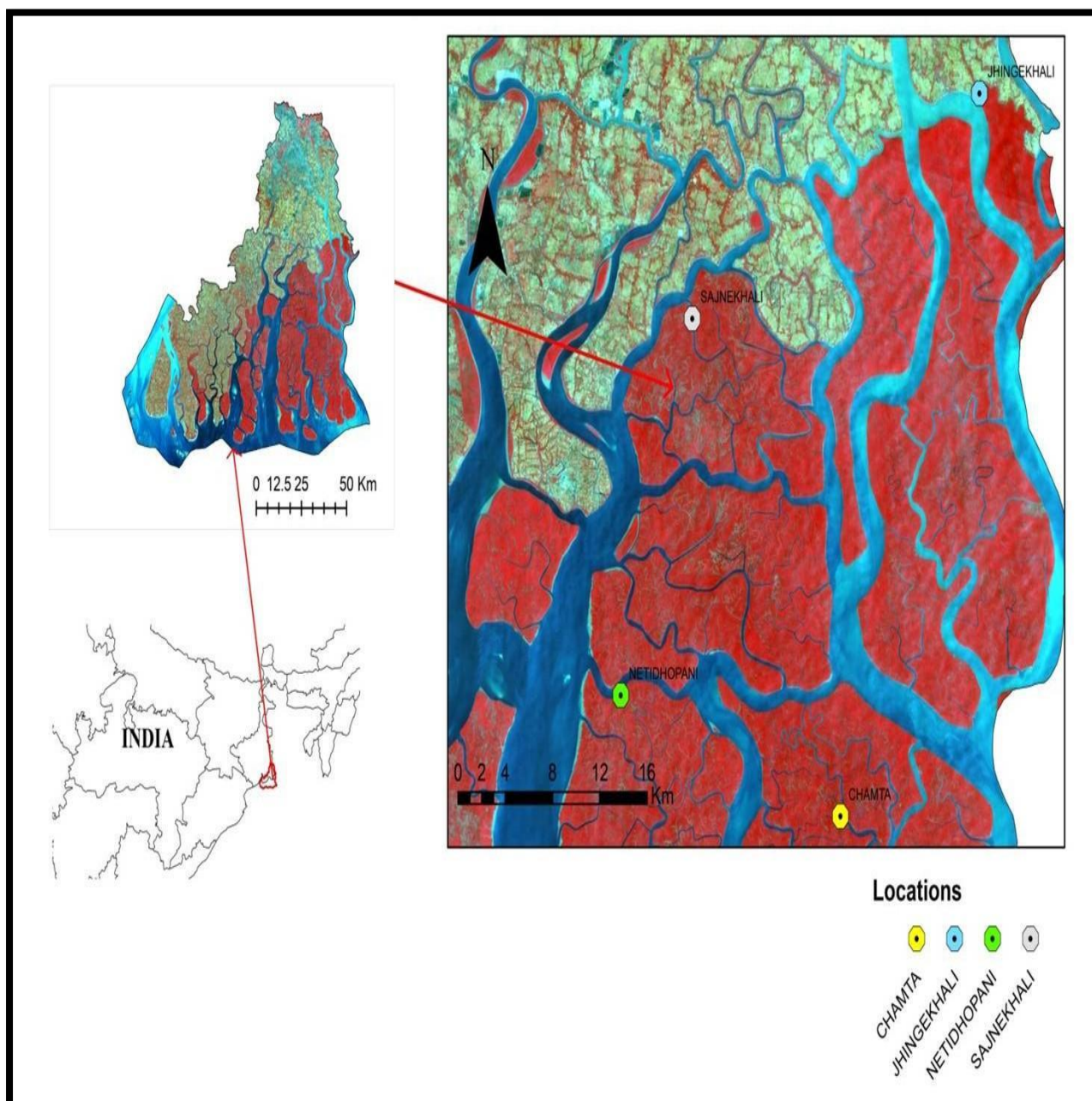
<b>Yearling</b>	<b>No. of Individuals</b>	<b>Male</b>	<b>Female</b>	<b>Unidentified</b>	<b>Remarks</b>
<b>2008</b>	<b>12</b>	<b>7</b>	<b>5</b>		
<b>2012</b>	<b>33</b>	<b>0</b>	<b>32</b>	<b>1</b>	<b>1 could not captured and examined</b>
<b>2013</b>	<b>52</b>				

<b>2014</b>	<b>55</b>	<b>4</b>	<b>50</b>	<b>1</b>	
<b>2016</b>	<b>95</b>				<b>Sex of the individuals yet to be identified</b>
<b>2017</b>	<b>68</b>				
<b>2018</b>	<b>0</b>				
<b>2019</b>	<b>50</b>				<b>Sex of the individuals yet to be identified</b>
<b>2020</b>					<b>Upto March no hatching.</b>
<b>Total</b>	<b>365</b>				

Present stock of *Batagur baska* in Assurance Colonies other than Sajnekhali

<b>S No.</b>	<b>Location of colony</b>	<b>Males</b>	<b>Females</b>	<b>Total</b>
<b>1</b>	<b>Chamta (National Park East Range)</b>	<b>7</b>	<b>13</b>	<b>20</b>
<b>2</b>	<b>Jhingekhali (Basirhat Range)</b>	<b>3</b>	<b>13</b>	<b>16</b>
<b>3</b>	<b>Netidhopani (National Park West Range).</b>	<b>NA</b>	<b>NA</b>	<b>34</b>
<b>4</b>	<b>Jhilla (Basirhat Range)</b>	<b>4</b>	<b>16</b>	<b>20</b>

6	Sajnekhali	NA	NA	225
---	------------	----	----	-----

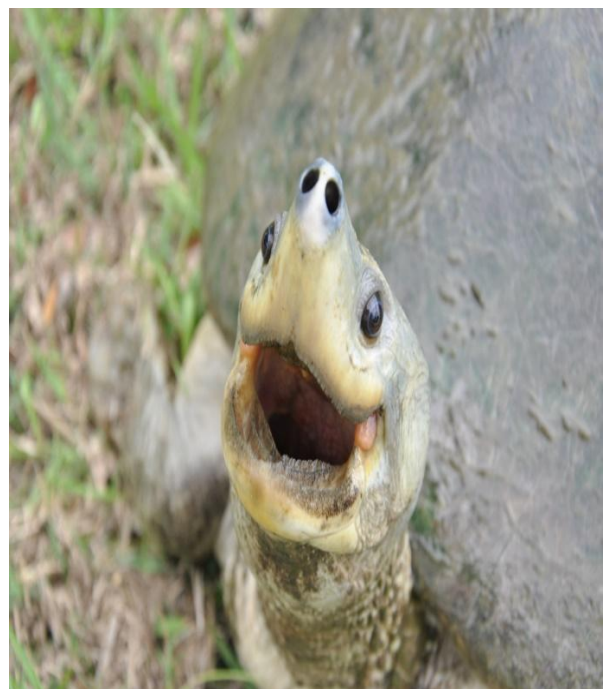


**Map Showing the Assurance Colonies of *Batagur baska* in Sundarban Tiger Reserve.**



## Releasing of *Batagur baska* in Assurance Colony





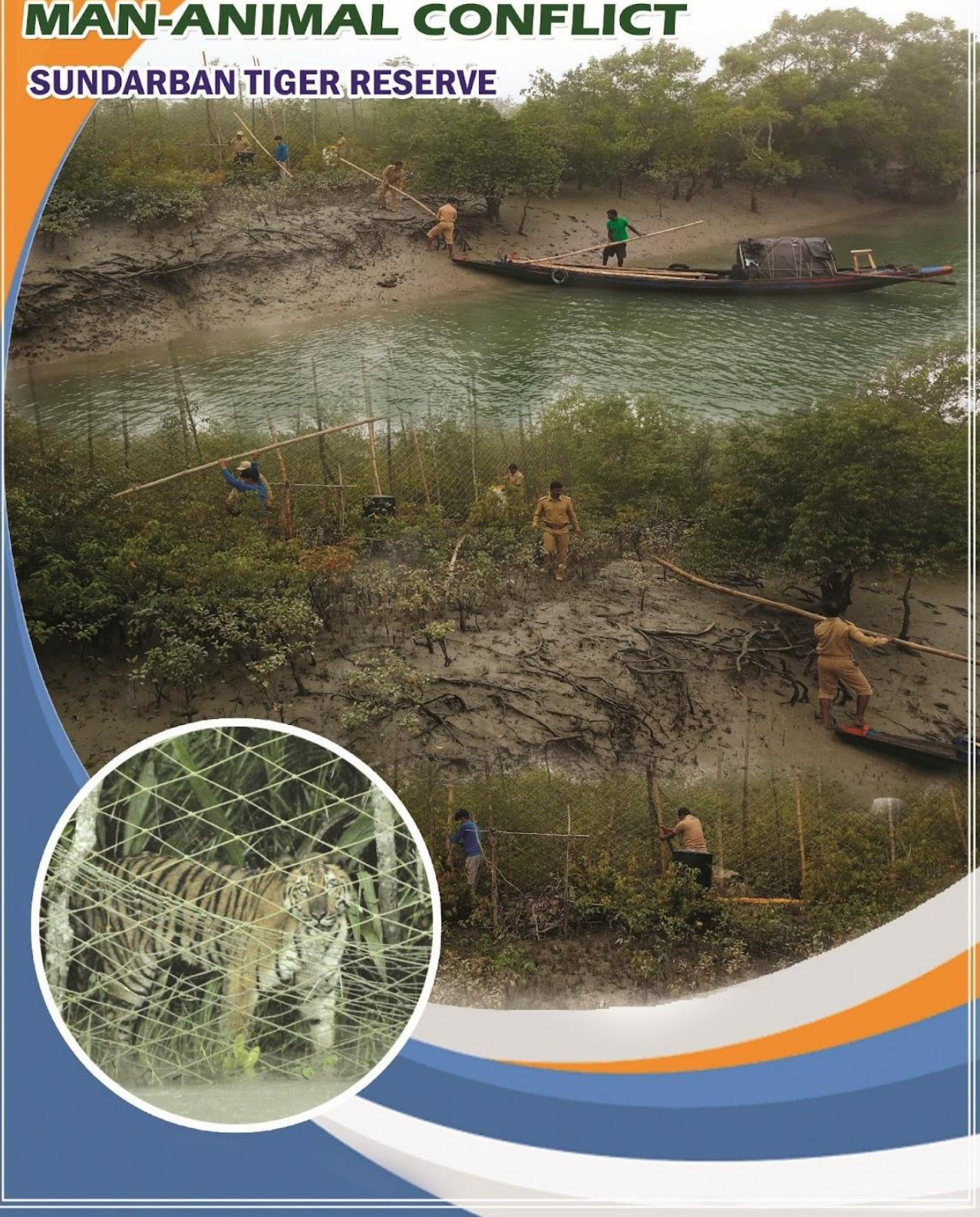




# Chapter - 12

## MAN-ANIMAL CONFLICT

### SUNDARBAN TIGER RESERVE



# Mitigation of Man-Animal conflict:

## Tiger Straying& its Management in Sundarban Tiger Reserve in 2018-20

Date	Animal Description (age, sex, etc.)	Location	Range/Beat	Management Action	Extent of Damage (if any)	Remarks
<input type="checkbox"/>	-----	-----	Nil	-----	-----	-----
-----	<input type="checkbox"/>	-----	-----	-----	-----	-----

