



*Government of the People's Republic of Bangladesh*

*Activities of 2022-2023*

*Soil Resource Development Institute  
Divisional Office, khulna*

## Technical activities of the Year 2022-2023, SRDI, DO, Khulna

### 1. Progress of Nirdeshika Updating

District	Field survey		Map finalization		Draft report preparation		Final report preparation	
	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
Khulna	Babugonj	Babugonj			Avoy Nagar	Avoy Nagar	Dumuria	Dumuria
Jashore	Gangni	Gangni	Keshobpur, Avoy Nagar	Keshobpur, Avoy Nagar			Chougacha, Keshobpur	Chougacha, Keshobpur
Kushtia	Gangni	Gangni	Kustia sadar	Kustia sadar	Gangni		Kustia sadar	Kustia sadar
			Meherpur sadar	Meherpur sadar			Meherpur sadar	Continued
Satkhira	Babugonj	Babugonj	Potuakhali Sadar	Potuakhali Sadar	Babugonj		Digholia	Digholia
							Potuakhali Sadar	Continued
Jhenaidah	Boalmari	Boalmari					Damurhuda	Damurhuda

**\* Khulna office with Satkhira and Jashore Office with Kushtia jointly completed the survey activities**

### 2. Information on Upazila Surveyed during 2022-2023

#### 2(a) Name of Upazila & District:

Serial no.	Upazila	District
i	Babugonj	Barishal
ii	Gangni	Meherpur
iii	Boalmari	Faridpur

#### 2(b) Change in Land Type (for floodplain, piedmont and terrace area)

##### i. Babugonj Upazila

Land type	Previous (2002)		Present (2022)		% increase/decrease	Possible reasons
	Area (ha)	%	Area (ha)	%		
Highland	15,225	44.9	13,857	40.84	-9.04	
Medium Highland	11,829	34.9	11,768	34.68	-0.63	
Medium Lowland	2,112	6.2	1,633	4.81	-22.42	
Lowland	34	0.1	34	0.1	-	
Very lowland	-	-	-	-	-	
Miscellaneous	4,732	13.9	6,640	19.57	+40.79	
<b>Total</b>	<b>33,932</b>	<b>100.0</b>	<b>33,932</b>	<b>100.0</b>		

##### ii. Gangni Upazila

Land type	Previous (2002)		Present (2022)		% increase/decrease	Possible reasons
	Area (ha)	%	Area (ha)	%		

Highland	15,225	44.9	13,857	40.84	-9.04	
Medium Highland	11,829	34.9	11,768	34.68	-0.63	
Medium Lowland	2,112	6.2	1,633	4.81	-22.42	
Lowland	34	0.1	34	0.1	-	
Very lowland	-	-	-	-	-	
Miscellaneous	4,732	13.9	6,640	19.57	+40.79	
<b>Total</b>	<b>33,932</b>	<b>100.0</b>	<b>33,932</b>	<b>100.0</b>		

### iii. Boalmari Upazila

Land type	Previous (2002)		Present (2022)		% increase/ decrease	Possible reasons
	Area (ha)	%	Area (ha)	%		
Highland	15,225	44.9	13,857	40.84	-9.04	
Medium Highland	11,829	34.9	11,768	34.68	-0.63	
Medium Lowland	2,112	6.2	1,633	4.81	-22.42	
Lowland	34	0.1	34	0.1	-	
Very lowland	-	-	-	-	-	
Miscellaneous	4,732	13.9	6,640	19.57	+40.79	
<b>Total</b>	<b>33,932</b>	<b>100.0</b>	<b>33,932</b>	<b>100.0</b>		

### 2(d) Change in Land Use (for floodplain, piedmont and terrace area)

#### i. Babugonj Upazila

Land Use	Land type	Previous (1999)		Present (2023)		% increase/ decrease	Possible reasons
		Area (ha)	%	Area (ha)	%		
1. Annual	Highland	217	1.4	301	1.97	+38.70	
2. Perennial	Highland	-	-	36	0.23	+100	
3. RV-KV	Highland	-	-	186	1.20	+100	
4. RC-Jute-TA	Medium Highland			2,928	19.21	+100	
5. RC-F-TA	Medium Highland	1,654	10.84	722	4.73	-56	
6. B- F-TA	Medium Highland	1,643	10.77	1,984	13.01	+20.75	
7. F-F- TA	Medium Highland	2,134	13.99	-	-	-100	
8. B- F-F	Medium Lowland	227	1.5	109	0.71	- 51.98	
9. RC-BA-TA	Highland/ Medium Highland	755	4.96	-	-	-100	
Miscellaneous	Medium Highland	4135	27.1	7,788	51.1	+88.3	
<b>Total</b>		15,247	100.0	15,247	100.0		

