



Flood Bulletin,2023

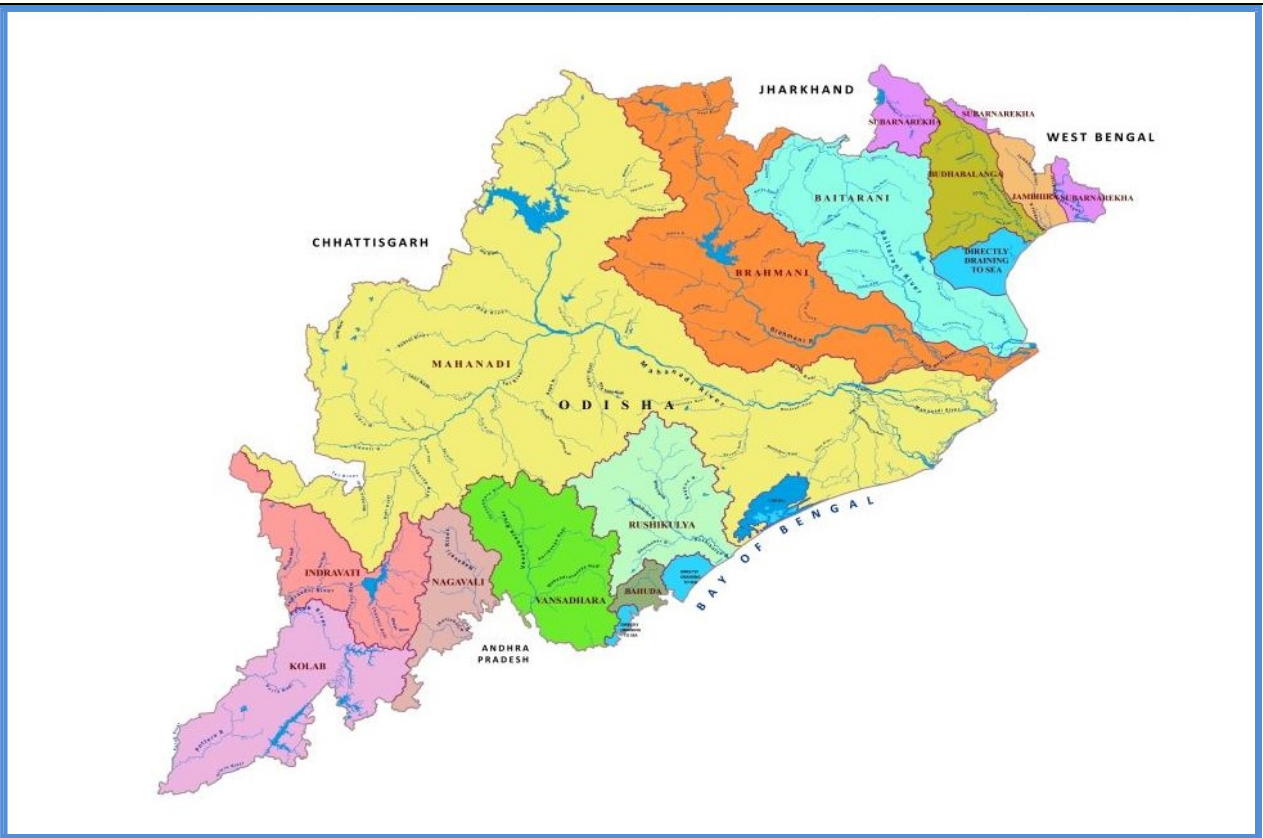
Government of Odisha

Department of Water Resources

Volume No.122

Date: 30.09.2023

Time: 14:00Hr



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Flood Cell

Office of the Engineer-in-Chief, Water Resources, Odisha
Secha Sadan, Bhubaneswar
Tel:0674-2395951,2395953e-Mail:floodcelleicwr@gmail.com
url: dowr.odisha.gov.in & dowrodisha.gov.in

Status of Gauge (in m)

