

क्-रचर-द्रवा-स-र-कृतिः व्यक्तिन्त्रवाक्षेत्रः कवा म्रील लूटका की टीनिट टिन्मी बेका मीचेका द्वाना राष्ट्र हो ना



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

Status and River Level Trends:

Wednesday, August 14, 2019

Issued at: 10:00 AM

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	6.66	6.67	0.01					
2			Pho Chhu	Thorthormi Tsho		7.50	5.00	5.86	5.87	0.01					
3				Rapstreng Tsho		7.40	5.00	6.34	6.34	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	6.55	6.52	-0.03	· ·······			
5	Basin II	Punatshang				Thanza		7.70	8.70	NR	NR	#VALUE!			
6	Dasin ii	Chhu				i .					Tarina Wachey		8.50	10.50	7.08
7				Dangsa		5.50	7.00	4.84	4.85	0.01	Khuruthang) Puna-Wangdue Valley and Downstream				
8			Mo Chhu	Taksemakhang		7.50	8.50	6.00	6.00	0.00					
9				Tashithang		9.00	10.50	7.45	7.54	0.09	Gasa,Mo Chhu Valley,Puna-Wangdue Valley and Downstream				
10					Yebesa		5.00	7.00	2.45	2.50	0.05				

			vacuation after t	he detection of flood at	Four lake Sensor	r	Approximate Lead Time for Evacuation after the detection of flood at Dangsa Sensor					
SI Nos	Name of Place Downstream	from Sensor (Bay	Approx. Distance from Sensor (Rapstreng Tsho)	Approx. Distance from Sensor (Thorthormi Tsho)	Approx. Distance from Sensor (Luggey Tsho)	Approx. Tme available for Evacuation	SI 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	

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

	Westerman Cana and Managere Cana David											
SI 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	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				Tshampa		5.00	6.50	4.50	4.48	-0.02		
2			Chamkhar Chhu	Khagthang		5.50	6.00	4.89	4.89	0.00	Chokortoe Pry School, Kurjey Village, Wangdicholing, Chamkhar Town, Gangrithng Pry School, Gvelkhar Village and Downstream settlement under Zhemgang.	
3	Basin III	Manas		Kurjey	5.72	3.30	5.00	2.57	2.52	-0.05	School, Oyenkhair vintage and Downstream settlement under Zueringang.	
4			Mangdue Chhu	Jongthang		5.90	7.00	5.14	NR	#VALUE!	Bjizam Community,MHPA Dam, Power House and Downstream settlement of Trongsa	
5	i l	Mangdue Chhu	Riizam	5.52	4.20	5.50	2.90	2.81	-0.09	and Zhemgang		

	X X			Chamkhar Chhu Sub Ba		Approximate Lead Time for Evacuation of Mangdue Chhu Sub Basin							
Appr	Approximate Lead Time for Evacuation after the detection of Flood at the Tshampa AWLS						Approximate Lead Time for Evacuation after the detection of Flood at the Jongthang AWLS						
Sl Nos	Name of Place Downstream	Approx.Distance from the Tshampa AWLS	Approx. Cumlative Distance from Tshampa AWLS	Elevation	Approx. Lead Time	SI 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	1							
6	Gangrithang PS	0.3km	44.2 km	2552 m	84 minutes	1							
7	Gyelkhar	1.7 km	45.9 km	2538 m	91 minutes	1							