ii . Gangni Upazila

Land Use	Land type	Previous (2002)		Present (2022)		% increase/decrease	Possible reasons
		Area (ha)	%	Area (ha)	%		
1. Annual		1,380	4.1	1,775	5.2	+26.83	
2. Perennial		-	-	1,330	3.9	-	
3. Miscellaneous		4,732	13.9	6,640	19.60	+41	
4. Rabi vegetables-Kharif vegetables		912	2.7	1,780	5.3	+96.30	
5. Rabi crops-Fallow-T. Aman		6,662	19.6	1,115	3.3	-83.16	
6. Rabi crops/Boro-Jute-T. Aman		5,226	15.4	5,100	15	-2.60	
7. Rabi crops/Boro-Jute-Fallow		1,825	5.3	440	1.3	-75.47	
8. Boro-Fallow-T. Aman		8,433	24.9	3,325	9.8	-60.64	
9. Tobacco-Fallow-T. Aman		1,928	5.7	890	2.6	-54.39	
10. Khesari/Pea/Boro-Fallow-B. Aman		1,682	5	-	-	-	
11. Boro (Local/HYV)-Fallow-Fallow		987	2.9	440	1.3	-55.17	
12. Maize-Cotton		-	-	665	2	-	
13. Wheat-Jute-Rice/T. Aman		-	-	9,980	29.4	-	
14. Others		165	0.5	452	1.3	+160	
<b>Total</b>		<b>33,932</b>	<b>100.0</b>	<b>33,932</b>	<b>100.0</b>		

iii. Boalmari Upazila

Land Use	Land type	Previous (year)		Present (year)		% increase/decrease	Possible reasons
		Area (ha)	%	Area (ha)	%		
Sugarcane +Companion crops		660	2.43	293	1.08	(-) 1.35	
RC-Jute-TA (Modern)		6,393	23.50	9,804	36.04	(+) 12.54	
RC-Jute-F		2,537	9.32	2,393	8.8	(-) 0.52	
RC-Mixed Aush and Aman		4,434	16.29	2,752	10.12	(-) 6.17	
RC-Pait-Ropa Aman (Modern)		835	3.09	552	2.03	(-) 1.06	
RC-woven Aman		1,214	4.46	277	1.02	(-) 3.44	
Boro (Modern)-F-TA (Modern)		5,462	20.08	4,913	18.06	(-) 2.02	
Boro (modern)/local-F-F		1,099	4.04	770	2.83	(-) 1.21	
Miscellaneous (other crop types)		742	2.72	1,175	4.32	(+) 1.6	
Miscellaneous (settlement/reservoir/river/pond etc.)		3,827	14.07	4,274	15.71	(+) 1.64	

Total		27,203	100.0	27,203	100.0		
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### 3. Union Sahayika Preparation

Name of Office	District	Upazila	No. of shahayika prepared
Jashore	Narail	Lohagara-8	8
Kushtia	Chuadanga	Alamdanga	10
Jhenaidah	Magura Jhenaidah	Sreepur-8 Harinakundu-2	10
Satkhira	Khulna	Koyra-7	7
Total			35

### 4. Mobile Soil Testing Services (MSTL) 2022-2023

Name of Office	District	Name of Upazila		Total no. of sample analyzed
		Rabi	Kharif	
Khulna	Bagerhat	Bagerhat sadar		50
	Khulna	Dumuria	Digholia	100
Jashore	Jashore	Keshobpur	Jhikargacha	99
	Narail	Kalia		51
Kushtia	Chuadanga	Chuadanga Sadar	Damurhuda	100
	Kushtia	Kushtia Sadar		50
Jhenaidah	Jhenaidah	Jhenaidah Sadar	Jhenaidah Sadar	100
Satkhira	Satkhira	Tala		50
			Total	600

### 5. Yield Data of STB Field Trial

SL No.	Name of Upazila	Name of District	Crop (s) & variety (s)	Average yield (t/ha)		Yield increase/decrease (%)
				Farmers' field	Demonstration plot	
Khulna	Tala	Satkhira	BRRIdhan87	5.2	5.7	+9.61
	Dumuria	Khulna	BRRIdhan87	5.4	6.3	+16.7
Jashore	Jashore sadar	Jashore	BRRIdhan87	5.5	6.2	+12.72
	Monirampur	Jashore	BRRIdhan87	5.7	6.68	+17.19
Kushtia	Doulatpur	Kushtia	BRRIdhan87	4.4	5.2	18.18
	Alamdanga	Chuadanga	BRRIdhan87	5.4	5.7	5.55

### 6. Distribution of Fertilizer Recommendation Card

Name of Office	District	Upazila	Type of service		No. of card distribute	Remarks
			Nirdeshika based	Online based recommendatio		

			recommenda tion	n	d	
Jashore		Monirampur, Jashore sadar	120	600	720	
Kushtia	Kushtia	Kumarkhali, Khoksa, Doulatpur, Mirpur,	182	320	502	
		Chuadanga Meherpur				
			182	320	502	
Satkhira	Satkhira	Satkhira sadar	60	360	420	
		Kaligonj	60		60	
		koraroa		120	120	
		Debhata		120	120	
	Total		120	600	720	
Jhenaidah	Jhenaidah	Jhenaidah Sadar	100	305	405	