Name of River	Gauge Site	Danger Level (DL)	Warning Level	Time (Hrs)	Present Level	Trend	(wrt DL)	Highest Recorded Level	
								Level	Date
Mahanadi	Khairmal	109.0	108.0	12:00	103.12	S	-5.88	108.31	19.09.08
	Tikarpara	-	-	12:00	60.90	S	-	74.98	30.08.82
	Naraj (IB)	26.41	25.41	12:00	23.11	F	-3.30	27.60	31.08.82
Kusabhadra	Nimapara	10.76	9.85	12:00	3.74	S	-7.02	11.60	31.08.82
Devi	Alipingala	11.76	10.85	12:00	4.97	F	-6.79	13.05	20.09.08
Brahmani	Panposh	178.42	177.51	12:00	172.58	R	-5.84	181.44	24.09.11
	Rengali	88.0	-	12:00	77.60	F	-10.40	92.25	18.08.75
	Talcher	62.91	-	12:00	54.90	S	-8.01	65.53	19.08.75
	Jenapur	23.0	22.0	12:00	19.12	R	-3.88	24.78	20.08.75
	Indupur	8.23	-	12:00	4.05	S	-4.18	-	-
Baitarani	Champua	376.41	375.33	12:00	371.86	S	-4.55	379.06	23.09.11
	Swampatna	311.1	-	12:00	306.10	R	-5.00	315.66	14.08.75
	Anandapur	38.36	37.44	12:00	34.23	R	-4.13	41.35	23.09.11
	Akhuapada	18.33	17.83	12:00	17.02	F	-1.31	21.95	16.08.60
Budhabalanga	Chandanpur	-	-	12:00	81.80	R	-	85.80	09.11.95
	Baripada	30.92	29.7	12:00	21.98	S	-8.94	34.82	13.10.13
	Balimundali	-	-	12:00	36.52	R	-	42.20	1995
	NH5-Govindapur	8.13	7.21	12:00	2.46	R	-5.67	9.67	12.10.73
Subarnarekha	Jamshedpur	123.5	122.5	12:00	116.34	R	-7.16	129.82	12.10.73
	Jamsolaghat	49.16	48.32	12:00	44.60	S	-4.56	56.91	03.09.78
	Rajghat	10.36	9.45	12:00	4.97	F	-5.39	12.69	19.06.08
Jalaka	Mathani Road Bridge	6.50	6.0	12:00	4.14	R	-2.36	7.31	22.09.21
Rushikulya	Sorada	81.99	80.99	12:00	77.81	S	-4.18	83.21	04.11.90
	Madhabarida	60.65	-	12:00	56.30	S	-4.35	61.44	18.10.99
	Purusottampur	16.84	15.84	12:00	12.40	S	-4.44	19.60	04.11.90
Vansadhara	Gudari	-	-	12:00	114.77	F	-	121.82	17.09.80
	Gunupur	84.0	83.0	12:00	81.25	S	-2.75	88.75	17.09.80
	Kashinagar	54.6	54.1	12:00	53.09	S	-1.51	58.93	18.09.80

Status of Major Reservoirs

Name of the Reservoir	Dead Storage Level	FRL/ MWL	Reservoir Level	LS Available/ Live Storage Capacity (%)	Last Year (2022) R.L/ Live Storage Avl (%)	Inflow	Total Outflow	Gates Open (Nos)/ Trend
1.Hirakud 12:00Hr	590.0 ft	630.0ft	629.52 ft	<u>4730.0 Mcum</u> 4822.83Mcum (98.1%)	<u>630.0 ft</u> 100%	89,279.0 Cusec	2,00,578.0 Cusec	10/98 Falling
2.Rengali 12:00Hr	109.72 m	<u>123.5 m</u> 125.4 m	121.93 m.	<u>289875.0Ham</u> 341371.0 Ham (84.8%)	<u>122.7 m</u> 92.31%	1041.23 Cumec	732.87 Cumec	0/27 Rising
3.U. Indravati 09:00Hr	625.0 m	<u>642 m</u> 643 m	637.84 m.	<u>101364.0 Ham</u> 148550.0 Ham (68.2%)	<u>640.1 m</u> 83.5%	214.06 Cumec	34.06 Cumec	0/12 Rising
4.UpperKolab 08:00Hr	844.0 m	858.0 m	855.90 m.	<u>736.21 Mcum</u> 935.0 Mcum (78.7%)	<u>854.7 m</u> 67.3%	114.63 Cumec	37.91 Cumec	0/11 Rising
5.Balimela 08:00Hr	1440.0 ft	<u>1516 ft</u> 1518 ft	1487.80 ft	<u>136606.0 Ham</u> 267600.0 Ham (51.0%)	<u>1478.8 ft</u> 38.4%	6661.0 Cusec	3767.24 Cusec	0/12 Rising
6.Machhkund (Jalaput) 08:00Hr	2685.0 ft	2750.0 ft	2733.15 ft	<u>51595.0 Ham</u> 89254.7 Ham (57.8%)	<u>2734.8 ft</u> 61.7%	3082.0 Cusec	1010.0 Cusec	02/12 Rising
7.Salandi 06:00Hr	50.24 m	<u>82.3 m</u> 83.21m	79.21 m.	<u>46015.0 Ham</u> 55650.0 Ham (82.7%)	<u>77.7 m</u> 74.3%	6.15 Cumec	42.46 Cumec	02/11 Falling
8.LowerIndra 08:00Hr	251.0 m	<u>265 m</u> 265 m	264.22 m.	<u>30581.60 Ham</u> 31425.2Ham (97.3%)	<u>262.5 m</u> 75.2%	50.47 Cumec	39.46 Cumec	01/09 Rising