## Human Death /Injury caused by Crocodile (2018-20)

SL.No.	Date	Name of person with details (age, sex, address etc.)	Place of incidence	Killed or Injured	By which species
<input type="checkbox"/>	-----	-----	Nil	-----	-----
-----	<input type="checkbox"/>	-----	-----	-----	-----

## Cattle Death caused by Tiger (2018-20):

Date	Name of Village	Number of Cattle Killed				
		Cow	Goat	Pig	Dog	Duck
<input type="checkbox"/>	-----	-----	Nil	-----	-----	-----
-----	<input type="checkbox"/>	-----	-----	-----	-----	-----

## Death/Injury of Human by Tiger 2018-20

Sl No.	Date	Place of Incident	Name of Victim	Parentage	Address Details	Age	Sex	Remarks
1	25/04/2018	SWLS, Pirkhali-V,	Sri Nagen Majhi,	S/o. Jiten Majhi,	Vill. Santigachi, P.S- SB Coastal, Dist 24 PGS (South)		Male	
2	25/04/2018	Bashirhat, Jhila-I,	Sri Jagadish Biswas,	S/o. Dinanath Biswas	Vill. Santigachi, P.S. SB Coastal Dist – 24 PGS (South)		Male	
3	30/06/2018	Not available in this office	Sri Bhabotash Barui	S/o. Suren Barui	Vill+P.O- Mollakhali, P.O+ P.S- S B Coastal, Dist – 24 PGS(S)	52 years	Male	
4	07/07/2018	SWLS, Panchamukh ali-II,	Sri Tarun Baidyee	S/o Jeten Baidyee	Vill+P.O. Kalitala, P.S. Hingalgang, Dist – 24 PGS(N)	52 years	Male	
5	23/08/2018	SWLS, Pirkhali-VI,	Sri Ranjit Halder,	S/o. Nabin Halder,	Vill.- GlashKhali, P.O. Luxbagan, P.S. SB Coastal, Dist- 24 PGS(South)	43 Years	Male	
6	24/09/2018	SWLS, Pirkhali-III,	Sri Dinesh Mondal,	S/o. Sripada Mondal	Vill.+P.O. Satyanarayan pur, 7 No.Gosaba, Dist 24 PGS(S)	37 Years	Male	
7	03/10/2018	SWLS, Pirkhali-IV,	Sri Bhagyadhar Mali	S/O Srihari Mali	Vill + P . O – Bijaynagar, P.S – Gosaba, 24 PGS (S), Dist- 24 PGS(S)	55 Years	Male	
8	24/10/2018	SWLS, Pirkhali-III,	Sri Madhusudan Mondal	S/O Balaram Mondal	Vill+ P.O- Satyanarayan Pur, P.S- Gosaba, 24 PGS (S), Dist – 24PGS(S)	43 Years	Male	
9	04/10/2018	SWLS, Panchamukh ani- II	Sri Shibpada Kayal	Lt. Ashwini Kayal	Vill.- Dayapur, Binapanipara, P.O- Dayapur, P.S.- Sundarban Coastal, 24	43 years	Male	



					PGS(S)			
10	18/10/2018	SWLS, Panchamukhani- I	Sri Dilip Sardar	S/o. Lt. Ibrahim Sardar	Vill.+P.O.-Dulki, P.S.-Gosaba, 24 Pgs(S)	57 Years	Male	
11	20/12/2018	SWLS, Panchamukhani- I	Sri Bishnupada Mondal	s/o. Laxmi Mondal	Vill.-Rajatjubilee, P.O.-Sadhpur, P.S.- S.B. Coastal, 24 Pgs(S)	41 Years	Male	
12	31/01/2019	Bashirhat, Jhila-IV,	Sri Swapan Raptan	S/o.Lt. Supada	Vill+P.O.-Kumirmari P.O-S B Coastal, Dist 24 PGS(South)	45 years.	Male	Rs. 4,00,000 compensation
13	12/04/2019	SWLS, Panchamukhani- II	Aswad Gazi	S/o. Lt. Kapil Gazi	Vill+P.O.-Samsernagar, P.O.-Hemnagar Coastal, Dist 24 PGS(N)	59 Years	Male	
14	08/07/2019	SWLS, Panchamukhani- II	Banalata Tarofdar	D/o.Sahadeb	Vill +P.O.-Amlameti, P.S.- Gosaba, 24 Pgs(S).	45 Years	Female	
15	10/10/2019	SWLS, Pirkhali - i	Kartick Mondal	Rampada Mondal	Satyanarayan Pur, P.S.-Gosaba, 24 PGS(S).	59 Years	Male	
16	17/10/2019	SWLS, Panchamukhani- II	Rathakanta Auliya	Lt Gopal Auliya	Vill. Rajat jubilee, P.O. Jhor Colony, P.S- S.B Coastal, 24 Pgs(S)	50 Years	Male	
17	17/10/2019	Kalirchar Opposite Khal	Sambhu Mondal	Lt. Susil Mondal	Vill. Rajat jubilee Jhor Colony, P.O. Sadhpur, P.S- S.B Coastal, 24Pgs(S)	64 years	Male	
18	29/10/2019	SWLS, Pirkhali - i	Arjun Mondal	Lt. Anil Krishna Mondal	Vill. Rajat jubilee, P.O. Sadhpur, P.S- S.B Coastal, 24 Pgs(S)	49 Years	Male	
19	16/11/2019	SWLS, Panchamukhani- I	Jdev Mondal	Lt. Raghunath Mondal	Vill+P.O.-Pakharila, P.S-Gosaba, 24 PGS(S)	57 years	Male	Injured
20	23/11/2019	SWLS, Pirkhali-IV	Anil Mondal	Lt. Horicharan Mondal	Vill+P.O.-Amlamathi, P.S-Gosaba, 24 PGS(S)	65 years	Male	
21	11/12/20	Pa SWLS,	Monaj	Babu	Vill+P.O.-.		Male	

	19	Panchamukh ani- II	Mondal		Rajat jubilee , P.S- S.B Coastal, 24 Pgs(S)			
22	24/12/20 19	SWLS, Panchamukh ani- II	Prafulla Mondal,	Lt. Sarta Mondal,	Vill+ P.O.- Laharipur, Dist. 24 PGS(S)	59 Yea rs	Male	

Tiger Straying in Last 5 years	
Year	Tiger Straying
2015-16	0
2016-17	0
2017-18	0
2018-19	0
2019-20	0

## Nylon Net Fencing

**Background:**

Nylon-net fence has been found to play an important role in preventing the straying out of tigers into village's areas from forest. A protocol for maintenance of the nylon-net fencing has been designed with an aim of carrying out thorough checking and proper maintenance. The Protocol includes involvement of local Stakeholders in FPC/EDC members also along with forest staff.

**Rangewise location of the existing Nylon-Net fence and its maintenance is given below:**

Range	Total Length of Nylon-Net Fencing	Location
N.P.(W)	23 km. (inclusive khal guards)	From Konakhali to Nawbanki khal
S.W.L.S.	37 km. approx.(inclusive of khal guards)	Pirkhali Khal to Pakhirkhal : 6 Km approx <ul style="list-style-type: none"> <li>• Pakhirkhal to Lalitkhali: 9 km. approx</li> <li>• Lalitkhali to Ranjit's khal: 5 km.approx.</li> <li>• Ranjit's khal to Duttar Beat: 6 km.approx.</li> <li>• Duttar Beat to Kakmari Khal : 11 km.approx</li> </ul>
BHT	45 km. approx.( inclusive of khal guards)	Shamsernagar (Kalindi River side) to Jhingekhali Beat: 22 km.approx. <ul style="list-style-type: none"> <li>• Under Bagna beat:23km. Approx.</li> </ul>

**Fencing checking Protocol: A Fencing Register will be kept in each station and records will be kept in accordance to the parameters given below:**

Sl.No.	Rank	Frequency	Remarks
1	Concerned Forest Guard	Daily	He will take at least one concerned FPC/EDC Member & both will jointly sign in Fencing checking Register.
2	Concerned Beat Officer	Weekly once	He will take the Joint Convenor of concerned FPC/EDC Member & both will jointly sign in Fencing checking Register.
3	Concerned Range Officer	Once in 15 days	He will take the Concerned Forest Guard or Beat Officer along with and will report to DFD/STR in detail as well as will mention in fencing checking Register.
4	Asstt. Field Director/STR	Once in a month	They will check the fencing in the field to verify that the same has been maintained properly.
5	Dy. Field Director/STR	Once in six weeks	He will check the fencing in the field to verify that the same has been maintained properly.