## 7. Training Programme

### 7(a) Training Received

Name of Office	Title of the programme	Duration	Host organization	Participant	
				Designation	Number
Khulna	Training on methods of collecting data from the field using "Soil Mastering Apps"	1 day	SRDI, Dhaka	SO	1
	Training on methods of collecting crop signature data from the field using "Survey 123 Apps"	1 day	SRDI, Dhaka	SO	1
Jashore	Training on methods of collecting data from the field using "Soil Mastering Apps"	1 day	SRDI, Dhaka	SO	1
	Training on methods of collecting crop signature data from the field using "Survey 123 Apps"	1 day	SRDI, Dhaka	SO	1
	Problematic soil management	2 days	SRDI, DO, Khulna	PSO	1
Satkhira	Disaster Management through Climate Smart Agriculture	5days	NATA, Gazipur	SSO	1
	Problematic soil management	2 days	SRDI, DO, Khulna	SO	1
	Training on methods of collecting data from the field using "Soil Mastering Apps"	1 day	SRDI, Dhaka	SSO, SO	2
	Training on methods of collecting crop signature data from the field using "Survey 123 Apps"	1 day	SRDI, Dhaka	SSO, SO	2
Kushtia	Training on Data Entry by using Survey 123 Apps	1 day	SRDI, Dhaka	SSO, SO	2
	Training on Data Entry by using Soil Mastering Apps	1 day	SRDI, Dhaka	SSO, SO	2
	Training on Problematic Soil	2 days	SRDI,	SO	1

	Management		Divisional Office, Khulna		
Jhenaidah	Data Entry into Software	1 day	SRDI, Dhaka	SSO	01
	Data Entry into Software	1 day	SRDI, Dhaka	SO	01
	Training on problem soil management	2 days	SRDI, Khulna	SO	01
	Training Course on Geographic Information System	5 days	BARC	SO	01

#### 7(b) Training Imparted

Name of Office	Title of the programme	Duration	Host organization	Participant	
				Type	Number
Khulna	Problematic soil management	2 days	Funded by: GKBS project Implemented by: SRDI, DO, Khulna	Officers	30
	Soil sample collection technique, identification of adulterate fertilizers, methods & time of fertilizer application, deficiency symptoms of nutrient element and use of balanced fertilizer. Salinity management	1 day	SRDI, DO, Khulna		510
	Use of Upazila Nirdeshika and Union Sahayika	5 days	SRDI, DO, Khulna	SAAO	50
Satkhira	Soil sample collection technique, identification of adulterate fertilizers, methods & time of fertilizer application, deficiency symptoms of nutrient element and use of balanced fertilizer. Salinity management	1 day	SRDI, Satkhira	Farmer	410
Jashore	Collection of soil sample collection and balanced fertilizer application	01 day	SRDI	Formers	150
	Use of soil and land use guide	05 day	SRDI	SAAO	50
	Modern cotton cultivation and technologies transfer	01	CDB	CDB personnel	50
Kustia	Training of SAAO on Use of "Upazila Land and Soil Resource Use Guidelines"	5 days	Funded by: SRSRF project	SAAO	50

			Implemented by: SRDI,RO, Kustia		
	Soil sample collection technique, identification of adulterate fertilizers, methods & time of fertilizer application, deficiency symptoms of nutrient element and use of balanced fertilizer.	1 day	SRDI, Kustia	Farmer	150
Jhenaidah	Training on soil sampling, use of balanced fertilizers and methods of detection of adulterated fertilizers	1 day	SRDI, RO, Jhenaidah	Farmers	100

#### 8. Advisory Services to Beneficiaries

Name of Office	District	Upazila	Agency	Service Provided

#### 9. Distribution of saplings and/seedlings (if any)

Name of Office	District	Upazila	Number		Total	Remarks
			Fruits	Vegetables		
Kushtia	Kushtia	Kushtia sadar	150	666	816	
		Meherpur	Gangni	25	75	100
	Chuadanga	Alamdanga		102	102	
Jhenaidah	Jhenaidah	Jhenaidah sadar	250	350	600	

#### 10. Soil and Water Salinity (where applicable)

##### 10.A. Soil salinity

(Data should be presented against each soil series with sampling location)

#### Soil Salinity (EC: dS/m)

##### 1. Khulna

Site no. 14A , Soil series: Bajoa, MHL, Location: Krishnanagar, Batiaghata.

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2020	5.4	7.2	8.24	10.4	8.6	7.6	6.1	1.3	1.2	1.4	1.5	2.1
2021	2.5	5.2	9.6	15.0	10.2	1.5	1.3	1.8	1.4	1.7	2.1	4.18
2022	4.6	5.07	9.20	11.2	8.20	6.5	6.0	3.9	3.4	3.0	3.7	4.0
2023	4.6	5.2	6.0	8.0	11.2							

Site no. 14B, Soil series: Dumuria, MHL, Location: Krishnanagar, Batiaghata.

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2020	4.9	7.9	8.36	10.8	8.1	7.5	6.0	1.2	1.1	1.3	1.4	1.9
2021	2.3	5.0	10.1	15.6	11	1.6	1.2	1.1	1.2	1.83	2.0	3.91
2022	4.2	6.21	9.0	11.5	8.0	7.0	6.6	3.7	3.3	2.9	3.8	4.1
2023	4.5	5.0	6.4	8.2	11.0							



Site no. 15A, Soil series: Bajoa, MHL, Location: Ghutudia, Dumuria.

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2020	4.5	7.2	8.5	9.1	8.8	6.9	6.3	1.4	1.2	1.5	1.7	2.0
2021	2.4	5.2	8.9	12.1	10.9	1.3	1.2	1.5	1.4	1.44	1.90	4.44
2022	5.20	6.59	9.70	11.0	7.90	6.9	6.4	3.6	3.5	3.1	3.9	4.2
2023	4.6	5.3	5.9	7.9	10.0							

Site no. 15B, Soil series: Dumuria, MHL, Location: Ghutudia, Dumuria.