Note: Total Outflow consists of Irrigation, Spillway, Sluice, Power generation, Industrial & other supply and Evaporation loss *U Indravati-7 gates, Muran Dam-5 gates (Total-12 Nos)

Average Inflow into & Outflow from Reservoir

Reservoir	Inflow	Outflow	Observation Period
Hirakud	1,33,381.0 Cusec	1,55,617.0 Cusec	During last 24 Hrs ending 08:00Hrs of 30.09.2023
Rengali	944.87 Cumec	714.51 Cumec	During last 24 Hrs ending 06:00Hrs of 30.09.2023

Travel Time of Flow in Mahanadi River

Hirakud Dam	115 km	Khairmal	106 km	Barmul	95 km	Mundali
	12-18 Hrs		12-16 Hrs		12-16 Hrs	

River Discharge

Name of the River	G&D Site	Time (Hrs)	Discharge (cusec)
Mahanadi (Up Stream Hirakud)	Champa	12:00	25,700
	Tarapur	12:00	BG
	Saradihi	12:00	84,200
	Kalma	09:00	NR
	Deogaon	12:00	5,468
Mahanadi (Down Stream Hirakud)	Khairmal	12:00	2,14,500
	Barmul	12:00	2,08,250
	Mundali	12:00	1,78,344
Tel	Patharla	12:00	50,154
Baitarani	NH-5 Akhuapada	08:00	NR
Brahmani	Pankapal	08:00	5,967
Subarnarekha	Rajghat	09:00	13,734
Rushikulya	Purusottampur	09:00	2,865

Status of Medium Reservoir

Sl.	Name of Dam / Reservoir	Available Live Storage (%) (Gates Open)	Sl.	Name of Dam / Reservoir	Available Live Storage (%) (Gates Open)	Sl.	Name of Dam / Reservoir	Available Live Storage (%) (Gates Open)
1.	Badanalla	92.1% (1)	17.	Harabhangi	42.7%	33.	Ret	100.0%
2.	Baghalati	45.5%	18.	Harihorejore	96.3%	34.	Rukura	91.4% (1)
3.	Baghua	76.0%	19.	Jambira*	7.2%	35.	Saipala	99.5%
4.	Bankabahal	86.6%	20.	Jharbandh*	100.0%	36.	Salia*	100.0%
5.	Bhanjanagar	94.3%	21.	Kalo	84.5%	37.	Sapua*	100.0%
6.	Bhaskel*	52.1%	22.	Kanjhari	87.9% (1)	38.	Saraphgarh	91.8%
7.	Budhabudhiani	86.9%	23.	Kansabahal	92.7%	39.	Satiguda*	100.0%
8.	Dadarghati*	93.0%	24.	Khadkhai	90.0%	40.	Soroda*	79.2%
9.	Daha	94.1% (1)	25.	Kuanria	88.6%	41.	Sunder	95.3%
10.	Deo	89.1% (5)	26.	Mandira	60.6% (5)	42.	Sunei	85.9%
11.	Derjang	88.7%	27.	Manjore	86.8%	43.	Talsara	86.2% (1)
12.	Dhanei*	100.0%	28.	Nesa*	79.6%	44.	Telengiri	68.4% (1)
13.	Dumberbahal	100.0%	29.	Pilasalki*	100.0%	45.	Titlagarh	90.7%
14.	Ghodahada	34.1%	30.	Pitamahal*	100.0%	46.	Upper Jonk	93.1%
15.	Gohira	96.8%	31.	Ramial	74.9%	47.	Upper Suktel*	100.0%
16.	Haladia	20.6%	32.	Remal	73.6% (1)			

Note: *Un-gated Dams (13 Nos.)