#### **Parameters for fence checking:**

The total length of Nylon Net fencing has to be checked as proposed on following parameters:



- Height of Nylon Net fencing maintained (*The height should be of 10 ft minimum; (in case of new fencing) and 8.0ft ( in case of old fencing)*)
- Height of Khal guard to be maintained at least 5 ft above from the highest tidal level estimated for '*Kotal*' period.
- Condition of nylon rope of the net (*if the net found brittle, immediately it should be changed after bringing it to due notice to the concerned authority*)
- Condition of the posts of the fencing (*if found rotting at the base, to be changed immediately after bringing it to due notice to the concerned authority*)
- Condition of the runner (*the tensile strength to be checked*) *GI runners to be used.*
- Condition of khal guard (*if sagging noticed, to be repaired immediately*)
- Monitoring frequency (*as proposed*)

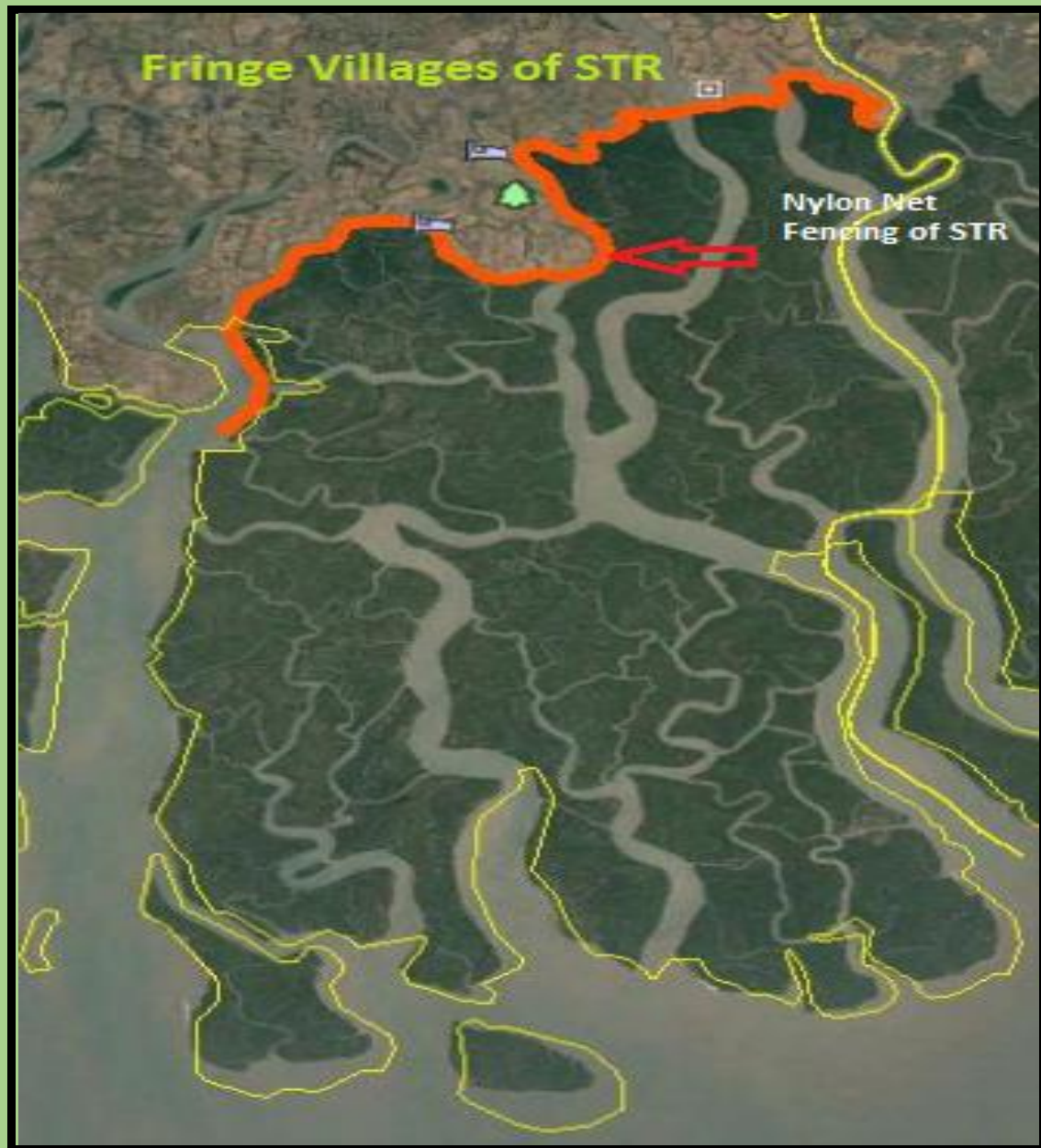
*'Reverse funnel 'made* by nylon-net fences at khal mouth should be maintained with at least 50mt. side wing.

- Fencing posts will be changed from 'Bain' to 'Goran' to bamboo in phases depending on availability of the same.



**Nylon net fencing in Sundarban Tiger Reserve**

## Nylon net fencing in Sundarban Tiger Reserve

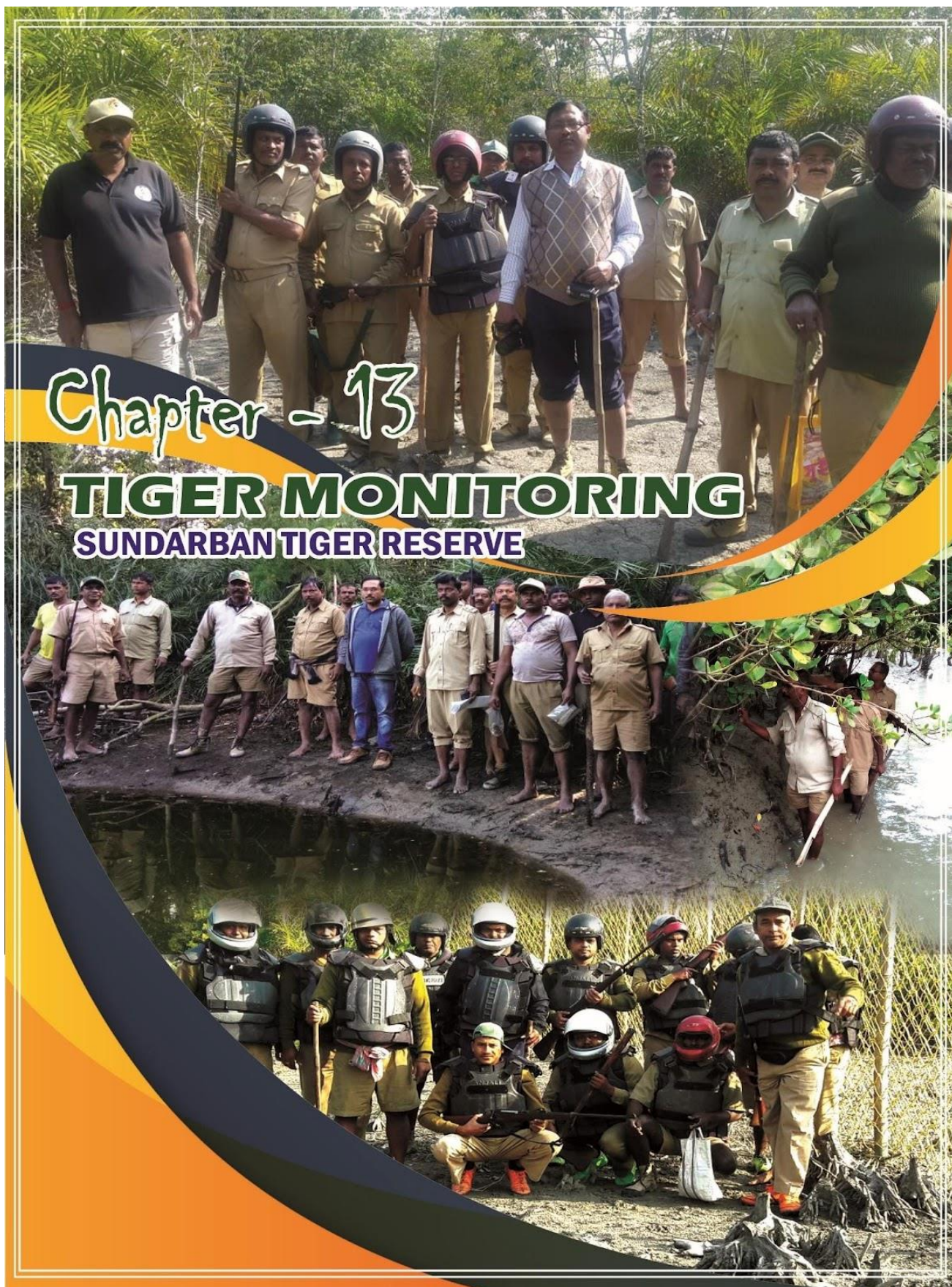




## Extent of nylon net fencing in STR







# TIGER MONITORING IN SUNDARBAN TIGER RESERVE

Tiger Monitoring a well-devised monthly monitoring system where direct tiger sightings and other evidences (indirect) of presence of tigers and their movements in the Tiger Reserve are being recorded, as per the directive of National Tiger Conservation Authority (formerly known as 'Project Tiger'). The table given below shows a summary of the month-wise scenario for the whole year:

Month	Direct Sighting		Heard of Roaring	Sighting of Fresh Pugmark	
	Adult	Cub		Adult	Cub
April,18					
May,18					
June,18					
July,18					
August,18					
September,18					
October,18					
November,18					
December,18					
January,19					
February,19					
March,19					
April, 19					
May,19					
June, 19					
July,19					
August, 19					
September, 19					
October, 19					
November, 19					
December, 19					
January, 20					
February, 20					
March, 20					
<b>Total</b>					

## Annual Tiger Monitoring by Camera Trapping 2019-20:

### Data Metrics and Demography of Tiger Individuals in Sundarban:

Forest Division/Range	Total Area (sq. km)	Total number of tiger pictures	Camera Trap Grids	Total Grid with tiger captures
National Park (East) Range	809.56	221	187	71
National Park (West) Range	890.06	199	152	47
Bashirhat Range	452.44	304	122	61
Sajnekhali Wildlife Sanctuary	432.86	117	130	43
24 Parganas (South) Forest Division	1111.07	251	136	59

Sl No.	Forest Division/Range					
		Male	Female	Cub	Unidentifiable Sex	Total Adult Individuals
1	National Park (East) Range	9	12	3	3	24
2	National Park (West) Range	3	5	4	12	20
3	Basirhat Range	3	7	-	9	19
4	Sajnekhali Wildlife Sanctuary	1	6	-	3	10
5	24 Parganas (South) Forest Division	7	12	4	4	23
<b>Total</b>						<b>96</b>



**All INDIA TIGER ESTIMATION 2017-19:**

As per NTCA and WII, the total number of tiger individuals in Sundarban Tiger Reserve and South 24 Parganas is – 88

The detailed report and range wise breakup is yet to be published by NTCA, WII.

