

क्चितःसूटन्नःक्टरन्नर्टन्विष्कृष्टम्भेनःखनन्नःकून्। क्टरन्नर्ट्यनातःर्ट्यकृष्कृष्टम्भेनःखननःकूनःकृषाः

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



Status and River Level Trends:

Wednesday, August 07, 2019

Issued at: 10:00 AM

Glacier Lake Outbrust Flood (GLOF) Early Warning System

1. Punatshang Chhu Sub Basin

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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	6.69	6.68	-0.01		
2				Thorthormi Tsho		7.50	5.00	5.88	5.87	-0.01		
3				Rapstreng Tsho		7.40	5.00	6.36	6.34	-0.02	Thanza, Tenchey, Lhedi and Lunana area and Downstream of Pho Chhu and Puna-Wangdue Valley	
4				Bay Tsho		7.40	5.00	6.57	6.45	-0.12	·	
5	Basin II	Punatshang			Thanza		7.70	8.70	NR	NR	#VALUE!	
6	Dasiii ii	Chhu		Tarina Wachey		8.50	10.50	NR	6.96	#VALUE!	Pho Chhu Valley (Tamidamchu, Wolathang, Samidingkha, Khawajara, Shengana,	
7				Dangsa		5.50	7.00	5.28	4.94	-0.34	Khuruthang) Puna-Wangdue Valley and Downstream	
8					Taksemakhang		7.50	8.50	6.13	6.06	-0.07	
9			Mo Chhu	Tashithang		9.00	10.50	NR	8.12	#VALUE!	Gasa, Mo Chhu Valley, Puna-Wangdue Valley and Downstream	
10					Yebesa		5.00	7.00	2.90	2.70	-0.20	

Approximate Lead Time for Evacuation after the detection of flood at Four lake Sensor

Approximate Lead Time for Evacuation after the detection of Flood at the Dangsa Sensor

SI Nos		Approx. Distance from Sensor (Bay Tsho)	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
							6	Wanadue 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

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	recorded at 9	Water Level Rise (+)/Fall (-) in meters during last 24 Hrs ending at 9 AM Today	Downstream Settlement						
1				Tshampa		5.00	6.50	NR	4.63	#VALUE!							
2			Chamkhar Chhu	Khagthang		5.50	6.00	NR	5.06	#VALUE!	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	2.92	2.74	-0.18	School, O Jennia 1 mage and Downsteam Schemen and Extending.						
4			Mangdue Chhu	Jongthang		5.90	7.00	5.64	5.38	-0.26	Bjizam Community, MHPA Dam, Power House and Downstream settlement of Trongsa						
5									Mangdue Chnu	Bjizam	5.52	4.20	5.50	3.64	3.22	-0.42	and Zhemgang

Approximate Lead Time for Evacuation of Chamkhar Chhu Sub Basin						Approximate Lead Time for Evacuation of Mangdue Chhu Sub Basin							
Appro	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	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							
	Cith DC	0.21	44.2 1	2552	04	1							

3. River Level Status of Gauging Station

Sl 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	NR	#VALUE!		Thimphu Valley and Downstream
2	Principal			Thim Chhu	Lungtenphu	2.82	1.56	1.60	0.04	Partly Cloudy	,
3	Principal				Damchu	6.00	3.45	3.22	-0.23	Cloudy	Chukha and Downstream
4	Secondary	Basin I	Wang Chhu	Haa Chhu	Haa	2.60	1.22	1.23	0.01	Cloudy	Haa and Wang Chhu Downstream
5	Principal			Pa Chhu	Bonday		1.88	1.67	-0.21	Rainy	Downstream of Paro Valley and Wang Chhu Basin
6	Principal			Amo Chhu	Dorokha		3.45	3.45	0.00	Sunny	Samtse, Phuntsholing and Downstream
7	Secondary			Anno Cinta	Droyagang	7.07	3.66	3.66	0.00	Sunny	Phunsholing and Downstream
8	Secondary			Pho Chhu	Samdingkha	6.10	5.50	5.55	0.05	Cloudy	Puna-Wangdue Valley and Downstream
9	Principal			Mo Chhu	Yebesa	3.94	3.00	2.69	-0.31	Cloudy	Mo Chhu Valley and Downstream
10	Secondary			Punatshang Chhu	Wangdue Bridge		4.75	3.95	-0.80	Cloudy	PHPA I,PHPA II and Downstream
11	Principal	Basin II	Punatshang Chhu		Wangdue Rapid	7.82	5.28	4.46	-0.82	Cloudy	
12	Principal	Dasiii ii			Turitar Sunkosh	6.68	4.45	4.40	-0.05	Cloudy	Downstream of Dagana and Lhamoizingkha
13	Secondary				Sunkosh Bridge		3.60	3.50	-0.10	Cloudy	DOWNERCHIN OF DARBIN LINE LINE DE LA LINE DE
14	Principal				Kerabari	11.90	6.50	6.45	-0.05	Cloudy	Lhamoizingkha and Downstream
15	Secondary			Mao Chhu	Sherzhong		4.40	4.40	0.00	Sunny	Gelelephu Valley and Downstream
16	Principal			Mangdue Chhu Chamkhar Chhu Kuri Chhu	Bjizam	5.35	3.66	3.25	-0.41	Cloudy	MHPA Dam,Power House and Downstream of Trongsa & Zhemgang
17	Secondary				Dakpai Chhu	2.26	1.50	1.53	0.03	Cloudy	Downstream of Zhmgang and Panbang
18	Principal				Tingtibi	7.45	4.72	4.38	-0.34	Cloudy	Downstream of Zinigang and I anothing
19	Principal				Kurjey	4.00	2.93	2.82	-0.11	Cloudy	Chamkhar Valley, Zhemgang and Downstream
20	Principal				Shingkhar (Bemethang)		2.70	2.61	-0.09		Zhemgang and Downstream
21	Principal				Sumpa	7.65	5.55	5.15	-0.40	Light Rain	Lhuntse Downstream,Kurizampa,KHPA and Downstream along the Kuri Chhu
22	Secondary				Khoma	5.30	2.70	2.38	-0.32	J	T-1
23	Secondary				Autsho	8.48	5.60	5.10	-0.50	Cloudy	Kurizampa,KHPA and Downstream along the Kuri Chhu
24	Principal	Basin III	Manas		Kurizampa	18.45	10.15	9.37	-0.78	Cloudy	KHPA and Downstream along the Kuri Chhu
25	Principal			Kholong Chhu	Muktirap	6.00	3.20	2.70	-0.50	Light Rain	Doksum, Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
26	Secondary				Doksum		4.72	4.64	-0.08	Cloudy	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
27	Secondary				Chazam		10.40	9.30	-1.10	Cloudy	Downstream Settlement of Kuri-Gongri and Panbang
28	Principal			Drangme Chhu	Ozorong	6.75	3.85	2.85	-1.00	Partly Cloudy	Downstream of Kuri-Gongri and Panbang
29	Secondary				Sheri Chhu	2.58	1.80	1.68	-0.12	I may crossy	DOWNSTAIN OF AME CONSTRUCT MINING
30	Principal				Panbang	12.48	7.39	7.09	-0.30	Cloudy	Manas and Downstream
31	Principal			Ngara Ama Chhu	Pangzam		6.45	6.45	0.00	Sunny	Bangtar Settlement and Downstream
32	Principal				Bangtar		2.80	2.76	-0.04	Sunny	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.

ALEXT

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

ISSUED BY: FMCR,HWRSD,NCHM