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2020	4.4	8.1	8.7	9.8	7.8	7.3	6.7	1.5	1.4	1.6	1.8	1.8
2021	2.2	5.1	9.5	13.2	11.5	1.6	1	1.1	1.5	1.7	1.8	3.90
2022	5.1	6.97	10.2	11.1	7.6	7.2	7.0	3.2	3.0	3.0	4.2	4.1
2023	4.0	5.1	6.0	8.0	10.2							

Site no. 16A, Soil series: Bajoa, MHL, Location: Kismat Fultala, Batiaghata .

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2020	5.2	6.7	7.98	8.6	7.6	7.7	6.3	1.7	1.3	1.5	1.7	2.2
2021	2.4	6.4	10.1	16.5	15.5	1.6	1	1.1	1.4	1.97	2.50	4.94
2022	5.3	5.96	10.5	13.2	7.5	6.9	7.0	3.7	3.2	2.9	3.7	4.0
2023	4.1	6.2	7.0	8.2	11.0							

Site no.16B, Soil series:Dumuria, MHL,Location:Kismat Fultala, Batiaghata.

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2020	4.7	8	8.36	9.1	7.4	7.8	6.7	1.4	1.2	1.4	1.4	2.1
2021	2.6	6.3	10.5	16.9	14.9	1.4	1.1	1.2	1.2	1.83	2.75	4.56
2022	5.20	6.97	10.2	13.1	7.4	6.8	6.4	3.5	3.4	2.9	3.9	4.1
2023	4.2	6.1	7.2	8.4	11.1							

Site no. 17A, Soil series: Bajoa, MHL, Location: Fultala, Batiaghata .

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2020	4.9	7.2	8.1	10.4	7.7	7.3	6.0	1.3	1.1	1.5	2.5	2.3
2021	2.5	5.8	11.0	17.0	13.9	1.0	1.0	1.2	1.3	1.2	2.2	4.8
2022	4.9	6.9	10.5	12.9	8.1	7.5	7.0	3.4	3.0	2.8	4.0	3.9
2023	4.2	5.6	6.4	8.1	10.5							

Site no. 17B, Soil series: Dumuria, MHL, Location: Fultala, Batiaghata .

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2020	5.2	7.9	8.5	11	8.5	6.9	5.7	1.1	1.2	1.4	1.4	2.4
2021	2.7	5.7	11.6	17.5	14.5	1.3	1.1	1.0	1.2	1.83	2.10	4.94

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2022	5.1	6.75	10.0	13.2	8.2	8.0	7.4	3.5	3.2	2.7	3.8	4.0
2023	4.1	5.5	6.2	8.2	10.7							

Site no. 18A, Soil series: Barisal, MHL, Location: Digraj Biddarbaon, Mongla .

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2020	5.5	9.8	12.6	14.5	11.6	9.1	7.5	1.8	1.7	1.9	2.1	3.1
2021	4.5	8.2	14.1	18.2	17.5	1.3	1.1	1.0	1.2	3.8	4.5	5.83
2022	6.8	8.2	10.5	17.2	10.0	8.5	4.6	1.9	1.6	1.8	4.5	5.0
2023	5.3	7.2	8.1	10.5	16.8							

Site no. 18B, Soil series: Barisal, MHL, Location: Digraj Biddarbaon, Mongla.

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2020	5.1	10.4	13.5	14.1	11.4	8.7	6.9	1.7	1.4	1.8	1.9	3.0
2021	4.7	8.1	14.2	18.4	18.2	4.6	1.7	1.4	1.2	2.63	4.2	4.94
2022	6.7	8.1	14.2	17.5	10.0	9.0	8.6	4.7	4.4	3.1	5.0	5.2
2023	5.4	7.1	8.4	11.0	17.0							

Site no. 19, Soil series: Barisal, MHL, Location: Shibbari, Paikgacha .

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2020	5	9.8	11.4	13.3	10.1	7.6	6.3	2.0	1.7	1.9	2.1	2.9
2021	3.5	7.5	13.2	17.3	16.0	4.6	1.9	1.6	1.8	4.0	5.0	5.32
2022	6.2	7.5	13.1	16.0	9.5	8.2	5.7	1.8	1.3	1.8	3.7	3.9
2023	4.1	7.0	8.0	11.2	15.0							

Site no. 20, Soil series: Barisal, MHL, Location: Boloibunia, Morellganj .

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2020	4.4	6.6	7.9	9.1	6.3	5	4.7	1.0	1.0	1.2	1.4	1.8
2021	2.5	6.5	10.0	10.2	8.2	2.1	1.2	0.9	1.2	1.44	2.0	3.8
2022	4.2	5.4	9.8	10.2	6.5	6.0	5.0	3.7	3.1	2.6	3.5	3.8
2023	4.0	5.1	6.1	8.2	10.6							

### Satkhira

1. Location: Soil series: Ishurdi, MHL, kumira, Tala.

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2021												1.70
2022	1.83	1.97	1.70	1.83	2.23	2.63	2.10	1.92	1.87	1.83	1.80	1.84
2023	3.80	3.89	2.63	1.70	1.30							

2. Location: Soil series: Ishurdi, MHL, Binerpota, Satkhira

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D

2021												1.44
2022	1.57	1.83	1.17	1.30	2.10	2.36	2.27	2.15	2.01	2.10	2.03	2.04
2023	4.82	4.93	4.44	5.70	4.94							