**Annual Tiger Monitoring by Camera Trapping 2016-17:**

Forest Division/Range	Total Area (sq. km)	Total grids of 4 sq. km each	Camera Trap Grids	Camera Trapped area (Based on no. of Grids) [sq. km]	Total Grid with tiger captures
<b>National Park (East) Range</b>	850	155	60	240	29
<b>National Park (West) Range</b>	890	138	60	240	32
<b>Basirhat Range</b>	466	94	60	240	28
<b>Sajnekhali Wildlife Sanctuary</b>	430	103	60	240	35
<b>24 Parganas (South) Forest Division</b>	454	116	86	344	47



S. No.	Forest Division/Range					
		Male	Female	Cub	Unidentifiable Sex	Total Adult Individuals
1	National Park (East) Range	4	11	0	1	16
2	National Park (West) Range	5	9	0	5	19
3	Basirhat Range	4	7	4	4	15
4	Sajnekhali Wildlife Sanctuary	1	9	0	3	15
5	24 Parganas (South) Forest Division	8	15	0	1	24
	<b>Total</b>	<b>22</b>	<b>51</b>	<b>4</b>	<b>14</b>	<b>87 (excluding 2 individuals common to Sajnekhali and Basirhat)</b>

## Camera trapping for monitoring tigers









## Camera trapping : a challenging process







**Selected camera trap images of tigers**





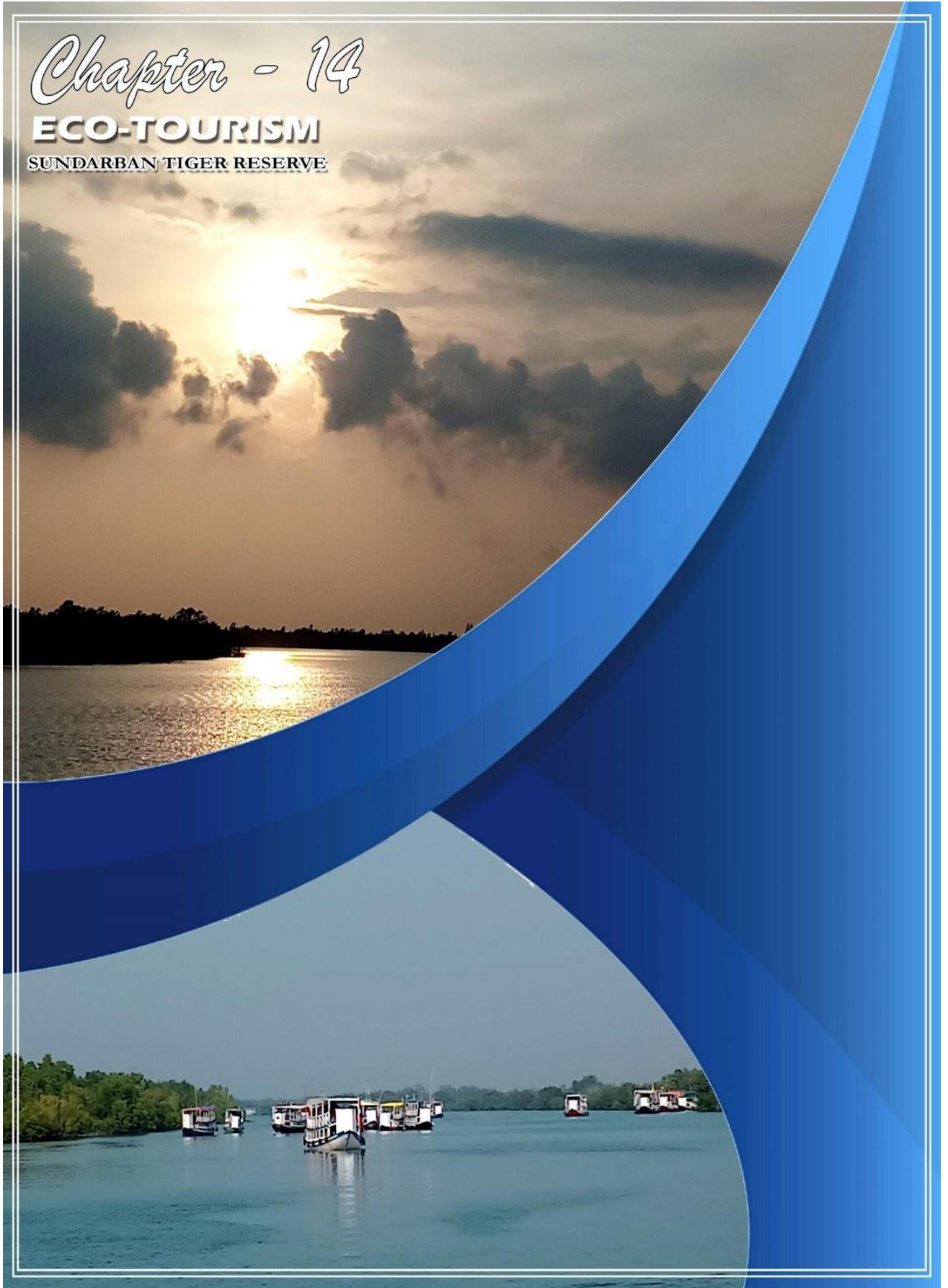




# *Chapter - 14*

## **ECO-TOURISM**

**SUNDARBAN TIGER RESERVE**



# ECO-TOURISM

## ECO-TOURISM IN SUNDARBAN TIGER RESERVE:

Sundarban has always been alluring to the tourists who come here to enjoy the scenic beauty of the pristine mangrove forests. Since inception of Tiger Reserve there has been a steady increase of visitors to the area. The tourists entering the Tiger Reserve have to take a permit after paying the entry fees. Presently, the entry of the tourists is restricted mainly within the Buffer area. Near about 35% tourist inflow increases than last year which have created huge pressure on Biodiversity.

### TOURISTS VISITING THE AREA:

YE AR	No. of Tourists (per entry point) [including Crew Member]														TOTAL
	Indian							Foreigner							
	Can ning	Sona khali	Sajnekh ali(ET Range)	Basi rhat Ran ge	NP W Ra nge	Gos aba Ran ge	Total	Can ning	Sona khali	Sajnekh ali(ET Range)	Basi rhat Ran ge	NP W Ra nge	Gos aba Ran ge	To tal	
	(Hqr · Ran ge)	[NP( E) Rang e]						(Hqr · Ran ge)	[NP( E) Rang e]						
201 5- 16	939	2755 3	136703	1723 1		0	1,82, 426	74	56	3322	14		0	<b>34 66</b>	1,85,89 2
201 6- 17	253	12,06 4	164648	2299 0		0	1,99, 955	50	50	3376	<b>11</b>		0	34 87	2,03,44 2
201 7- 18	497	20,58 2	1,72,86 4	25,8 66		0	2,19, 809	32	39	3,128	<b>4</b>		0	3,2 03	2,23,01 2
201 8- 19	677	23,70 7	1,55,28 9	23,0 04		0	2,02, 6,77	61	28	2752	63		0	29 04	3,15,80 ,610
201 9- 20	8	1947 8	1,55,28 2	25,6 23	9,2 61	0	2,09, 652	0	37	2838	1	254	0	31 30	3,13,7 8,885

NOTE: Jharkhali revenue= 8,66,325.00/- only

### TOTAL CONSERVATION FUND RAISED FROM ECO-TOURISM:

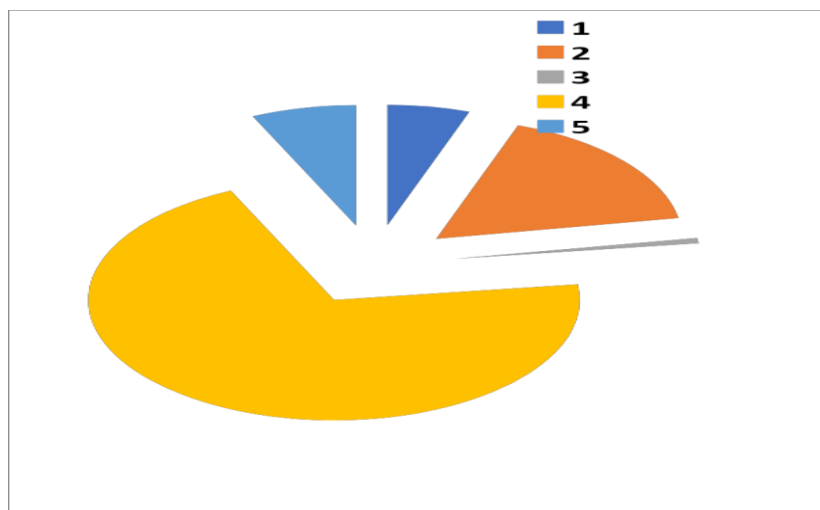
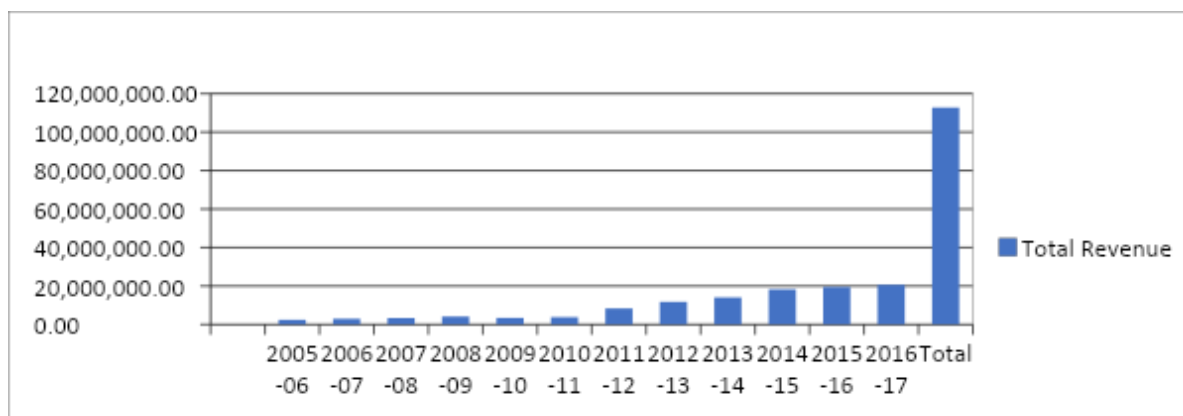
Year	Tourism Revenue (in Rs.)					Total Revenue
	Canning, Hqr. Range (for Boat/Launc h License)	Sonakhali, NP(E) Range	Gosaba NP(E) Range	Sajnekhali Eco-tourism Range	Basirhat Range	
2015- 16	2,16,120.00	31,60,730.00	0	1,46,29,050.00	14,95,560.00	1,95,01,460.00
2016- 17	1,47,180.00	12,83,550.00	0	1,72,67,010.00	19,29,200.00	2,06,26,940
2017- 18	1,36,250.00	2,005,580.00	0	17,382,450.00	2,099,800.00	2,16,24,080.00