3. River Level Status of Gauging Station

SI 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		2.08	2.07	-0.01	Sunny	Thimphu Valley and Downstream
2	Principal			Thim Chhu	Lungtenphu	2.82	1.45	1.46	0.01	Partly cloudy	
3	Principal				Damchu	6.00	2.95	2.96	0.01		Chukha and Downstream
4	Secondary	Basin l	Wang Chhu	Haa Chhu	Haa	2.60	1.18	1.13	-0.05	Cloudy	Haa and Wang Chhu Downstream
5	Principal			Pa Chhu	Bonday		1.50	1.48	-0.02	Partly cloudy	Downstream of Paro Valley and Wang Chhu Basin
6	Principal			Amo Chhu	Dorokha		3.35	3.45	0.10	Sunny	Samtse, Phuntsholing and Downstream
7	Secondary			Anno Ciniu	Droyagang	7.07	3.35	3.64	0.29	Sunny	Phunsholing and Downstream
8	Secondary			Pho Chhu	Samdingkha	6.10	4.20	4.28	0.08	Sunny	Puna-Wangdue Valley and Downstream
9	Principal			Mo Chhu	Yebesa	3.94	2.43	2.50	0.07	Sunny	Mo Chhu Valley and Downstream
10	Secondary			Punatshang Chhu	Wangdue Bridge		3.35	3.35	0.00	clear	PHPA I,PHPA II and Downstream
11	Principal	Basin II	Donatal and Chlor		Wangdue Rapid	7.82	3.84	3.93	0.09	Sunny	
12	Principal	Dasiii ii	Punatshang Chhu		Turitar Sunkosh	6.68	3.85	3.90	0.05	Cloudy	Downstream of Dagana and Lhamoizingkha
13	Secondary				Sunkosh Bridge		3.00	3.00	0.00	Sunny	Downsteam of Dagana and Liamszingsna
14	Principal				Kerabari	11.90	5.95	6.02	0.07	Cloudy	Lhamoizingkha and Downstream
15	Secondary			Mao Chhu	Sherzhong		4.35	4.20	-0.15	Sunny	Gelelephu Valley and Downstream
16	Principal			Mangdue Chhu	Bjizam	5.35	2.91	2.83	-0.08	Sunny	MHPA Dam,Power House and Downstream of Trongsa & Zhemgang
17	Secondary				Dakpai Chhu	2.26	1.48	1.46	-0.02	Cloudy	Downstream of Zhmgang and Panbang
18	Principal				Tingtibi	7.45	4.12	4.09	-0.03	Cloudy	Downsteam of Zinigang and I alloang
19	Principal			Chamkhar Chhu	Kurjey	4.00	2.57	2.53	-0.04	Sunny	Chamkhar Valley, Zhemgang and Downstream
20	Principal				Shingkhar (Bemethang)		2.36	2.33	-0.03		Zhemgang and Downstream
21	Principal			Kuri Chhu	Sumpa	7.65	4.72	5.10	0.38	Sunny	Lhuntse Downstream, Kurizampa, KHPA and Downstream along the Kuri Chhu
22	Secondary				Khoma	5.30	2.17	2.40	0.23	,	Estatise Dominicality Carles and Dominical along the National
23	Secondary				Autsho	8.48	4.60	5.15	0.55	Sunny	Kurizampa,KHPA and Downstream along the Kuri Chhu
24	Principal	Basin III	Manas		Kurizampa	18.45	8.84	9.57	0.73	Cloudy	KHPA and Downstream along the Kuri Chhu
25	Principal			Kholong Chhu	Muktirap	6.00	2.45	2.85	0.40	Sunny	Doksum, Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
26	Secondary				Doksum		4.37	4.29	-0.08	Sunny	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
27	Secondary				Chazam		8.90	9.40	0.50	Sunny	Downstream Settlement of Kuri-Gongri and Panbang
28	Principal			Drangme Chhu	Ozorong	6.75	2.72	3.10	0.38	partly clear	Downstream of Kuri-Gongri and Panbang
29	Secondary				Sheri Chhu	2.58	1.71	1.90	0.19	party crear	20 material of Rate Origin and Landing
30	Principal				Panbang	12.48	6.51	6.63	0.12	Sunny	Manas and Downstream
31	Principal			Ngara Ama Chhu	Pangzam		6.30	6.35	0.05	Sunny	Bangtar Settlement and Downstream
32	Principal				Bangtar		2.69	2.62	-0.07	Cloudy	Downstream of Bangtar Settlement

NOTE The Water Level are relative Gauge Hight of the Observation site reference to the Site Specific and doesnot represent the actual water depth.

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

ISSUED BY: FMCR,HWRSD,NCHM