3. Location: Soil series: Ishurdi, MHL, Shreepatipur, Kolaroa.

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2021												4.18
2022	1.30	1.57	1.04	1.17	1.83	2.10	1.70	1.61	1.56	1.57	1.44	1.49
2023	2.10	2.14	1.97	1.57	1.44							

4. Location: Soil series: Barisal, MHL, Capra, Budhhata, Ashashuni.

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2021												4.33
2022	5.1	5.8	5.2	5.7	6.1	8.5	5.5	4.8	4.63	4.56	4.50	4.55
2023	6.72	6.83	6.08	7.86	6.84							

5. Location: : Soil series: Ishurdi, MHL, Shokhipur, Debhata

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2021												5.20
2022	5.3	5.7	4.94	5.32	6.21	8.36	4.18	4.05	4.00	3.93	3.91	3.95
2023	5.20	5.55	5.07	5.86	4.06							

6. Location: Soil series: Barisal, MHL, Varashimla, kaligonj .

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2021												4.2
2022	5.9	4.7	4.1	5.9	7.1	10.8	4.44	3.43	3.45	3.80	3.75	3.80
2023	6.46	6.79	6.21	7.25	7.10							

7. Location: Soil series: Barisal, MHL, Shrifalkathi, Ishwaripur, Shyamnagar

Year	Monthwise EC Value											
	J	F	M	A	M	J	J	A	S	O	N	D
2021												4.0
2022	4.4	6.8	6.1	8.1	10.9	13.5	6.08	5.33	5.37	5.45	5.53	5.62
2023	8.11	8.87	8.49	9.63	9.50							

## Jashore

Site no-3: Narail Ferry ghat Narial Sadar

**Soil series: Gopalpur, High land**

	2020	2021	2022	2023
January	0.64	0.77	0.91	1.03
February	0.64	1.03	0.64	0.63
March	0.6	1.17	0.91	0.38
April	0.65	1.17	1.03	0.51
May	0.7	1.4	1.03	1.3
June	0.64	1.03	0.91	
July	0.24	0.97	1.04	
August	0.64	0.5	0.64	
September	0.38	0.24	0.51	
October	0.64	0.38	0.64	
November	0.77	0.38	0.9	
December	0.98	0.51	0.78	

Site no-4: Baraipara, Kalia, Narail

**Soil Series: Gopalpur, medium highland,**

	2020	2021	2022	2023
January	1.04	1.17	1.04	0.97
February	1.3	1.17	0.77	0.76
March	1.03	1.3	0.97	0.77
April	1.17	1.03	1.17	0.77
May	0.98	1.57	1.4	7.86
June	1.04	1.17	1.83	
July	0.77	1.03	1.17	
August	0.77	0.48	0.91	
September	0.51	0.38	0.77	
October	0.6	0.57	0.91	
November	0.77	0.91	0.97	
December	0.98	0.91	0.97	

Site no-5: Kalna ghat, Lohagara, Narail

**Soil series: Sara highland,**

	2020	2021	2022	2023
January	1.9	0.8	0.6	1
February	1.9	1.2	0.7	0.71
March	1.9	2.8	0.8	1.15
April	4.1	4.6	6	6.03
May	9.25	12.5	5.8	11.81
June	1.98	2.8	4	
July	0.3	5.1	9	
August	0.3	0.7	1.8	
September	0.4	0.5	0.7	
October	0.4	0.3	0.6	
November	0.5	0.65	0.8	

December	0.3	0.6	0.8	
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Site no-7: Sagardari, Kesabpur, Jessore

**Soil Series: Amjhupi, medium highland,**

	2020	2021	2022	2023
January	0.77	1.03	1.17	0.91
February	1.3	1.03	0.97	0.91
March	0.91	1.3	0.77	1.04
April	0.77	1.4	1.5	0.64
May	0.97	1.97	1.4	0.91
June	0.77	0.97	1.04	
July	0.24	0.38	0.93	
August	0.9	0.24	0.91	
September	0.77	0.24	0.91	
October	0.98	0.24	0.77	
November	1.03	0.91	0.91	
December	1.17	0.91	0.97	

Site no-9: Noapara, Jessore

**Soil Series: Gopalpur, highland,**

	2020	2021	2022	2023
January	0.83	1.3	0.91	1.3
February	0.51	0.98	1.04	1.01
March	0.6	1.3	1.1	2.5
April	0.91	1.57	1.4	5.07
May	0.57	1.57	1.57	0.77
June	1.17	1.03	0.91	
July	1.04	0.97	1.03	
August	1.04	0.38	1.04	
September	0.98	0.11	0.77	
October	1.03	0.97	0.51	
November	1.2	0.77	0.78	
December	1.3	0.77	0.91	

Site no-10:Tularampur, Narail

**Soil series: Sara, High land**

	2020	2021	2022	2023
January	0.64	0.98	0.64	0.9
February	0.77	0.92	0.77	0.71
March	0.91	1.03	0.91	2.1
April	0.98	1.03	1.17	5.83
May	0.97	1.17	0.97	8.11
June	0.64	1.17	0.77	
July	0.24	1.03	0.91	
August	0.68	0.4	0.77	
September	0.38	0.24	0.51	
October	0.51	0.64	0.38	

November	0.6	0.51	0.5	
December	0.77	0.77	0.77	

Site no-12.Gobra Bazar, Narail  
Soil series: Gopalpur, Medium high land.