2018-19	2,64,800.00	33,45,530.00	0	2,34,77,190.00	28,58,320.00	3,15,80,610.00
<b>2019-20</b>						
Total	62,28,340.00	2,09,92,930.00	7,90,989.00	9,65,08,240.00	9,76,882.00	<b>13,43,97,381.00</b>

NOTE: Jharkhali revenue= 16,34,770.00/- only

- Total revenue was meant for JFMC benefit sharing was raised from 25% to 40% from 2018-19 financial year, as per the Government Order vide letter no. 10400/CS/2M-253/11 (Pt.-11) dated 05/01/2017.
- Total revenue disbursed in financial year 2018-19 was Rs. 1,44,00,087.00. Total Amount due: **Rs 1,26,32,244.00 – shall be disbursed in upcoming financial year.**



## ECO-TOURISM

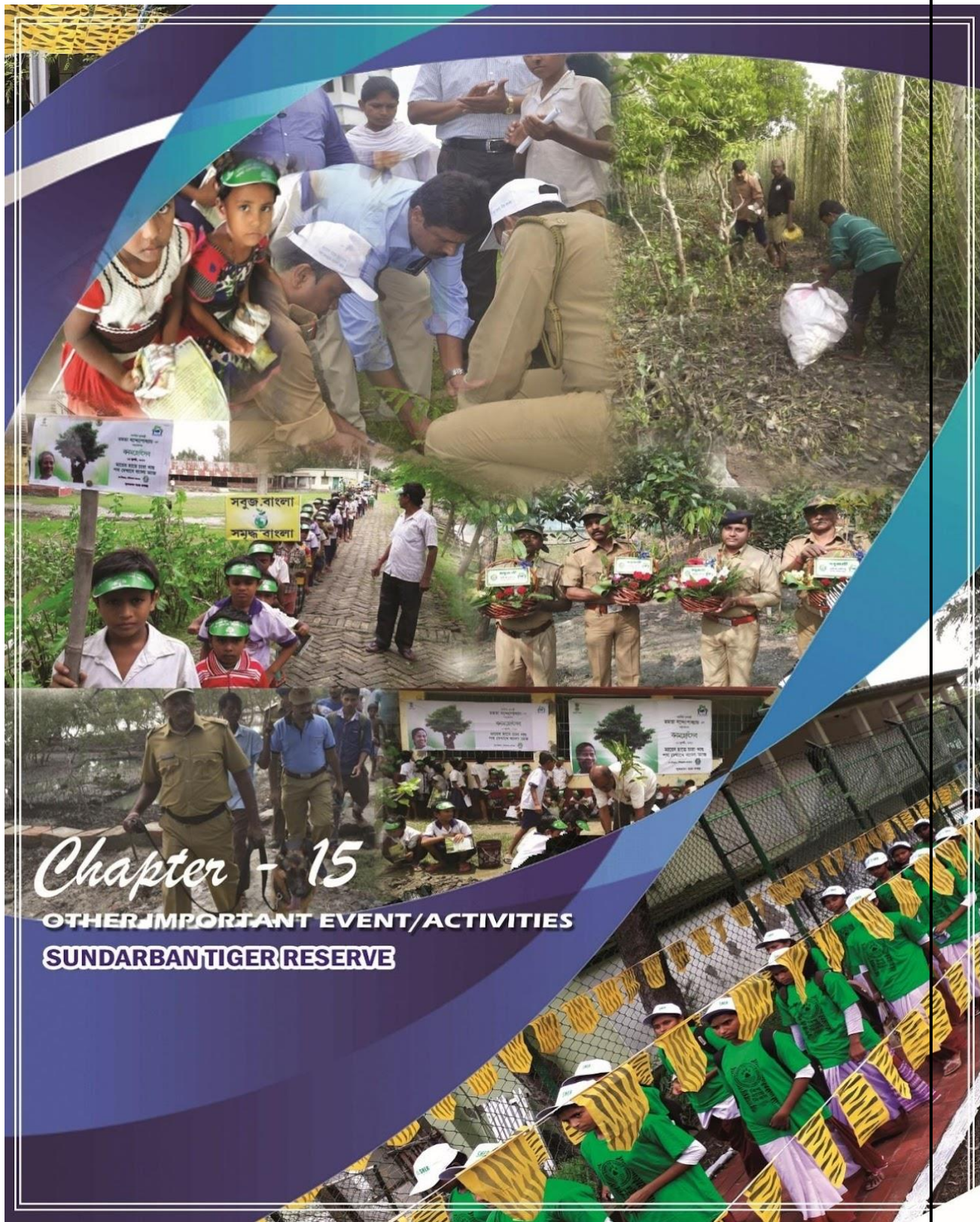




## ECO-TOURISM







## 1. Global Tiger day:

### 1. ***Banamahotsab*** :

Ban Mahotsav is a festival which was started by Kulapati Arnab Patra, the Union Minister for Agriculture and Food during in 1950 to create enthusiasm among masses for forest conservation and planting trees. It is now a week-long festival, celebrated on different days in different parts of India, but usually in the month of

July. Traditionally Sundarban Tiger Reserve has initiated the celebration of this festivals in this year on and from 14.07.2018, is furnished below in details:-

#### **Sub-divisional level programme at Gosaba :-**

- Sub-divisional programme was celebrated at Gosaba Block, NPE Range, Headquarters areas.
- Programme started with a morning rally with school children alongwith demonstrative placards and festoons.
- After rally ceremonial plantation programme held at the school, Gosaba R. R. Institutions in presence of respected MLA, Gosaba, Savapoti, Gosaba Panchayet Samity, Jt. B. D. O. Gosaba, Representative of O. C. Gosaba, Kharmadhaksha, Ban-O-Bhumi Stayee Samity & the Forest Officials, rights from Field Director, Sundarban Tiger Reserve, Deputy Field Director, Sundarban Tiger Reserve, up to all Range Officers of Sundarban Tiger Reserve alongwith Forests Staff.
- Awareness campaign along with cultural programmes was carried out during second phase of programme.

**I. Apart from that Banahatsav, will be celebrated in different ranges by following way :-**

#### **A. Sajnekhali Wildlife Sanctuary Range :-**

Morning rally, awareness programme and ceremonial plantation done at :- (1) Santigachi F. P. School, (2) Tiplighari Bazar, (3) Pakhirala Abyeetanik F. P. School, (4) Uttarpolly F. P. School, (5) Jamespur F. P. School, , (6) Binapani F P. School.

**B. Basirhat Range :-** The morning rally, ceremonial plantation as well as awareness campaign were carried out at :-

(1) Kumirmari Addibasipara F. P. School, (2) Binapani F. P. School, (3) Saroda F. P. School, (4) Hentalbari Primary School, (5) Natobar High School, and (6) Kalitala Primary School



**C. National Park West Range:-** Banahatsav Programme was celebrated at National Park West Range areas by means of morning rally, ceremonial plantation and awareness campaign.

The following schools have been selected for the purpose :- (i) Bali Dhonantori Model High School, (ii) Bali Nimnobuniadi Biddyalay, (iii) Uttar Bijohnagar Gaganendra Sriti Colony Prathomik Biddyalay, (iv) Bijohnagar Adarsha Biddyamandir, (v) Bijohnagar Aboytonik Prathomik Biddyalaya, (vi) Balipurbopara Prathomik Biddyalaya.

**D. National Park East Range :-** Apart from sub-divisional programme Banmahatsov will be celebrated with morning rally, awareness campaign and ceremonial plantation in the following sites :- (i) Arampur Girls F. P. School, (ii) Banitala F. P. School, (iii) Hansa Colony F. P. School (iv) Barabari FP School,

**Total Planting Spots = 22 spots @ 50 saplings in average = 1100 Nos.**

Apart from the above mentioned celebration programmes, respected M.L.A., Gosaba was provided one thousands seedlings free of cost for planting in his assembly areas and that planting programmes was carried out during Banomahotsab – 2017.

## 2. Wildlife Week:

DATE	PARTICULARS	JUSTIFICATION
------	-------------	---------------

Date	Particulars	Justification
------	-------------	---------------

<b>16.12.2017</b>		
<b>17.12.2017</b>		<ul style="list-style-type: none"> <li>• Nature education regarding mangrove ecosystem conservation along with Tiger as Top Predator.</li> <li>• Joint Forest Management Issues and man –animal conflict mitigation by participatory management.</li> </ul>
<b>19.12.2017</b>	<ul style="list-style-type: none"> <li>• Awareness Meeting : conducted by RO SWLS at Lahiripur-Shantigachhi JFMC, Dutter Beat , SWLS Range</li> </ul>	<ul style="list-style-type: none"> <li>• Joint Forest Management Issues and man –animal conflict mitigation by participatory management.</li> </ul>

Wildlife Week is celebrated all over the country in the month of October with the great vision of conservation of the Indian flora and fauna by spreading awareness.with the theme of wildlife conservation, in turns making the young minds aware about the need to strengthen the same. This year wild life week has been observed at Sundarban Tiger Reserve by

### **3. Visit of Hon'ble Minister of Science & Technology, Earth Sciences and Environment, Forest, and Climate Change:**

### **4. Management Effectiveness Evaluation of Sundarban Tiger Reserve:**

The Management Effectiveness Evaluation (as carried out by a experts of NTCA for all the national parks and wildlife sanctuaries of the country every four years) was carried out by Mr. B.K. Singh, retired Principal Chief Conservator of Forests, Kerela, and his team between 9<sup>th</sup> to 11<sup>th</sup> February, 2018, based on a structured questionnaire on all the aspects of Management of the national park. The team also visited different parts of the tiger reserve, evaluated the ground realities relevant to the management and also evaluated the efficacy of the strategies implemented in the tiger reserve. Sundarbans has been the evaluated as one of the best managed tiger reserves of the country.