Above 75%

Above 90%

Medium Reservoir: 47 Nos.

(Gated-34, Un-Gated-13),

Below 50%: 5 Nos., Between 50% to 75%: 5 Nos., Above 75%:37 Nos.

AVAILABLE LIVE STORAGE CAPACITY OF MAJOR & MEDIUM RESERVOIRS (30.09.2023)

No. of Gates Open/Total Gates:

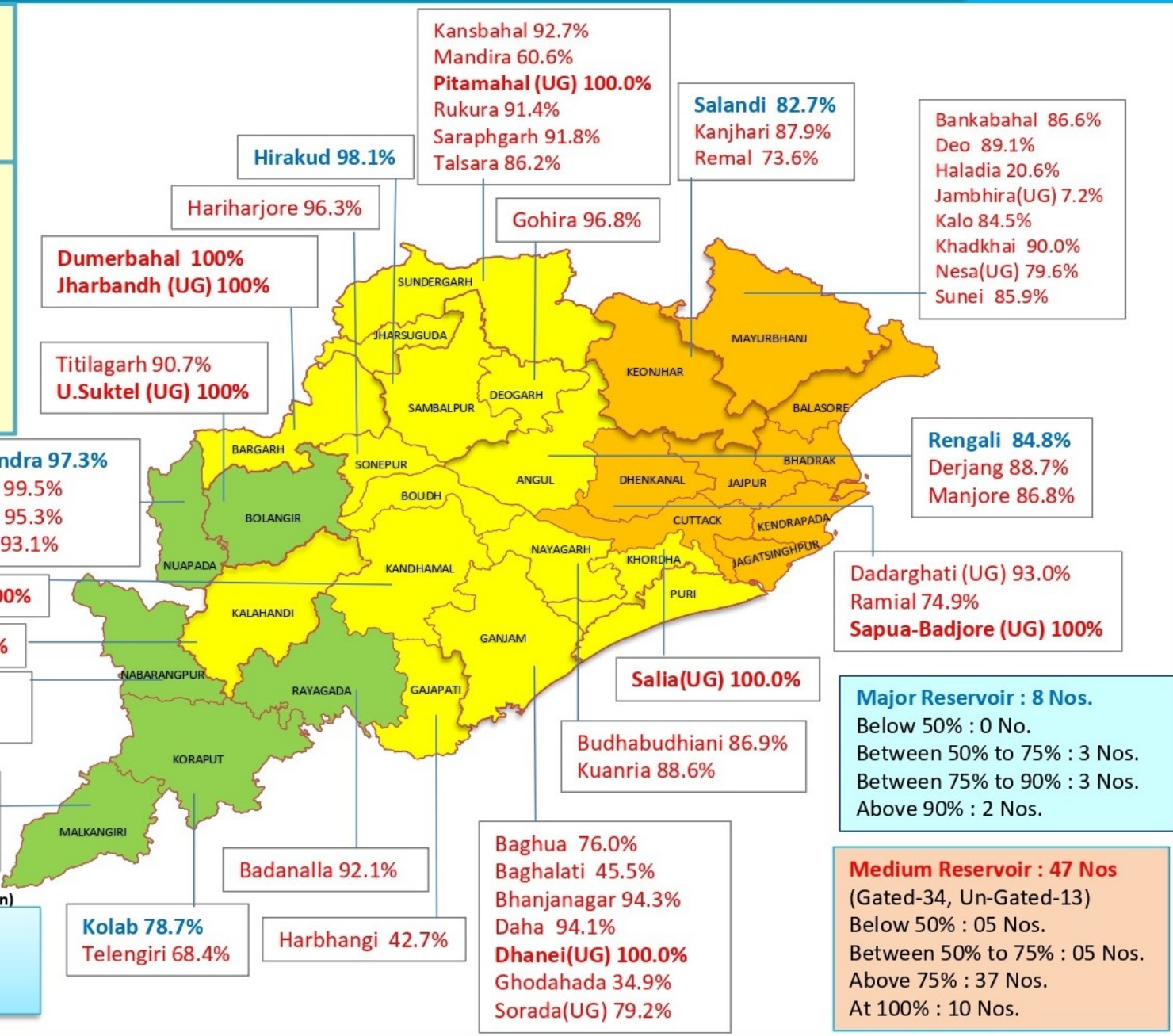
Major

1. Hirakud-10/98
2. Lower Indra-01/09
3. Salandi- 02/11
4. Jalaput-02/12

No. of Gates Open/Total Gates:

Medium

1. Badanalla- 01/08
2. Daha-01/04
3. Deo- 05/07
4. Kanjhari-01/07
5. Mandira-05/13
6. Remal-01/04
7. Rukura-01/04
8. Talsara-01/06
9. Telengiri-01/03

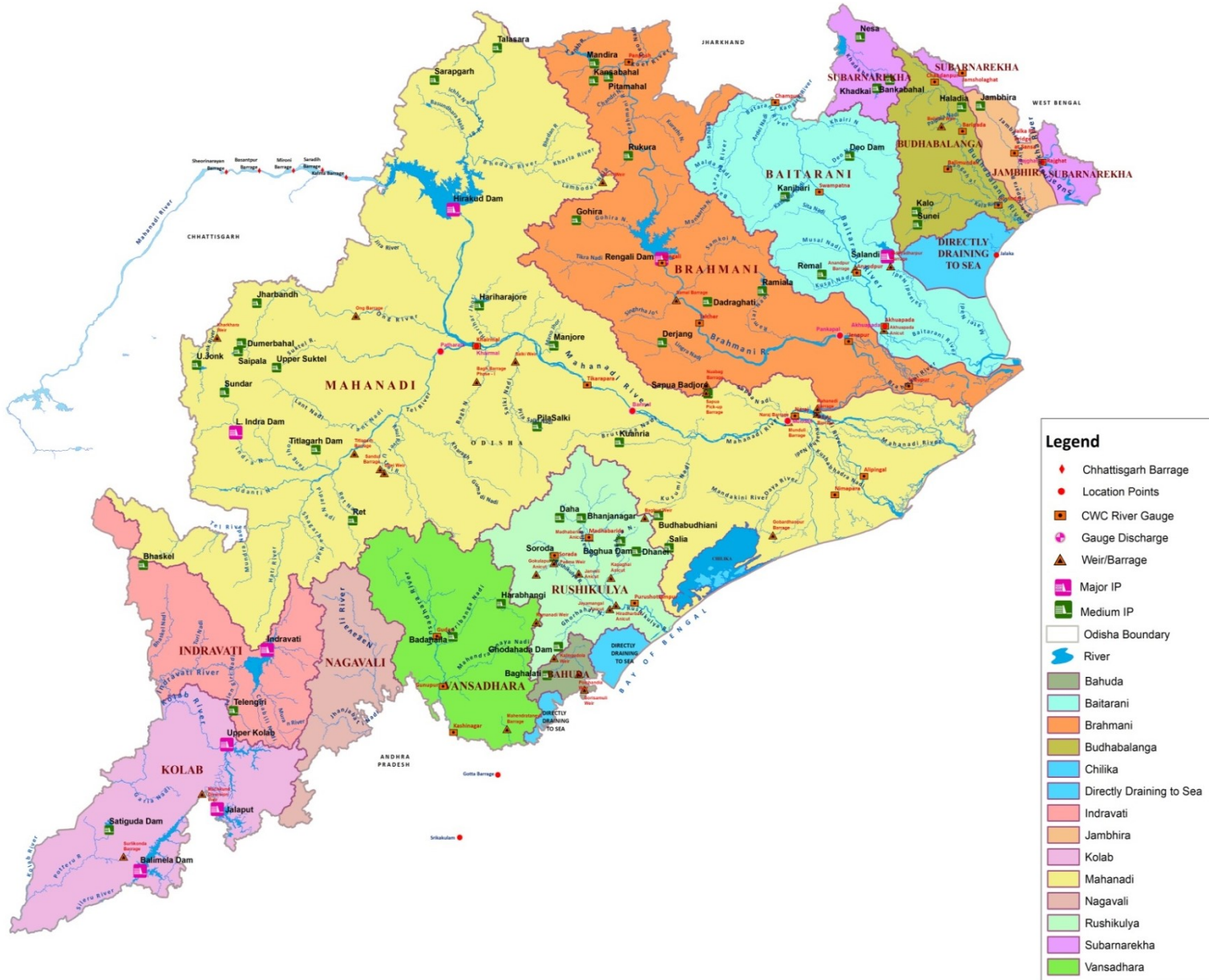


Major Reservoir : 8 Nos.
 Below 50% : 0 No.
 Between 50% to 75% : 3 Nos.
 Between 75% to 90% : 3 Nos.
 Above 90% : 2 Nos.