	2020	2021	2022	2023
January	0.91	0.98	0.91	0.77
February	0.51	1.17	1.04	1.02
March	0.57	1.57	1.04	4.69
April	0.6	1.4	1.4	1.04
May	0.91	1.97	1.03	5.86
June	0.77	1.3	1.03	
July	0.77	0.9	1.04	
August	0.98	0.38	0.91	
September	0.51	0.11	0.77	
October	0.51	0.51	0.51	
November	0.77	0.38	0.77	
December	1.03	0.63	0.9	

Site no-13: Bardia , Kaliail.  
Soil series: Gopalpur, High land.

	2020	2021	2022	2023
January	0.8	1.03	0.94	0.97
February	0.64	1.03	0.91	0.92
March	0.77	1.44	0.97	0.51
April	0.91	1.3	1.03	0.51
May	0.78	1.4	1.5	1.17
June	0.77	0.97	0.97	
July	0.77	0.6	0.97	
August	0.91	0.4	1.17	
September	0.64	0.38	0.91	
October	0.77	0.38	0.77	
November	1.03	0.51	0.51	
December	0.98	0.77	0.78	

Site no-26: Sheikhati, Narail Sadar  
Soil series: Gopalpur, High land.

	2020	2021	2022	2023
January	1.04	1.17	1.04	1.03
February	0.91	1.3	1.04	1.02
March	0.97	1.83	0.91	0.64
April	0.91	1.5	1.4	0.64
May	0.97	1.57	1.97	0.91
June	1.04	1.17	1.17	
July	0.91	0.18	1.83	
August	1.97	0.11	1.3	
September	1.17	0.24	1.17	

October	1.17	0.57	0.91	
November	1.17	0.77	0.91	
December	1.17	0.91	0.91	

#### 10.B. water (surface & ground) salinity

(Data should be presented against individual point of river, canal & tube well with name of location)

#### Khulna

Site no. 13. Madhumati river, Mollahat, Bagerhat.

Year	Monthwise EC Value											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	0.7	0.9	1.5	1.4	4.2	1	1.2	0.3	0.3	0.4	0.4	0.4
2021	0.6	0.7	0.9	7.2	5.1	0.3	0.4	0.5	0.4	0.43	0.45	0.40
2022	0.57	0.52	1.0	3.9	0.70	0.60	0.52	0.33	0.34	0.37	0.46	0.60
2023	0.69	0.74	0.91	2.3	2.70							

Site no. 15. Rupsa river, Rupsa Ferryghat, Khulna.

Year	Monthwise EC Value											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	1.6	2.6	11.0	8.0	10.5	3.43	2.4	0.40	0.2	0.4	0.5	0.4
2021	1.70	5.00	11.8	25.9	30.2	0.29	0.4	0.4	0.3	0.34	0.35	0.56
2022	0.74	1.0	10.0	14.6	10.5	0.72	0.22	0.26	0.24	0.32	0.35	0.45
2023	0.72	4.00	11.5	16.7	32.0							

Site no. 16. Shailmari river, Koiya Bazar, Batiaghata, Khulna.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	2.1	9.5	12.5	10	13	8.2	0.4	0.3	0.2	0.3	0.7	0.9
2021	2.30	10.0	17.0	28.0	33.0	0.84	0.4	0.5	0.4	0.4	0.60	0.49
2022	0.93	2.8	10.2	16.0	13.5	1.5	0.31	0.28	0.29	0.35	0.41	0.59
2023	4.0	8.15	18.6	26.2	34.2							

Site no. 17. Vadra river, Khornia, Dumuria, Khulna

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	4.3	4.23	4.8	6.5	12.7	7.2	2.0	1.17	0.6	1.4	1.5	1.0
2021	1.50	2.20	3.9	19.5	24.7	13.5	1.6	1.9	0.7	0.71	0.75	1.6
2022	1.73	2.5	15.3	22.0 2	19.0	15.6	6.37	3.0	1.86	3.29	3.80	4.0
2023	12.0	17.2	21	26.5	31.2							

Site no. 25. Shibsha river, Paikgacha HQ, Khulna.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	6.9	14.2	20	18.7	18.5	11.2	5.7	1.30	2.4	1.5	1.9	2.0
2021	1.2	7.7	18.6	28.8	33.6	20.0	2.9	2.1	0.9	0.91	1.2	1.65
2022	2.1	2.8	17.2	25.0	32.7	29.7	17.2	11.5	9.2	3.76	4.20	5.1
2023	14.9	20.1 0	26.0	32.5	36.2							

Site no. 26. Kazibachha river, Batiaghata, Khulna

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	2.4	9.9	16.7	14	15	8.9	0.45	0.35	0.22	0.3	0.7	1.0

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2021	2.4	11.4	17.2	29.2	33.2	0.85	0.4	0.6	0.4	0.42	0.57	0.50
2022	0.94	2.85	13.5	18.5	15.0	1.6	0.33	0.30	0.31	0.37	0.48	0.63
2023	4.15	12.8	21.0	27.5	35.2							

Site no. 27. Pasur river, Mongla port , Mongla, Bagerhat.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	2.2	9.03	17.2	6.8	17	13.5	1.8	4.6	0.4	0.7	0.9	1.2
2021	2.6	13.0	28.2	29.5	33.7	1.0	0.4	0.5	0.5	0.50	0.65	0.55
2022	1.2	5.7	15.2	20.2 0	16.0	1.8	0.35	0.33	0.35	0.40	0.50	0.70
2023	5.0	13.2	23.0	27.1	37.0							