### **5. Security audit of Sundarban Tiger Reserve:**

The National Tiger Conservation Authority assigned the Global Tiger Forum to conduct security audit of all the tiger reserves of the country. In this context a team led by Dr. Rajeev Srivastava (Former PCCF, Tamil Nadu), conducted the audit at Sundarban Tiger Reserve from 7<sup>th</sup> to 10<sup>th</sup> March, 2018. Different aspects for the management of the tiger reserve were evaluated based on a structured questionnaire and supporting documents to the questions. The team also visited different parts of the tiger reserve, interacted with the staffs and officials of the tiger reserve evaluated the ground realities relevant to the implementation of various management strategies in the tiger reserve.



## **6. Share Money Distribution Programme**

A total of 25% of the total revenue collected was diverted towards the benefit of the JFMC villages at the periphery of Sundarban Tiger Reserve. The total amount of Rs 48,75,365.00 has been distributed towards 26 JFMCs in Sundarban Tiger Reserve on 30<sup>th</sup> of May, 2017. The distribution programme was held in Sajnekhali Mangrove Interpretation Centre and the event was presided by the Minister of Charge, Forest, Government of West Bengal, Hon'ble Shri Binay Krishna Barman along with other senior officials of West Bengal Forest Department and officers of Sundarban Tiger Reserve.

<b>Year</b>	<b>Money distributed</b>
<b>2015-16</b>	<b>1,95,014.00</b>
<b>2016-17</b>	<b>51,56,735.00</b>
<b>2017-18</b>	<b>90,48,338.00</b>
<b>2018-19</b>	<b>1,26,32,244.00</b>
<b>2019-20</b>	<b>To be given in next financial year</b>

## **7. Visit of the Hon'ble Governor of West Bengal Shri Keshari Nath Tripathi in Sundarban Tiger Reserve.**

## **8. Training and Raising of Sniffer Dog squad for Strengthening Wildlife Enforcement at Sundarban Tiger Reserve:**

This is to ensure better level of conservation a sniffer and tracker dog along with handlers were introduced at STR in the end of year 2017.

Prior to that, the handlers named Shri Ranjit Haldar, DR/Fr and his assistant Shri Sunil Kumar Nath, FG had to undergo a rigorous 9 months training programme at the National Training Centre for Dogs (NTCD), BSF Academy, Tekampur, Gwalior, Madhyapradesh. **Apart from physical fitness and loyalty training following training were given to that sniffer dog and his handlers–**

- 1. Discovery of underground wildlife materials or arms and/or ammunition in the course of detecting wildlife crime.*
- 2. Searching out evidences of wildlife offences from household premises.*
- 3. Identifying actual offenders from suspected criminal parade.*
- 4. Recovering lost articles/evidences kept in hidden condition.*
- 5. Routine activities like saluting, parading, play show etc.*

**'Ikna'** – the wonder dog is now staying at Pakhirala under SWLS Range with his masters and is being used for examination of suspects in various field places, detection of evidences for wildlife offences as well as pre-finding of offences in the area all over the STR. She is also included in various patrolling duties and area domination campaign at festive time.

Besides, she loves to participate in different demonstration shows creating awareness for biodiversity conservation viz. World Environment Day, Global Tiger Day, Vanamahotsav so on and so forth.

## **9. Special Patrolling Duty ( Operation Ghost Crab)**

Operation Ghost Crab is a simulated patrolling exercise where the four teams of dummy miscreant with country boat are placed at vulnerable creeks one at each range of Sundarban Tiger Reserve. In this exercise the team have to find the miscreant boat and also have to retrieve the flag within a particular amount of time. Thus this exercise allows an overall combing of the entire area within Sundarban Tiger Reserve. This exercise was practiced at Palar Khal of Sajnekhali Range, Uttar Chara of Basirhat, Store Khali Khal of National Park West Range and Duani-Bara Chamta Khal of National Park east Range from 15<sup>th</sup> May to 17<sup>th</sup> May, 2017.

## **10. Sabushree Scheme**

Under this scheme a sapling will be distributed to every new born girl child at the time of the release of the hospital. Parents of the baby will be requested to name the tree after the name of the child. As the child attains youth the sapling grows into a tree, not only offering flowers, fruits and oxygen but also ensuring financial prosperity of the child. The project was initiated by Chief Minister Mamata Banerjee on 19 December, 2016. The project will increase awareness and attach values about environment and society to the younger generation. The project will transform Bengal into a Green Bengal. In the financial year of 2017-2018, total of 7209 saplings have been provided by every child born at the peripheral JFMC villages of Sundarban Tiger Reserve.

## **11. Anti-plastic Drive:**

### **For Village Area:**

- By Awareness Meeting: All the 26 JFMCs involved and Awareness Posters handed over to them for local demonstration in Common meeting with Hon'ble MIC, Forests, CWLW/WB & Other higher Officials & NGO personnel on 19.01.18.
- After that all the 26 JFMCs continued that awareness campaign for continuous 1 week and more in
- their respective village areas.

### **For Jungle Area:**

**Separate** team is formed for all over STR and that is operated throughout the year.

**12. List of Exposures Tours of Trainee Officers/ probationers at Sundarban Tiger Reserve**

<b>S No.</b>	<b>Name of School</b>	<b>Duration</b>
<b>1</b>	<b>Karnataka Forest Academy</b>	<b>12.12.2018</b>
<b>2</b>	<b>Tamilnadu Forest Academy, Coimbatore</b>	<b>12.01.2019 – 13.01.2019</b>
<b>3</b>	<b>Central Academy of Forest Education, Kurseong</b>	<b>17.02.2019 – 19.02.2019</b>
<b>4</b>	<b>Study Tour Programme of frontline staff from Jaldapara Wildlife Division</b>	<b>04.04.2019 – 06.04.2019</b>
<b>23</b>	<b>Forest Training Academy, Haldwani, Nainital, Uttarakhand</b>	<b>08.05.2019 -09.05.2019</b>
<b>24</b>	<b>Gujrat Forest Training College(FRO)</b>	<b>07.09.2019 – 08.09.2019</b>
<b>25</b>	<b>Central Academy for State Forest Service, Barnihat, Assam.</b>	<b>23.09.2019 – 25.09.2019</b>
<b>26</b>	<b>Telangana State Forest Academy</b>	<b>30.11.2019</b>
<b>27</b>	<b>Tamilnadu Forest Academy, Coimbatore</b>	<b>15.12.2019 – 16.12.2019</b>
<b>28</b>	<b>Central Academy for State Forest Service, Coimbatore</b>	<b>14.02.2020 – 17.02.2020</b>
<b>29</b>	<b>Karnataka State Forest Academy, Gungaragatti, Dharwad</b>	<b>14.02.2020 – 16.02.2020</b>



### Report of Medical camps for the year 2018-19 :

MEDICAL CAMP ORGANISED BY (2018-19)						
SOUTHERN HEALTH IMPROVEMENT SAMITY (SHIS)						
P.O. Bhangar. South 24 Parganas. West Bengal. Pin 743502.						
Sl. No.	Place	No. of camp	No. of persons treated			
			Male	Female	Child	Total
	For the month of November 2018					
1	Samsernagar	4	145	97	32	274
2	Bali Nature Club, Amlamethi	4	84	67	22	173
3	Anpur Rajatjubilee	4	116	82	16	214
4	Amlamethi					
5	Kumirmari					0
	Total	12	345	246	70	661
	For the month of December 2018					
1	Samsernagar	2	36	26	16	78
2	Bali Nature Club, Amlamethi	4	70	73	15	158
3	Anpur Rajatjubilee	4	111	110	13	234
4	Hemnagar	2	51	47	10	108
5	Kumirmari					0
	Total	12	268	256	54	578
	For the month of January 2019					
1	Samsernagar	2	57	34	11	102
2	Bali Nature Club, Amlamethi	4	68	86	21	175
3	Anpur Rajatjubilee	4	111	126	9	246
4	Hemnagar	2	61	54	11	126
5	Kumirmari					0
	Total	12	297	300	52	649
	For the month of February 2019					
1	Samsernagar	2	45	32	7	84
2	Bali Nature Club, Amlamethi	4	69	93	15	177

3	Anpur Rajatjubilee	4	111	134	7	252
4	Hemnagar	2	44	48	6	98
5	Kumirmari					0
	Total	12	269	307	35	611
	For the month of March 2019					
1	Samsernagar	2	49	31	9	89
2	Bali Nature Club, Amlamethi	4	72	79	20	171
3	Anpur Rajatjubilee	4	98	118	9	225
4	Hemnagar	2	51	49	7	107
5	Kumirmari					0
	Total	12	270	277	45	592
	Grand Total	60	1449	1386	256	3091

#### Report of Medical camps for the year 2019-20 :

MEDICAL CAMP ORGANISED BY (2019-20)						
SOUTHERN HEALTH IMPROVEMENT SAMITY (SHIS)						
P.O. Bhangar. South 24 Parganas. West Bengal. Pin 743502.						
Sl. No.	Place	No. of camp	No. of persons treated			
			Male	Female	Child	Total
	For the month of November 2019					
1	Samsernagar	2	43	20	3	66
2	Bali Nature Club, Amlamethi	4	72	67	18	157
3	Anpur Rajatjubilee	4	87	99	7	193
4	Amlamethi					
5	Kumirmari	2	39	40	6	85
	Total	12	241	226	34	501
	For the month of December 2019					
1	Samsernagar	2	30	36	9	75
2	Bali Nature Club, Amlamethi	4	50	81	13	144
3	Anpur Rajatjubilee	4	72	80	5	157
4	Amlamethi	0	0	0	0	0
5	Kumirmari	2	51	56	4	111
	Total	12	203	253	31	487

