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HYDROLOGY & WATER RESOURCES SERVICES DIVISION NATIONAL CENTER FOR HYDROLOGY & METEOROLOGY THIMPHU: BHUTAN

Wednesday, October 02, 2019



10:00 AM

Issued at:

Status and River Level Trends:

Glacier Lake Outbrust Flood (GLOF) Early Warning System 1. Punatshang Chhu Sub Basin

SI Nos.	River Basin Number	Basin Name	Name of River	Station Name	Highest Water Level Recorded	Alert Water Level	Alerm Water Level	Water Level (m) recorded at 9 AM Yesterday	Water Level(m) recorded at 9 AM Today	Water Level Rise (+)/Fall (-) in meters during last 24 Hrs ending at 9 AM Today	Downstream Settlement		
1				Luggay Tsho		7.80	10.00	6.49	6.48	-0.01			
2				Thorthormi Tsho		7.50	5.00	NR	NR	#VALUE!			
3				Rapstreng Tsho		7.40	5.00	6.16	6.16	0.00	Thanza, Tenchey, Lhedi and Lunana area and Downstream of Pho Chhu and Puna-Wangdue Valley		
4			Pho Chhu	Bay Tsho		7.40	5.00	6.24	6.23	-0.01	· · · · · · · · · · · · · · · · · · ·		
5	Basin II	Punatshang		Thanza		7.70	8.70	6.54	6.53	-0.01			
6	Dasin n	Chhu		Tarina Wachey		8.50	10.50	6.70	6.70	0.00	Pho Chhu Valley (Tamidamchu, Wolathang, Samidingkha, Khawajara, Shengar		
7				Dangsa		5.50	7.00	4.45	4.45	0.00	Khuruthang) Puna-Wangdue Valley and Downstream		
8				Taksemakhang		7.50	8.50	5.60	5.60	0.00			
9			Mo Chhu	Tashithang		9.00	10.50	6.46	6.66	0.20	Gasa,Mo Chhu Valley,Puna-Wangdue Valley and Downstream		
10				Yebesa		5.00	7.00	2.03	2.15	0.12			
	Approximate	Lead Time for H	Vacuation after	the detection of flood at	Four lake Senso	r	Approximate Lead Time for Evacuation after the detection of flood at Dangsa Sensor						
Sl Nos		Approx. Distance from Sensor (Bay Tsho)	from Soncor	Approx. Distance from Sensor (Thorthormi Tsho)	Approx. Distance from Sensor (Luggey Tsho)	Approx. Tme available for Evacuation	Sl Nos	Name of Place Downstream	Approx. Distance from Sensor (Bay Tsho)	Approx. Time for Flood to reach at the Place	Approx. Tme available for Evacuation		
1	Thanza	1.5 km	2.8 km	3.3 km	6.7 km		1	Wolathang	5.8 km	30 minutes	30 minutes		
2	Tenchey	2.9 km	4.1 km	4.6 km	8.2 km	20-60	2	Samdingkha	12.0 km	55 minutes	55 minutes		
3	Tshojo	8.1 km	10.0 km	10.5 km	13.8 km	minutes	3	Punakha Dzong	20 km	90 minutes	1 hours 30 minutes		
4	Lhedi	16.7 km	17.6 km	18.5 km	21.8 km		4	Khuruthang Town	24 km	120 minutes	2 hours		
5	Puna-Wangdue Valley	100 km	100 km	100 km	100 km	5-7 hours	5	Bajo Town	30.5 km	145 minutes	2 hours 25 minutes		
							6	Wangdue Bridge	33 km	150 minutes	2 hours 30 minutes		

NOTE: The above distance were Calculated from basic tools in the Google Earth Map, thus diastance were approximate only.