Site no. 28. Daratana river, Bagerhat ferryghat, Bagerhat.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	2.4	2.4	9.8	5.2	14.5	5.8	2.0	1.1	1.1	0.9	1.0	1.0
2021	1.14	2.3	5.77	19.6	24.7	1.95	1.2	1.3	1.4	1.45	1.80	2.0
2022	2.6	2.7	12.7	12.7	12.7	2.1	5.9	3.5	2.2	2.16	2.24	2.70
2023	3.2	5.0	11.5	15.7	28.9							

Site no. 30. Panguchi river, Morelgonj HQ, Bagerhat.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	2.3	2.7	7.9	4	10.2	4.2	1.6	0.6	0.9	0.7	0.8	0.9
2021	1.8	8.2	10.0	9.6	6.5	0.48	0.5	0.4	0.4	0.46	0.53	0.59
2022	1.70	3.69	9.5	9.2	9.2	0.72	0.60	0.80	0.25	0.29	0.30	0.50
2023	0.70	2.70	8.70	11.2	19.0							

Site no: Ghoshiakhali, Rampal

Monthwise EC Value												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	2.0	6.5	15.1	8.20	10.8 0	7.50	1.5	0.37	0.30	0.56	0.70	0.95
2021	2.3	10.0	15.6	25.0	27.4	0.71	0.45	0.29	0.27	0.40	0.52	0.56
2022	0.95	3.45	9.0	18.9	10.5	1.2	0.29	0.27	0.27	0.30	0.39	0.49
2023	0.62	6.20	13.0	18.2	23.2							

## Satkhira

1.Kapotaksha river, Patkelghata, Tala, Satkhira.

Year	Monthwise EC Value											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2021	0.55	0.70	1.8	16.0	25.6	11.2	0.9	0.5	0.3	0.5	0.6	0.3
2022	0.6	0.8	1.1	14.3	18.1	21.0	17.1	11.2	1.5	3.8	2.7	3.1
2023	3.3	8.1	13.7	22.1	27.7							

2.Betna river, Benerpota, Satkhira sadar, Satkhira.

Year	Monthwise EC Value											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	3.1	3.62	6.7	4.01	8.6	4.7	2.5	0.3	0.3	0.4	0.5	0.6
2021	2.8	0.9	1.6	2.3	7.5	9.5	1.4	0.7	0.3	0.3	0.3	0.4



2022	3.2	0.5	0.9	1.0	*	*	*	*	0.8	4.1	5.4	5.4
2023	4.4	5.3	5.5	7.5	4.4							

\*It was not possible to collect water due to river excavation work

### 3. Betna river, kolaroa bazar , kolaroa , Satkhira

Year	Monthwise EC Value											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2021	-	-	-	-	-	-	-	-	-	-	-	0.35
2022	0.62	0.92	0.98	-	-	-	2.4	2.1	0.8	1.1	1.0	1.2
2023	2.8	2.9	3.2	5.6	2.98							

\*It was not possible to collect water due to river excavation work

### 4. Morichap river, Ashashuni, Satkhira.

Year	Monthwise EC Value											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	6.7	14.3	22.1	19.5	20.2	12.5	18	9.5	4	2.8	2.5	3.3
2021	4.00	12.1	18.2	30.4	23.5	10.2	7.70	5.20	3.1	1.8	3.2	2.6
2022	3.30	5.10	16.5	22.5	29.0	31.1	18.2	13.8	8.1	8.3	10.4	11.5
2023	13.9	17.3	21.9	28.7	29.6							

### 5. Sapmara khal, parulia , Debhata, Satkhira

Year	Monthwise EC Value											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2021	-	-	-	-	-	-	-	-	-	-	-	2.6
2022	3.4	2.1	6.4	13.4	19.2	19.7	16.3	11.3	6.3	7.1	6.7	8.3
2023	12.0	13.1	17.8	22.5	24.8							

### 6. Kakshiali river, Kaligonj HQ, Satkhira.

Year	Monthwise EC Value											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	6.8	17.8	24.2	20	22	13.8	1.1	3.5	2.2	1.9	3.5	3.2
2021	3.40	8.6	14.2	25.5	34.1	16.2	8.5	6.0	2.8	1.2	1.7	1.8
2022	2.8	5.8	11.3	19.8	25.2	26.7	24.6	18.6	7.6	7.7	7.8	10.5
2023	12.2	15.6	20.5	27.9	28.4							

### 7. kholpatua river, Noyabeki, Shyamnagar, Satkhira

Year	Monthwise EC Value											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2021	-	-	-	-	-	-	-	-	-	-	-	10.1
2022	11.2	19.8	25.2	36.2	41.3	42.6	32.2	25.2	18.1	18.2	17.8	20.7
2023	21.2	26.4	36.7	43.1	44.1							

## Jashore

Site no-1: Chitra River, Narail Ferry ghat Narial Sadar

Month	water salinity (EC:dS/m)			2023
	2020	2021	2022	
January	0.55	0.80	0.40	0.50
February	0.70	0.40	0.50	0.45
March	0.48	0.60	0.50	0.62
April	0.77	0.80	0.75	0.90
May	0.57	0.80	0.70	3.00
June	0.30	0.50	0.60	
July	0.30	0.68	0.75	
August	0.30	0.30	0.60	
September	0.30	0.30	0.40	
October	0.50	0.50	0.30	
November	0.50	0.50	0.40	
December	0.50	0.50	0.40	

