



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

Status and River Level Trends:

Sunday, August 11, 2019

Issued at: 10:00 AM

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

Sl 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	6.67	6.68	0.01	Thanza,Tenchey,Lhedi and Lumana area and Downstream of Pho Chhu and Puna-Wangdue Valley Pho Chhu Valley (Tamidanchu, Wolathang, Samidingkha, Khawajara, Shengana, Khuruthang) Puna-Wangdue Valley and Downstream
2				Thorthormi Tsho		7.50	5.00	5.85	5.85	0.00	
3				Rapstreng Tsho		7.40	5.00	6.31	6.33	0.02	
4	Basin II	Punatshang Chhu		Bay Tsho		7.40	5.00	6.55	6.32	-0.23	
5				Thanza		7.70	8.70	NR	NR	#VALUE!	
6	Dasin n			Tarina Wachey		8.50	10.50	7.02	7.06	0.04	
7				Dangsa		5.50	7.00	4.82	4.95	0.13	
8	>			Taksemakhang		7.50	8.50	6.02	NR	#VALUE!	
9				Tashithang		9.00	10.50	7.21	8.07	0.86	Gasa, Mo Chhu Valley, Puna-Wangdue Valley and Downstream
10				Yebesa		5.00	7.00	2.36	2.69	0.33	

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

Sl Nos	Name of Place Downstream	Approx. Distance from Sensor (Bay Tsho)	Approx. Distance from Sensor (Rapstreng Tsho)	Approx. Distance from Sensor (Thorthormi Tcho)	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	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

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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	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	4.49	4.54	0.05						
2			Chamkhar Chhu	Khagthang		5.50	6.00	4.86	4.94	0.08	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	2.53	2.55	0.02						
4			Mangdue Chhu	Jongthang		5.90	7.00	NR	NR	#VALUE!	Bjizam Community, MHPA Dam, Power House and Downstream settlement of Trongs					
5								Manguue Chinu	Bjizam	5.52	4.20	5.50	2.82	2.86	0.04	and Zhemgang
Appr	**			Chamkhar Chhu Sub Ba tion of Flood at the Tsh		Approximate Lead Time for Evacuation of Mangdue Chhu Sub Basin Approximate Lead Time for Evacuation after the detection of Flood at the Jongthang AWLS										
Appr-	**					SI Nos	Name of Place Downstream		•		0					
	Downstream	Tshampa AWLS	Tshampa AWLS		Time		Downstream	AWLS	Tshampa AWLS							
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		2.09	2.11	0.02	Partly Cloudy	Thimphu Valley and Downstream
2	Principal			Thim Chhu	Lungtenphu	2.82	1.45	1.55	0.10		
3	Principal				Damchu	6.00	2.93	3.15	0.22	Cloudy	Chukha and Downstream
4	Secondary	Basin l	Wang Chhu	Haa Chhu	Haa	2.60	1.02	1.38	0.36	Cloudy	Haa and Wang Chhu Downstream
5	Principal			Pa Chhu	Bonday		1.45	1.65	0.20	Cloudy	Downstream of Paro Valley and Wang Chhu Basin
6	Principal			Amo Chhu	Dorokha		3.35	3.30	-0.05		Samtse, Phuntsholing and Downstream
7	Secondary			Ano Cina	Droyagang	7.07	3.56	3.47	-0.09	Cloudy	Phunsholing and Downstream
8	Secondary			Pho Chhu	Samdingkha	6.10	4.23	4.55	0.32		Puna-Wangdue Valley and Downstream
9	Principal			Mo Chhu	Yebesa	3.94	2.35	2.67	0.32	Cloudy	Mo Chhu Valley and Downstream
0	Secondary				Wangdue Bridge		3.10	3.80	0.70	Cloudy	PHPA I,PHPA II and Downstream
1	Principal	Basin ll	Burnetshame China		Wangdue Rapid	7.82	3.60	4.42	0.82		THE ALL HE ALL AND DOWNSTEAM
2	Principal	Dasin n	Punatshang Chhu	Punatshang Chhu	Turitar Sunkosh	6.68	3.65	4.25	0.60	Cloudy	Downstream of Dagana and Lhamoizingkha
3	Secondary				Sunkosh Bridge		2.85	3.40	0.55		Downstean of Dagana and Elamoizingkia
4	Principal				Kerabari	11.90	5.93	6.42	0.49		Lhamoizingkha and Downstream
5	Secondary			Mao Chhu	Sherzhong		4.30	4.35	0.05	Sunny	Gelelephu Valley and Downstream
6	Principal			Mangdue Chhu	Bjizam	5.35	2.85	2.88	0.03		MHPA Dam, Power House and Downstream of Trongsa & Zhemgang
7	Secondary				Dakpai Chhu	2.26	1.45	1.48	0.03	Cloudy	Downstream of Zhingang and Panbang
18	Principal				Tingtibi	7.45	4.22	4.14	-0.08		
9	Principal			Chamkhar Chhu Si (Bu Kuri Chhu	Kurjey	4.00	2.53	2.56	0.03		Chamkhar Valley, Zhemgang and Downstream
20	Principal				Shingkhar (Bemethang)		2.35	2.38	0.03		Zhemgang and Downstream
1	Principal				Chazam	7.65	4.70	4.80	0.10	Cloudy	Lhuntse Downstream, Kurizampa, KHPA and Downstream along the Kuri Chhu
2	Secondary				Khoma	5.30	2.20	2.28	0.08		
13	Secondary				Autsho	8.48	4.65	4.70	0.05	Cloudy	Kurizampa, KHPA and Downstream along the Kuri Chhu
4	Principal	Basin Ill	Manas		Kurizampa	18.45	8.83	8.91	0.08	Cloudy	KHPA and Downstream along the Kuri Chhu
5	Principal			Kholong Chhu	Muktirap	6.00	2.45	2.50	0.05	Sunny	Doksum, Kholong Chhu Hydro Power Project and Downstream of Gongri Ch
6	Secondary	1		Drangme Chhu	Doksum		4.40	3.35	-1.05	Sunny	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
27	Secondary				Chazam		9.00	9.05	0.05	Sunny	Downstream Settlement of Kuri-Gongri and Panbang
8	Principal	1			Ozorong	6.75	2.78	2.83	0.05	Clauda	Downstream of Kari Counsi and Dashara
9	Secondary	1			Sheri Chhu	2.58	1.64	1.72	0.08	Cloudy	Downstream of Kuri-Gongri and Panbang
0	Principal				Panbang	12.48	6.51	6.75	0.24	Sunny	Manas and Downstream
31	Principal	1		Ngara Ama Chhu	Pangzam		6.40	6.45	0.05	Sunny	Bangtar Settlement and Downstream
32	Principal	1			Bangtar		2.77	2.76	-0.01	Sunny	Downstream of Bangtar Settlement

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

ISSUED BY: FMCR,HWRSD,NCHM