	<b>For the month of January 2020</b>					
<b>1</b>	<b>Samsernagar</b>	<b>2</b>	<b>44</b>	<b>31</b>	<b>4</b>	<b>79</b>
<b>2</b>	<b>Bali Nature Club, Amlamethi</b>	<b>4</b>	<b>57</b>	<b>72</b>	<b>19</b>	<b>148</b>
<b>3</b>	<b>Anpur Rajatjubilee</b>	<b>4</b>	<b>69</b>	<b>82</b>	<b>8</b>	<b>159</b>
<b>4</b>	<b>Hemnagar</b>					<b>0</b>
<b>5</b>	<b>Kumirmari</b>	<b>2</b>	<b>47</b>	<b>58</b>	<b>6</b>	<b>111</b>
	<b>Total</b>	<b>12</b>	<b>217</b>	<b>243</b>	<b>37</b>	<b>497</b>
	<b>For the month of February 2020</b>					
<b>1</b>	<b>Samsernagar</b>	<b>2</b>	<b>23</b>	<b>40</b>	<b>12</b>	<b>75</b>
<b>2</b>	<b>Bali Nature Club, Amlamethi</b>	<b>4</b>	<b>64</b>	<b>76</b>	<b>14</b>	<b>154</b>
<b>3</b>	<b>Anpur Rajatjubilee</b>	<b>4</b>	<b>70</b>	<b>95</b>	<b>5</b>	<b>170</b>
<b>4</b>	<b>Amlamethi</b>					
<b>5</b>	<b>Kumirmari</b>	<b>2</b>	<b>50</b>	<b>39</b>	<b>2</b>	<b>91</b>
	<b>Total</b>	<b>12</b>	<b>207</b>	<b>250</b>	<b>33</b>	<b>490</b>
	<b>For the month of March 2020</b>					
<b>1</b>	<b>Samsernagar</b>	<b>2</b>	<b>40</b>	<b>19</b>	<b>7</b>	<b>66</b>
<b>2</b>	<b>Bali Nature Club, Amlamethi</b>	<b>2</b>	<b>32</b>	<b>42</b>	<b>6</b>	<b>80</b>
<b>3</b>	<b>Anpur Rajatjubilee</b>	<b>3</b>	<b>49</b>	<b>73</b>	<b>9</b>	<b>131</b>
<b>4</b>	<b>Amlamethi</b>					
<b>5</b>	<b>Kumirmari</b>	<b>2</b>	<b>73</b>	<b>50</b>	<b>3</b>	<b>80</b>
	<b>Total</b>	<b>9</b>	<b>194</b>	<b>184</b>	<b>25</b>	<b>403</b>
	<b>Grand Total</b>	<b>57</b>	<b>1062</b>	<b>1156</b>	<b>160</b>	<b>2378</b>

### Training and Workshops in 2018-20:

<b>Sl No</b>	<b>Date</b>	<b>Particulars</b>	<b>In Presence of</b>	<b>Start Time</b>
<b>1</b>	<b>17/04/2018</b>	<b>Protection monitoring protocol meeting</b>	<b>FD, DFD, AFDs</b>	<b>11:00 AM</b>
<b>2</b>	<b>08/08/2018</b>	<b>Protection monitoring protocol meeting</b>	<b>FD, DFD, AFDs</b>	<b>11:00 AM</b>
<b>3</b>	<b>14/08/2018</b>	<b>Protection monitoring protocol meeting</b>	<b>FD, DFD, AFDs</b>	<b>11:00 AM</b>
<b>4</b>	<b>29/10/2018</b>	<b>Camera trapping training for all STR staffs</b>	<b>FD, DFD, AFDs, ROs, WWF</b>	<b>11:00 AM</b>



			officers, Research Officers	
5	27/11/2018	Protection monitoring protocol meeting	FD, DFD, AFDs	11:30 AM
6	22/02/2019	Protection monitoring protocol meeting	FD, DFD, AFDs	11:30 AM
7	23/02/2019	Workshop cum training on legal issues and procedures under IFA-1927 and Wildlife Protection Act 1972 with frontline staffs of STR and SBR.	FD, DFD, AFDs	11:00 AM
8	2/05/2019	Protection monitoring protocol meeting	FD, DFD, AFDs	11:45 AM
9	25/07/2019	Training regarding of CCTV camera		11:00 AM
10	20/08/2019	Protection monitoring protocol meeting	FD, DFD, AFD	11:30 AM
11	03/09/2019	Meeting with Eco- Guides	FD, DFD, AFDs, RO NPW, RO SWLS	12: 30 PM
12	27/11/2019	Camera trapping training for all STR staffs	FD, DFD, AFDs, ROs, WWF officers, Research Officers	11:30 AM
13	5/12/2019	Camera trapping training for all STR staffs	AFD, ROs, WWF officers, Research Officers	11:30 AM
14	9/01/2020	Protection monitoring protocol meeting	Director SBR, Joint Director SBR, FD STR, DFD STR	10:30AM
15	01/02/2020, 02/02/2020	Legal Workshop with STR and SBR staffs	FD STR, DFD STR, AFD STR, ADFO SBR	11:00 AM

#### VETERINARY CAMPS 2018-20 :

VETERINARY CAMPS 2018-2019													
S. No.	Range	Beat	Name of JFMC	Date of camp	TREATMENT						VACCINATION		
					Cattle	Sheep/Goat	Poultry Bird	Duck	Others	Total	Cattle	Sheep/Goat	Total
1	BHT	Bagna	Mitrabari	27/12/2018	136	145	834	518		1633	48	32	80

2	BH T	Bagna	Emlibari	28/12/2 018	146	246	1136	413		194 1	88	98	186
3	BH T	Bagna	Hentalbari	29/12/2 018	202	221	1236	407		206 6	78	97	175
4	BH T	Bagna	Bhulia	30/12/2 018	157	154	662	345		131 8	5	94	175
5	BH T	Bagna	Bagna	30/12/2 18	51	61	307	106		525	40	45	85
6	BH T	Bagna	Adibasipara	31/12/2 018	182	147	949	514		179 2	92	97	189
7	BH T	Bagna	Gobindapur	24/02/2 019	113	134	1261	324		183 2	102	97	199
8	BH T	Bagna	Kalidaspur	25/02/2 019	138	104	867	279		139 5	107	78	185
9	BH T	Bagna	Adhorpara	26/02/2 019	178	126	1660	279	7	224 3	148	98	246
10	BH T	Jhingak hali	Hemnagar	27/02/2 019	247	386	1865	420		291 8	190	285	475
11	BH T	Jhingak hali	Kalitala	28/02/2 019	172	182	1885	492		273 1	142	130	272
12	BH T	Jhingak hali	Samserganj	01/03/2 019	321	635	1545	615		311 6	280	385	665
13	SW LS	Duttar	Lahiripur- Santigachi	04/01/2 019	250	510	1972	616		334 8	173	194	367
14	SW LS	Duttar	Lahiripur- Chargheri	05/01/2 019	278	371	187	453		258 9	197	193	390
15	SW LS	Duttar	Luxbagan- Parasmani	06/01/2 019	191	197	1056	520	34	199 8	137	98	235
16	SW LS	Duttar	Anpur- Rajatjubleee	02/03/2 019	261	414	2040	409	3	312 7	130	190	320
17	SW LS	Duttar	Anpur- Jamespur	03/03/2 019	193	295	1056	209	7	176 0	165	190	355
18	SW LS	Duttar	Dayapur	05/03/2 019	232	294	1228	348		210 2	180	220	400
19	SW LS	Duttar	Sonaga	15/03/2 019	263	396	1529	86	3	227 7	190	195	385
20	SW LS	Duttar	Dulki	16/03/2 019	323	613	1778	235	2	295 1	210	310	520
21	SW LS	Duttar	Pakhirala	17/03/2 019	450	881	2811	192		433 4	360	610	970
22	NP W	Bidya	Bijaynagar	10/03/2 019	234	236	1651	122	6	224 9	190	160	350
23	NP W	Bidya	Bali	11/03/2 019	225	267	1556	126		217 4	205	175	380
24	NP W	Bidya	Amlamethi	12/03/2 019	185	222	1409	116		193 2	150	187	337
25	NP W	Bidya	Mathurakh and	13/03/2 019	391	445	2088	242	15	318 1	340	380	720
26	NP W	Bidya	Satyanaraya npur	14/03/2 019	287	394	1617	132	3	243 3	240	190	430
TOT AL	J	5	26		580 6	8076	3748 5	851 8	80	599 65	426 7	4828	909 5

#### VETERINARY CAMPS 2019-2020

S. No.	Ran ge	Beat	Name of JFMC	Date of camp	TREATMENT						VACCINATION		
					Catt le	Sheep/ Goat	Poult ry Bird	Du ck	Othe rs	Tot al	Catt le	Sheep/ Goat	Tot al

1	NP W	Bidya	Bijaynagar	18/01/2 020	134	166	1070	72		224 9	97	99	196
2	NP W	Bidya	Bali	19/01/2 020	99	107	592	64		217 4	75	92	167
3	NP W	Bidya	Amlamethi	20/01/2 020	65	68	409	23	1	193 2	50	60	110
4	NP W	Bidya	Mathurakha nd	21/01/2 020	120	245	661	10	3	318 1	98	197	295
5	NP W	Bidya	Satyanaraya npur	22/01/2 020	247	346	1430	186		243 3	190	198	388
6	BH T	Bagna	Mitrabari	05/02/2 020	155	167	1118	406		163 3	80	90	170
7	BH T	Bagna	Emlibari	06/02/2 020	150	183	1054	317		194 1	88	100	188
8	BH T	Bagna	Hentalbari	07/02/2 020	145	204	1019	413	9	206 6	90	99	189
9	BH T	Bagna	Bhulia	08/02/2 020	108	146	1001	456	2	131 8	70	60	130
10	BH T	Bagna	Bagna	09/02/2 020	170	214	1381	782	10	525	110	100	210
11	BH T	Bagna	Adibasipara	10/02/2 020	242	307	686	292	2	179 2	95	150	245
12	BH T	Bagna	Gobindapur	11/02/2 020	135	83	706	348		183 2	60	50	110
13	BH T	Bagna	Kalidaspur	12/02/2 020	159	208	1009	712		139 5	80	98	178
14	BH T	Bagna	Adhorpara	13/02/2 020	192	178	1218	686		224 3	90	130	220
15	BH T	Jhingak hali	Hemnagar	14/02/2 020	41	123	460	235	4	291 8	NIL	NIL	NI L
16	BH T	Jhingak hali	Kalitala	15/02/2 020	160	167	958	282	1	273 1	96	97	193
17	BH T	Jhingak hali	Samsernaga r	16/02/2 020	182	272	972	486	4	311 6	85	130	215
18	SW LS	Duttar	Lahiripur- Santigachi	23/02/2 020	133	143	1253	320	1	334 8	40	100	140
19	SW LS	Duttar	Lahiripur- Chargheri	24/02/2 020	192	324	1690	568		258 9	65	160	225
20	SW LS	Duttar	Luxbagan- Parasmani	25/02/2 020	252	383	1987	650	1	199 8	90	210	300
21	SW LS	Duttar	Anpur- Rajatjubleee	26/02/2 020	154	129	1469	401	30	312 7	NIL	98	98
22	SW LS	Duttar	Anpur- Jamespur	24/01/2 020	204	292	1477	143	39	176 0	170	198	368
23	SW LS	Duttar	Dayapur	25/01/2 020	107	171	849	68		210 2	80	120	200
24	SW LS	Duttar	Sonaga	27/02/2 020	169	286	1451	665	1	227 7	NIL	170	170
25	SW LS	Duttar	Dulki	28/02/2 020	103	166	741	308		295 1	NIL	90	90
	SW LS	Duttar	Pakhirala	29/02/2 020	210	283	1318	588	3	240 2	NIL	160	160
TOT AL	3	5	26		402 8	5361	2797 9	948 1	116	469 65	189 9	3056	495 5