Site no-2: Kapotaxma River, sagardari , kesabpur, Jashore

Month	water salinity (EC:dS/m)			2023
	2020	2021	2022	
January	0.60	0.80	0.75	1.80
February	1.00	1.00	0.80	0.82
March	1.95	2.50	0.90	7.50
April	5.57	6.40	9.00	10.18
May	11.24	13.00	8.50	15.70
June	0.30	3.00	3.80	
July	0.30	5.44	9.50	
August	0.40	0.40	2.00	
September	0.30	0.40	0.80	
October	0.50	0.35	0.55	
November	0.60	0.60	1.50	
December	0.70	0.70	1.20	

Site no-3: Bhairab River, Naapara, Jashore

Month	water salinity (EC:dS/m)			2023
	2020	2021	2022	
January	1.90	0.80	0.60	1.00
February	1.90	1.20	0.70	0.71
March	1.90	2.80	0.80	1.15
April	4.1	4.60	6.00	6.03
May	9.25	12.50	5.80	11.81
June	1.98	2.80	4.00	
July	0.30	5.1	9.00	
August	0.30	0.70	1.80	
September	0.40	0.50	0.70	
October	0.40	0.30	0.60	
November	0.50	0.65	0.80	
December	0.30	0.60	0.80	

Site no-4: Afra River, Tularampur, Narail Sadar.

Month	water salinity (EC:dS/m)		

	2020	2021	2022	2023
January	1.10	0.80	0.60	0.75
February	1.90	1.40	0.70	0.74
March	1.85	1.90	0.90	1.05
April	3.5	2.80	2.00	3.64
May	4.15	4.80	3.00	8.76
June	0.20	1.80	2.00	
July	0.30	3.42	4.50	
August	0.40	0.50	1.10	
September	0.30	0.40	0.60	
October	0.60	0.40	0.50	
November	0.50	0.55	0.50	
December	0.50	0.50	0.60	

Site no-5: Chittra River, Gobra, Narail Sadar.

Month	water salinity (EC:dS/m)			
	2020	2021	2022	2023
January	0.70	0.75	0.60	1.00
February	0.85	1.40	0.60	0.62
March	1.45	1.90	0.90	0.75
April	2.85	3.60	2.00	1.34
May	4.85	5.60	2.80	4.50
June	0.30	2.00	1.70	
July	0.30	4.04	5.00	
August	0.40	0.50	1.60	
September	0.30	0.35	0.80	
October	0.40	0.45	0.50	
November	0.40	0.50	0.75	
December	0.60	0.60	0.90	

Site no-6: Naboganga River, Baraypara, Kalia, Narail.

Month	water salinity (EC:dS/m)			
	2020	2021	2022	2023
January	1.00	0.80	0.70	1.40
February	1.05	1.35	0.65	0.63
March	2.68	3.10	0.85	1.65
April	5.48	6.00	9.10	4.76
May	11.2	12.00	8.00	9.65
June	0.30	2.00	4.50	
July	0.40	5.55	8.90	
August	0.50	0.40	1.50	
September	0.20	0.40	0.70	
October	0.30	0.60	0.50	
November	0.30	0.60	1.05	
December	0.60	0.70	1.30	

Site no-7: Modhumoti River, Tularampur, Narail Sadar.

Month	water salinity (EC:dS/m)			
	2020	2021	2022	2023

January	1.10	0.80	0.70	1.30
February	0.70	1.30	0.60	0.62
March	2.38	2.40	0.90	1.15
April	5.68	6.20	8.00	3.83
May	9.75	10.00	7.00	8.46
June	0.30	2.00	2.90	
July	0.30	5.55	8.50	
August	0.40	0.60	1.50	
September	0.20	0.45	0.70	
October	0.20	0.30	0.60	
November	0.60	0.60	1.00	
December	0.60	0.60	1.25	

Site no-8: Modhumoti River, Kalnaghat, Lohagara, Narail.

Month	water salinity (EC:dS/m)			
	2020	2021	2022	2023
January	0.50	0.70	0.40	0.50
February	0.30	0.30	0.40	0.39
March	0.48	0.50	0.50	0.35
April	0.84	0.80	0.70	0.35
May	1.74	1.80	0.70	0.72
June	0.20	0.40	0.70	
July	0.30	0.71	0.70	
August	0.30	0.30	0.60	
September	0.20	0.30	0.80	
October	0.30	0.35	0.30	
November	0.30	0.40	0.30	
December	0.30	0.30	0.50	

Site no-9: Afra River, Shaikhati, Narail.

Month	water salinity (EC:dS/m)			
	2020	2021	2022	2023
January	1.80	0.70	0.70	1.10
February	2.05	1.30	0.75	0.73
March	2.01	2.10	0.90	0.90
April	3.29	4.20	3.00	4.83
May	4.48	5.60	3.00	10.66
June	0.30	1.50	1.80	
July	0.30	0.74	5.10	
August	0.50	0.40	1.80	
September	0.40	0.30		
October	0.50	0.40	0.50	
November	0.50	0.65	0.70	
December	0.70	0.70	0.60	

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