Glacier Lake Outbrust Flood (GLOF) & Rainstorm Flood Early Warning System. 2. Chamkhar Chhu and Mangdue Chhu Sub Basin

;	Sl Nos.	River Basin Number	Basin Name	Name of River	Station Name	Highest Water Level Recorded (m)	Alert Water Level (m)	Alerm Water Level (m)	Water Level (m) recorded at 9 AM Yesterday	AM Today	Water Level Rise (+)/Fall (-) in meters during last 24 Hrs ending at 9 AM Today	Downstream Settlement	
	1					Tshampa		5.00	6.50	4.18	4.17	-0.01	
	2			Chamkhar Chhu	Khagthang		5.50	6.00	4.73	4.72	-0.01	Chokortoe Pry School, Kurjey Village, Wangdicholing, Chamkhar Town, Gangrithng Pry School, Gyelkhar Village and Downstream settlement under Zhemgang.	
	3	Basin III	Manas		Kurjey	5.72	3.30	5.00	2.25	2.21	-0.04	oction, opennia v ninge and bownsteam settement ander Estengung.	
Г	4			Mangdue Chhu	Jongthang		5.90	7.00	4.77	NR	#VALUE!	Bjizam Community, MHPA Dam, Power House and Downstream settlement of Trongsa	
	5	7	Manguue Ciniu	Biizam	5.52	4.20	5.50	2.51	2.50	-0.01	and Zhemgang		

Арри	Approximate Lead Time for Evacuation of Chamkhar Chhu Sub Basin Approximate Lead Time for Evacuation after the detection of Flood at the Tshampa AWLS							Approximate Lead Time for Evacuation of Mangdue Chhu Sub Basin Approximate Lead Time for Evacuation after the detection of Flood at the Jongthang AWLS						
Sl Nos	Name of Place	Approx.Distance from the Tshampa AWLS	Approx. Cumlative Distance from Tshampa AWLS	Elevation	Approx. Lead Time	Sl Nos	Name of Place Downstream	Approx.Distance from the Tshampa AWLS	Approx. Cumlative Distance from Tshampa AWLS	Elevation	Approx. Lead Time			
1	Khagthang	20.3 km	20.3 km	3704 m	27 minutes	1	Bjizam	18.5 km	18.5 km	2223 m	34 minutes			
2	Chorkhor Toe PS	4.5 km	24.8 km	2904 m	34 minutes	2	Dam Site	7.8 km	26.3 km	1848 m	50 minutes			
3	Kurjey	12.4 km	37.2 km	2771 m	60 minutes	3	Power Plant	20.4 km	46.7 km	1024 m	88 minutes			
4	Wangdicholling	5.7 km	42.9 km	2600 m	79 minutes									
5	Bumthang	1 km	43.9 km	2562 m	83 minutes									
6	Gangrithang PS	0.3km	44.2 km	2552 m	84 minutes									
7	Gyelkhar	1.7 km	45.9 km	2538 m	91 minutes									