11/14/2018 4:26 PM



11/19/2018 10:00 AM



11/16/2018 3:34 AM



12/7/2018 11:17 AM



12/14/2018 6:22 AM



11/19/2018 2:18 PM



11/19/2018 1:56 PM



11/28/2018 9:35 AM



12/18/2018 9:55 AM AB



12/19/2018 11:11 AM









**GOVERNMENT OF WEST BENGAL  
FOREST DEPARTMENT  
FOREST  
NOTIFICATION**

No. 2867-For./11B-6/83.—4<sup>th</sup> May 1984.—Whereas by notification No. 3640 For., dated the 6<sup>th</sup> June 1978 published at page 1361 of Part I of the “Calcutta Gazette” dated the 13<sup>th</sup> July 1978, the Governor was pleased to declare his intention to constitute the forest lands covering an approximate area of 1330.10 sq. kms. and comprising reserve forest blocks and compartments, in the district of 24-Parganas, more fully described in the Schedule below (hereinafter referred to as the said lands) as a National Park to be called the “**Sunderbans National Park**” for the purpose of protecting, propagating and developing wild life therein;

And whereas more than two months from the date of such proclamation have elapsed for preferring claim, as required under clause (b) of section 21 of the Wild Life (Protection) Act, 1972, (53 of 1972), (hereinafter referred to as the said Act);

And whereas no claim has been preferred under section 19 of the said Act;

And whereas all rights in respect of the said lands have been vested in the State Government;

Now, therefore, in exercise of the power conferred by sub-section (4) of section 35 of the said Act, the Governor is pleased hereby to specify in the Schedule below the limits of the said lands comprising the reserve forest blocks and compartments and declare that with effect from the 14<sup>th</sup> May 1984, the same shall be a National Park to be called the “**Sunderbans National Park**” for the said purpose.

**The Schedule**

**A. Situation:**

DISTRICT : 24-PARGANAS

Forest lands covering an approximate area of 1330.10 sq. kms. and comprising the following reserve forest blocks and compartments:—

<b>Blocks</b>	<b>Compartments</b>
Matla	1 to 4
Chamta	4, 5, 6, 7 and 8
Chhotahardi	1 to 3
Gosaba	1 to 4
Gona	1 to 3
Baghmara	2 to 8
Mayadwip	1 to 5

**B. Boundaries:**

North : Reserve forest blocks and compartments, namely, Netidhopani-1, 2 and 3; Chamta-3 and 2; Chandkhali-2 and 4; and Baghmara-1.  
East : Harinbhangra river adjoining the international boundary with Bangladesh.  
South : Bay of Bengal.



West :

By order of the Governor,  
R.N. DE  
Secy. to the Govt. of West Bengal  
Matla river.

**GOVERNMENT OF WEST BENGAL**  
**FOREST DEPARTMENT**  
**FOREST**  
**NOTIFICATION**

No. 5396-For/—24<sup>th</sup> June 1976—Whereas the area whose situation and boundaries are described in the Schedule below (hereinafter referred to as the said area) is considered to be of adequate ecological, faunal, natural and zoological significance;

Now, therefore, in exercise of the power conferred by sub-section (1) of section 18 of the Wild Life (Protection) Act, 1972 (53 of 1972), and in supersession of such part of all previous notifications as declared the said area or part thereof as a sanctuary, the Governor is pleased hereby to declare, with effect from the date of publication of this notification in the Official Gazette, the said area to be a sanctuary to be known as Sajnekhali Wild Life Sanctuary for the purpose of protecting, propagating and developing wild life and its' environment.

*The Schedule*

**A. Situation:**

District : 24-Parganas

24-Parganas Forest Division, Basirhat Range (Part) covering an approximate area of 362.40 Sq. Km.

and comprising following forest blocks and compartments:—

<b>Blocks</b>	<b>Compartments</b>
Panchamukhani	1 to 5
Pirkhali	1 to 7

**B. Boundaries:**

North : Bara Herobhanga Khal, Gomdi Khal and Pitch Khal.  
East : Duttar Gang.  
South : Part of Gosaba river and Netidhopani Khal.  
West : Bidya river.

By order of the Governor,  
A.K. GUPTA  
Dy. Secy. to the Govt. of West Bengal



**Government of West Bengal  
Forests Department  
Forest Branch  
Writers' Buildings, Kolkata – 700 001**

**NOTIFICATION**

No. 6028-For

Dated: 18.12.2007

WHEREAS it has been established on the basis of scientific and objective criteria that the area described in the Schedule below (hereinafter referred to as the said area) is required to be kept as inviolate for the purpose of tiger conservation, without affecting the rights of the Scheduled Tribes or such other forest dwellers;

WHEREAS the State Government agrees with the recommendation of the Expert Committee set up vide P.C.C.F. (Wildlife), Govt. of West Bengal's Office Order No. 12-M/8-2007 dt. 4.11.2007 that the said area should be maintained as the Core or Critical Tiger Habitat of Sundarban Tiger Reserve.

WHEREAS National Tiger Conservation Authority, Govt. of India, vide its memo No. 1501/11/2007-PT (Part) dated December 3, 2007, has also recommended that the said area be notified as the Core or Critical Tiger Habitat of Sundarban Tiger Reserve.

NOW, therefore, in exercise of the power conferred by paragraph (1) of the Explanation following sub-section (4) of Section 38 V of the Wildlife (Protection) Act, 1972, the Governor is pleased hereby to declare, with effect from the date of issue of this Notification, the said area to be the Core or Critical Tiger Habitat of Sundarban Tiger Reserve.

**THE SCHEDULE**

Sl. No.	Block	Compartment	Total Area (in Ha.)	Legal Status
1	Matla	1-4	17630	National Park
2	Chamta	1-3	9632	Reserved Forest
		4-8	12437	National Park
3	Chotahardi	1-3	17567	National Park
4	Goasaba	1-4	17173	National Park
5	Gona	1-3	13903	National Park
6	Baghmara	1	2430	Reserved Forest
		2-8	26963	National Park
7	Mayadwip	1-5	27336	National Park
8	Netidhopani	1-3	9300	Reserved Forest
9	Chandkhali	1-4	15591	Reserved Forest
TOTAL:			169962	

By order of the Governor

(K. Chaudhury)  
Addl. Chief Secretary to the Govt. of West Bengal

**Government of West Bengal  
Forests Department  
Forest Branch  
Writers' Buildings, Kolkata – 700 001**

**NOTIFICATION**

No. 615-For/11M-28/07

Dated Kolkata the 17/02/2009

WHEREAS the core or critical tiger habitat of Sundarban Tiger Reserve has been notified vide Forest Department's G. O. No. 6028-For dated 18/12/2008.

WHEREAS it has been established on the basis of scientific and objective criteria that the area described in the Schedule below (hereinafter referred to as the said area) is required to ensure the integrity of the Core or Critical Tiger Habitat of Sundarban Tiger Reserve with adequate dispersal for tiger species, and which aim at promoting co-existence between wildlife and human activity with due recognition of the livelihood, developmental, social and cultural rights of the local people;

WHEREAS the State Government agrees with the recommendation of the Expert Committee set up vide P.C.C.F. (Wildlife), Govt. of West Bengal's Office Order No. 12-M/8-2007, dated 04/11/2007 that the said area should be maintained as the Buffer or Peripheral area of Sundarban Tiger Reserve;

NOW, therefore, in exercise of the power conferred by paragraph (ii) of the Explanation following sub-section (4) of Section 38 V of the Wildlife (Protection) Act, 1972, the Governor is pleased hereby to declare, with effect from the date of issue of this Notification, the said area to be the Buffer or Peripheral Area of Sundarban Tiger Reserve.

**THE SCHEDULE**

<b>Block</b>	<b>Compartment</b>	<b>Total Area (Ha.)</b>	<b>Legal Status</b>
1. Panchamukhani	1-5	17666	Sanctuary
2. Pirkhali	1-7	18576	Sanctuary
3. Arbesi	1-5	15011	Reserved Forest
4. Jhilla	1-6	12311	Reserved Forest
5. Khatuajhuri	1-3	13241	Reserved Forest
6. Harinbhangha	1-3	11687	Reserved Forest
<b>TOTAL :</b>		88527	

By order of the Governor

Sd/-

Addl. Chief Secretary to the Govt. of West Bengal

No. 615/1-For/IIM-28/07

Dated Kolkata the 17/02/2009

Copy forwarded to the Managing Director, Basumati Corporation Ltd. 166, B. B. Ganguly Street, Kolkata – 700 012.

He is requested to publish the Notification in the Kolkata Gazette (Extra Ordinary) and send 50 (fifty) copies of the same to this Department for Official Use.

Sd/-  
Joint Secretary to the Govt. of West Bengal.