Medium Reservoir : 47 Nos
 (Gated-34, Un-Gated-13)
 Below 50% : 05 Nos.
 Between 50% to 75% : 05 Nos.
 Above 75% : 37 Nos.
 At 100% : 10 Nos.

Source IMD-30.09.2023 (Special Bulletin)
 No Warning
 Heavy Rainfall
 Very Heavy Rainfall
 Extremely Heavy Rainfall
 Thunderstorm with Lightning & Rainfall
 (Valid upto 08:30 hrs of IST 01.10.2023)

MAJOR & MEDIUM RESERVOIRS , G & D SITES IN ODISHA



Legend

- ◆ Chhattisgarh Barrage
- Location Points
- CWC River Gauge
- ◆ Gauge Discharge
- ▲ Weir/Barrage
- Major IP
- Medium IP
- ▭ Odisha Boundary
- ▬ River
- Bahuda
- Baitarani
- Brahmani
- Budhabalanga
- Chilika
- Directly Draining to Sea
- Indravati
- Jambhira
- Kolab
- Mahanadi
- Nagavali
- Rushikulya
- Subarnarekha
- Vansadhara

भारत सरकार
 भारत मौसम विज्ञान विभाग
 (पृथ्वी विज्ञान मंत्रालय)
 पता : मौसम विज्ञान केन्द्र, भुवनेश्वर
 फोन न. २५९६०१० &
 २५९६११६
 फैक्स न. २५९६०१० &
 २५९६०९३



GOVERNMENT OF INDIA
 INDIA METEOROLOGICAL DEPARTMENT
 (Ministry of Earth Sciences)
METEOROLOGICAL CENTRE
BIJUPATNAIK AIRPORT
BHUBANESWAR-751020
 TELE: 2596010 & 2596116
 FAX : 2596010 & 2596093
 E-MAIL : imdbbsr@ori.nic.in

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Dated: 30/09/2023
 Time of Issue: 1300 hrs IST

HYDROMET BULLETIN

1) Synoptic Situation

- Southwest Monsoon has further withdrawn from some parts of Jammu-Kashmir, Himachal Pradesh and Uttarakhand; entire Punjab and Haryana-Chandigarh-Delhi; some parts of West Uttar Pradesh, West Madhya Pradesh and East Rajasthan and some more parts of West Rajasthan today, the 30th September, 2023.
- The line of withdrawal of Southwest Monsoon passes through Gulmarg, Dharamshala, Pantnagar, Etawah, Morena, Sawai Madhopur, Jodhpur, Barmer and 25.7°N/70.3°E.
- The Well Marked Low Pressure Area over Northwest Bay of Bengal with the associated cyclonic circulation extending upto 7.6 km above mean sea level persists. It is likely to move west-northwestwards across north Odisha and adjoining West Bengal during next 24 hours.

a) River Sub-basin-wise Quantitative Precipitation Forecast (QPF)

S. No.	Basin Name	Sub-basin Name	QPF (mm)						
			Day-1 (30.09.23)	Day-2 (01.10.23)	Day-3 (02.10.23)	Day-4 (03.10.23)	Day-5 (04.10.23)	Day-6 (05.10.23)	Day-7 (06.10.23)
1	BAITRANI	BT	26-37	26-37	26-37	11-25	11-25	11-25	0.1-10
2	LOWER BRAHMANI	LB	26-37	11-25	26-37	11-25	11-25	0.1-10	0.1-10
3	UPPER BRAHMANI	UB	11-25	26-37	26-37	11-25	0.1-10	0.1-10	0.1-10
4	BHURABALANG	BB	26-37	26-37	26-37	11-25	11-25	11-25	0.1-10
5	LOWER MAHANADI	LM	11-25	26-37	26-37	0.1-10	0.1-10	0.1-10	0.1-10
6	NAGAVALI	NV	0.1-10	11-25	11-25	0.1-10	0.1-10	0.1-10	0.1-10
7	RUSHIKULIYA	RK	0.1-10	11-25	11-25	0.1-10	0.1-10	0.1-10	0.1-10
8	SUBERNAREKHA	SR	11-25	11-25	11-25	0.1-10	11-25	0.1-10	0.1-10
9	UPPER MAHANADI	UM	0.1-10	26-37	26-37	0.1-10	0.1-10	0.1-10	0.1-10
10	VAMSDHARA	VD	0.1-10	11-25	11-25	0.1-10	0.1-10	0.1-10	0.1-10

