



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

Status and River Level Trends:

Friday, August 16, 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	6.68	6.68	0.00			
2				Thorthormi Tsho		7.50	5.00	5.86	5.86	0.00			
3				Rapstreng Tsho		7.40	5.00	6.33	6.33	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	6.49	6.51	0.02	, much		
5	Basin II	Punatshang		Thanza		7.70	8.70	NR	NR	#VALUE!			
6	Dasin n	Chhu	Chhu		Tarina Wachey		8.50	10.50	7.05	6.99	-0.06	Pho Chhu Valley (Tamidamchu, Wolathang, Samidingkha, Khawajara, Shengana,	
7			Mo Chhu	Dangsa		5.50	7.00	4.85	4.80	-0.05	Khuruthang) Puna-Wangdue Valley and Downstream		
8				Taksemakhang		7.50	8.50	5.94	5.89	-0.05			
9				Tashithang	9.00	10.50	7.33	7.08	-0.25	Gasa, Mo Chhu Valley, Puna-Wangdue Valley and Downstream			
10				Yebesa		5.00	7.00	2.43	2.32	-0.11	1		
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	Approximate l	Lead Time for E	vacuation after t	he detection of flood at	Four lake Senso	r	Approximate Lead Time for Evacuation after the detection of flood at Dangsa Sensor						
SI Nos	Name of Place Downstream	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	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

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	NR	4.49	#VALUE!	Chokortoe Pry School,Kurjey Village,Wangdicholing,Chamkhar Town,Gangrithng Pr School,Gyelkhar Village and Downstream settlement under Zhemgang.						
2				Khagthang		5.50	6.00	NR	4.88	#VALUE!							
3	Basin III	Manas		Kurjey	5.72	3.30	5.00	2.60	2.52	-0.08							
4				Jongthang		5.90	7.00	5.14	5.14	0.00	Bjizam Community, MHPA Dam, Power House and Downstream settlement of Trongsa						
5									Mangdue Chhu	Bjizam	5.52	4.20	5.50	2.88	2.86	-0.02	and Zhemgang
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										
		Approx.Distance	Approx.					Approx.Distance	Approx.								

SI Nos	Downstream	Approx.Distance from the Tshampa AWLS	Distance from	Elevation	Approx. Lead Time	SI Nos		Approx.Distance from the 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

l 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		2.04	2.03	-0.01		Thimphu Valley and Downstream
2	Principal			Thim Chhu	Lungtenphu	2.82	1.44	1.43	-0.01	partly cloudy	
3	Principal				Damchu	6.00	2.99	2.97	-0.02	Cloudy	Chukha and Downstream
4	Secondary	Basin l	Wang Chhu	Haa Chhu	Haa	2.60	1.18	1.16	-0.02	Sunny	Haa and Wang Chhu Downstream
5	Principal			Pa Chhu	Bonday		1.57	1.50	-0.07	Sunny	Downstream of Paro Valley and Wang Chhu Basin
6	Principal			Amo Chhu	Dorokha		3.35	3.45	0.10	Cloudy	Samtse, Phuntsholing and Downstream
7	Secondary			Ano Cinu	Droyagang	7.07	3.58	3.56	-0.02	Cloudy	Phunsholing and Downstream
8	Secondary			Pho Chhu	Samdingkha	6.10	4.30	4.22	-0.08	Cloudy	Puna-Wangdue Valley and Downstream
,	Principal			Mo Chhu	Yebesa	3.94	2.41	2.30	-0.11		Mo Chhu Valley and Downstream
0	Secondary			Punatshang Chhu	Wangdue Bridge		3.40	3.05	-0.35		PHPA l,PHPA ll and Downstream
1	Principal	Basin II	Punatshang Chhu		Wangdue Rapid	7.82	3.90	3.59	-0.31		
2	Principal	Dasin n	Punatsnang Cnnu		Turitar Sunkosh	6.68	4.10	3.60	-0.50	Cloudy	Downstream of Dagana and Lhamoizingkha
3	Secondary				Sunkosh Bridge		3.20	2.80	-0.40	Cloudy	
4	Principal				Kerabari	11.90	6.22	5.90	-0.32	Cloudy	Lhamoizingkha and Downstream
5	Secondary			Mao Chhu	Sherzhong		4.25	4.15	-0.10	light rainy	Gelelephu Valley and Downstream
6	Principal			Mangdue Chhu Chamkhar Chhu Kuri Chhu	Bjizam	5.35	2.87	2.86	-0.01	Sunny	MHPA Dam, Power House and Downstream of Trongsa & Zhemgang
7	Secondary				Dakpai Chhu	2.26	1.47	1.49	0.02	Sunny	Downstream of Zhmgang and Panbang
8	Principal				Tingtibi	7.45	4.10	4.14	0.04		
9	Principal				Kurjey	4.00	2.60	2.53	-0.07	Sunny	Chamkhar Valley, Zhemgang and Downstream
20	Principal				Shingkhar (Bemethang)		2.42	2.35	-0.07		Zhemgang and Downstream
1	Principal		Manas		Sumpa	7.65	5.00	5.05	0.05	partly cloudy	Lhuntse Downstream, Kurizampa, KHPA and Downstream along the Kuri Chh
2	Secondary				Khoma	5.30	2.47	2.25	-0.22	party cloudy	
3	Secondary				Autsho	8.48	5.07	5.05	-0.02	Cloudy	Kurizampa,KHPA and Downstream along the Kuri Chhu
4	Principal	Basin III			Kurizampa	18.45	9.50	9.36	-0.14	cloudy with sunny	KHPA and Downstream along the Kuri Chhu
5	Principal			Kholong Chhu	Muktirap	6.00	2.75	2.60	-0.15	Sunny	Doksum, Kholong Chhu Hydro Power Project and Downstream of Gongri Ch
26	Secondary	1			Doksum		4.52	4.44	-0.08	Cloudy	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
27	Secondary				Chazam		9.90	9.20	-0.70	Cloudy	Downstream Settlement of Kuri-Gongri and Panbang
8	Principal	1		Drangme Chhu	Ozorong	6.75	3.55	3.15	-0.40	Sunny	Downstream of Kuri-Gongri and Panbang
9	Secondary				Sheri Chhu	2.58	1.73	1.70	-0.03	Juniy	Downstream of Kuri-Gongri and Panbang
0	Principal				Panbang	12.48	7.59	6.96	-0.63	cloudy	Manas and Downstream
51	Principal	1		Ngara Ama Chhu	Pangzam		6.45	6.35	-0.10	Sunny	Bangtar Settlement and Downstream
32	Principal				Bangtar		2.60	2.59	-0.01	Cloudy	Downstream of Bangtar Settlement

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

ISSUED BY: FMCR,HWRSD,NCHM