3. River Level Status of Gauging Station

il Nos.	Station Type	River Basin Number	Basin Name	Name of River	Station Name	Highest Water Level Recorded (m)	Water Level (m) recorded at 9 AM Yesterday	Water Level(m) recorded at 9 AM Today	Water Level Rise (+)/Fall (-) in meters during last 24 Hrs ending at 9 AM Today	Weather Condition	Downstream Settlement	
1	AWLS				Dodena		NR	1.96	#VALUE!	partly sunny	Thimphu Valley and Downstream	
2	Principal			Thim Chhu	Lungtenphu	2.82	1.36	1.32	-0.04	partly sunny		
3	Principal				Damchu	6.00	2.90	2.86	-0.04	Sunny	Chukha and Downstream	
4	Secondary	Basin l	Wang Chhu	Haa Chhu	Haa	2.60	1.13	1.09	-0.04	Sunny	Haa and Wang Chhu Downstream	
5	Principal			Pa Chhu	Bonday		1.42	1.39	-0.03	Cloudy	Downstream of Paro Valley and Wang Chhu Basin	
6	Principal			Amo Chhu	Dorokha		3.35	3.35	0.00	Cloudy	Samtse, Phuntsholing and Downstream	
7	Secondary				Droyagang	7.07	3.40	3.33	-0.07	Cloudy	Phunsholing and Downstream	
8	Secondary			Pho Chhu	Samdingkha	6.10	3.68	3.68	0.00	Sunny	Puna-Wangdue Valley and Downstream	
9	Principal			Mo Chhu	Yebesa	3.94	2.00	2.09	0.09	Sunny	Mo Chhu Valley and Downstream	
10	Secondary			Chhu Punatshang Chhu	Wangdue Bridge		2.45	2.60	0.15	Sunny	PHPA I, PHPA II and Downstream	
11	Principal	Basin II	Punatshang Chhu		Wangdue Rapid	7.82	2.87	3.08	0.21	Sunny		
12	Principal	Dasin n	runatshang Chhu		Turitar Sunkosh	6.68	3.15	3.45	0.30	partly cloudy	Downstream of Dagana and Lhamoizingkha	
13	Secondary]			Sunkosh Bridge		2.35	2.60	0.25	Cloudy		
14	Principal	1			Kerabari	11.90	5.42	5.57	0.15	Sunny	Lhamoizingkha and Downstream	
15	Secondary]		Mao Chhu	Sherzhong		3.90	4.00	0.10	Sunny	Gelelephu Valley and Downstream	
16	Principal			Mangdue Chhu Chamkhar Chhu	Bjizam	5.35	2.51	2.51	0.00	Sunny	MHPA Dam, Power House and Downstream of Trongsa & Zhemgang	
17	Secondary	1			Dakpai Chhu	2.26	0.63	0.61	-0.02	partly cloudy	Downstream of Zhmgang and Panbang	
18	Principal	1			Tingtibi	7.45	3.95	3.92	-0.03			
19	Principal	1			Kurjey	4.00	2.25	2.22	-0.03	Sunny	Chamkhar Valley, Zhemgang and Downstream	
20	Principal	1			Shingkhar (Bemethang)		2.06	2.02	-0.04	Sunny	Zhemgang and Downstream	
21	Principal		-		Sumpa	7.65	4.20	4.24	0.04	Clouds		
22	Secondary	1		Kuri Chhu Autsho	5.30	1.93	1.98	0.05	Cloudy	Lhuntse Downstream, Kurizampa, KHPA and Downstream along the Kuri Chhu		
23	Secondary				Autsho	8.48	4.21	4.21	0.00	cloudy with sunny	Kurizampa, KHPA and Downstream along the Kuri Chhu	
24	Principal	Basin Ill	Manas	Manas		Kurizampa	18.45	8.40	8.44	0.04	Cloudy	KHPA and Downstream along the Kuri Chhu
25	Principal	1			1	Kholong Chhu	Muktirap	6.00	2.37	2.43	0.06	Cloudy
26	Secondary				Doksum		4.27	4.22	-0.05	Sunny	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu	
27	Secondary				Chazam		8.55	8.65	0.10	Sunny	Downstream Settlement of Kuri-Gongri and Panbang	
28	Principal	1		Drangme Chhu	Ozorong	6.75	2.30	2.32	0.02	Sunny	Downstream of Kuri-Gongri and Panbang	
29	Secondary	1			Sheri Chhu	2.58	1.65	1.64	-0.01	Sully	Downstream of Kurt-Gongri and Panbang	
30	Principal				Panbang	12.48	5.91	6.01	0.10	Sunny	Manas and Downstream	
31	Principal	1		Name Ame China	Pangzam		6.45	6.05	-0.40	Sunny	Bangtar Settlement and Downstream	
32	Principal			Ngara Ama Chhu	Bangtar		2.27	2.32	0.05	Sunny	Downstream of Bangtar Settlement	

ALARM NR Represent that the Data has not been reported or Not Updated

ISSUED BY: FMCR,HWRSD,NCHM