PF categories (mm)	0	0.1-10	11-25	26-37	38-50	51-75	76-100	>100
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2b) River Sub-basin-wise Intensity and Distribution of QPF

S. No	Basin Name	Sub-basin Name	Intensity (I) and Spatial Distribution (D)													
			Day-1 (30.09.23)		Day-2 (01.10.23)		Day-3 (02.10.23)		Day-4 (03.10.23)		Day-5 (04.10.23)		Day-6 (05.10.23)		Day-7 (06.10.23)	
			I	D	I	D	I	D	I	D	I	D	I	D	I	D
1	BAITRANI	BT	M	WS	M	WS	M	WS	M	WS	M	WS	M	WS	L	FWS
2	LOWER BRAHMANI	LB	M	WS	M	WS	M	WS	M	WS	M	WS	L	WS	L	SCT
3	UPPER BRAHMANI	UB	M	WS	M	WS	M	WS	M	WS	L	WS	L	WS	L	SCT
4	BHURABALANG	BB	M	WS	M	WS	M	WS	M	WS	M	WS	M	WS	L	FWS
5	LOWER MAHANADI	LM	M	WS	M	WS	M	WS	L	WS	L	FWS	L	FWS	L	SCT
6	NAGAVALI	NV	L	FWS	M	WS	M	WS	L	FWS	L	FWS	L	FWS	L	SCT
7	RUSHIKULIYA	RK	L	FWS	M	WS	M	WS	L	FWS	L	FWS	L	FWS	L	SCT
8	SUBERNAREKHA	SR	M	WS	M	WS	M	WS	L	WS	M	WS	L	WS	L	FWS
9	UPPER MAHANADI	UM	L	WS	M	WS	M	WS	L	WS	L	WS	L	FWS	L	SCT
10	VAMSDHARA	VD	L	FWS	M	WS	M	WS	L	FWS	L	FWS	L	FWS	L	SCT

Spatial Distribution		
DRY	Dry	No station reported rainfall
ISOL	One or two places	25% or less number of stations recorded rainfall 2.5 mm
SCT	At a few places	26%-50% number of stations recorded rainfall 2.5 mm
FWS	At many places	51%-75% number of stations recorded rainfall 2.5 mm
WS	At most places	76%-100% number of stations recorded rainfall 2.5 mm

Intensity					
M.Dry	NIL	0 cm	VL	Very Light Rainfall	Trace
L	Light Rainfall	Upto 1 cm	M	Moderate Rainfall	2-6 cm
H	Heavy Rainfall	7-11 cm	VH	Very Heavy rainfall	12-20 cm
EH	Extremely Heavy Rainfall	21 cm or more			
ExH	Exceptionally Heavy Rainfall	When the amount is a value near about the highest recorded rainfall at or near the station for the month or season. However, this term will be used only when the actual rainfall amount exceeds 12 cm.			

3) River Sub-basin-wise Heavy Rainfall Warning

S. No	Basin Name	Sub-basin Name	Day-1 (30.09.23)		Day-2 (01.10.23)		Day-3 (02.10.23)		Day-4 (03.10.23)		Day-5 (04.10.23)		Day-6 (05.10.23)		Day-7 (06.10.23)	
			I	D	I	D	I	D	I	D	I	D	I	D	I	D
1	BAITRANI	BT	VH	ISOL	VH	ISOL	VH	ISOL	H	ISOL	NIL	NIL	NIL	NIL	NIL	NIL
2	LOWER BRAHMANI	LB	VH	ISOL	VH	ISOL	H	ISOL	H	ISOL	NIL	NIL	NIL	NIL	NIL	NIL
3	UPPER BRAHMANI	UB	H	ISOL	NIL	NIL	VH	ISOL	H	ISOL	NIL	NIL	NIL	NIL	NIL	NIL
4	BHURABALAN G	BB	VH	ISOL	VH	ISOL	VH	ISOL	H	ISOL	NIL	NIL	NIL	NIL	NIL	NIL
5	LOWER MAHANADI	LM	VH	ISOL	VH	ISOL	VH	ISOL	H	ISOL	NIL	NIL	NIL	NIL	NIL	NIL
6	NAGAVALI	NV	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
7	RUSHIKULIYA	RK	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
8	SUBERNAREK HA	SR	VH	ISOL	H	ISOL	H	ISOL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
9	UPPER MAHANADI	UM	H	ISOL	VH	ISOL	VH	ISOL	H	ISOL	NIL	NIL	NIL	NIL	NIL	NIL
10	VAMSDHARA	VD	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

Spatial Distribution		
DRY	Dry	No station reported rainfall
ISOL	One or two places	25% or less number of stations recorded rainfall 2.5 mm
SCT	At a few places	26%-50% number of stations recorded rainfall 2.5 mm
FWS	At many places	51%-75% number of stations recorded rainfall 2.5 mm
WS	At most places	76%-100% number of stations recorded rainfall 2.5 mm

Intensity					
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EH	Extremely Heavy Rainfall	21 cm or more			
ExH	Exceptionally Heavy Rainfall	When the amount is a value near about the highest recorded rainfall at or near the station for the month or season. However, this term will be used only when the actual rainfall amount exceeds 12 cm.			

4) River Sub-basin-wise Probabilistic QPF

Basin Name	Sub-basin Name	QPF Probability (%)																																									
		Day-1 (30.09.2023) (QPF categories)					Day-2 (01.10.2023) (QPF categories)					Day-3 (02.10.2023) (QPF categories)					Day-4 (03.10.2023) (QPF categories)					Day-5 (04.10.2023) (QPF categories)					Day-6 (05.10.2023) (QPF categories)					Day-7 (06.10.2023) (QPF categories)											
		0	0.1-10	11-25	26-50	51-100	>100	0	0.1-10	11-25	26-50	51-100	>100	0	0.1-10	11-25	26-50	51-100	>100	0	0.1-10	11-25	26-50	51-100	>100	0	0.1-10	11-25	26-50	51-100	>100	0	0.1-10	11-25	26-50	51-100	>100	0	0.1-10	11-25	26-50	51-100	>100
BAITRANI	B T																																										
LOWER BRAHMANI	L B																																										
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RUSHIKULIYA	R K																																										
SUBERNAREKHA	S R																																										
UPPER MAHANADI	U M																																										
VAMSDHARA	V D																																										

Probability of occurrence (%)	0-5	5-25	25-50	50-75	75-100
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5) Station-wise significant rainfall recorded at 0830 hrs IST of today

S. NO.	NAME OF SUB-BASIN	NAME OF STATION AND RAINFALL (≥55.0 MM.)
1	BAITRANI	GHASIPURA(95.1),ANANDAPUR(67)
2	BHURABALANG	SORO(113),UDALA(71),NH5 GOVINDPUR(70.8),BARIPADA(CWC)(69.6),BARIPADA(IMD)(68),BALASORE(CWC)(65),BASUDEVPUR(58)BAHANAGA(55)
3	LOWER BRAHMANI	BHUBAN(80),BARI(73.6)
4	LOWER MAHANADI	BANPUR(95),KALINGA(55),BURLA(82.6),RANPUR(80.2),PATAMUNDALAI(72)
5	NAGAVALI	BOBBILI(61)
6	UPPER MAHANADI	KURU(68)LOHARDAGA(58.4)
7	UPPER BRAHMANI	AKALTARA(56.2)

6) River Sub-basin-wise observed Average Areal Precipitation (AAP) of today

S. No.	Basin Name	Sub-basin Name	AAP (mm)
1	BAITRANI	BT	20.5
2	LOWER BRAHMANI	LB	13.5
3	UPPER BRAHMANI	UB	12.0
4	BHURABALANG	BB	33.6
5	LOWER MAHANADI	LM	7.7
6	NAGAVALI	NV	7.6
7	RUSHIKULIYA	RK	6.9
8	SUBERNAREKHA	SR	15.7
9	UPPER MAHANADI	UM	6.2
10	VAMSDHARA	VD	6.1

(DUTY OFFICER)
for Scientist-F & Head
FLOOD MET.OFFICE
M.C Bhubaneswar

