



ཆུ་དཔଁས་ཅིག་པ་དང་ཆུ་ལྷོད་ཐོན་སྐྱོད་ཞབས་ཏུ་ག་ལྷོ་ཚན།
 ཆུ་ལ་ཡོངས་ཆུ་དཔଁས་དང་གནས་གསེས་ཅིག་པའི་ལྷེ་བ།
HYDROLOGY & WATER RESOURCES SERVICES DIVISION
NATIONAL CENTER FOR HYDROLOGY & METEOROLOGY
THIMPHU: BHUTAN



Status and River Level Trends:
 Glacier Lake Outburst Flood (GLOF) Early Warning System

Saturday, October 26, 2019

Issued at: 10:00 AM

I. Punatshang Chhu Sub Basin

SI No.	River Basin Number	Basin Name	Name of River	Station Name	Highest Water Level Recorded	Alert Water Level	Alarm Water Level	Water Level (m) recorded at 9:00 AM Yesterday	Water Level(m) recorded at 9:00 AM Today	Water Level Rise (+)/Fall (-) in meters during last 24 Hrs ending at 9 AM Today	Downstream Settlement
1	Basin II	Punatsang Chhu	Pho Chhu	Luggay Tsho	7.80	10.00	6.35	6.34	0.01	Thanza, Tenchev, Lhedi and Lunana area and Downstream of Pho Chhu and Puna-Wangdue Valley	
2				Thorhormi	7.50	5.00	5.59	5.60	-0.01		
3				Rapstreg	7.40	5.00	6.05	6.05	0.00		
4				Bay Tsho	7.40	5.00	6.20	6.20	0.00		
5				Thanza	7.70	8.70	6.34	6.34	0.00		
6				Tarina Wachey	8.50	10.50	6.53	6.53	0.00		
7				Dangsa	5.50	7.00	3.87	3.87	0.00		
8			Taksemakhang	7.50	8.50	5.39	5.38	0.01	Pho Chhu Valley (Tamidanchu, Wolathang, Samdingkha, Khawajara, Shengana, Khuruthang) Puna-Wangdue Valley and Downstream		
9			Tashithang	9.00	10.50	5.57	5.56	0.01			
10			Yebesa	5.00	7.00	1.58	1.57	0.01			

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 Dangsa Sensor					
SI Nos	Name of Place	Approx. Distance	Approx. Time	Approx. Distance	Approx. Time	Approx. Time	SI Nos	Name of Place	Approx. Distance	Approx. Time for	Approx. Time available for Evacuation	
1	Thanza	1.5 km	2.8 km	3.3 km	6.7 km	20-60 minutes	1	Wolathang	5.8 km	30 minutes	30 minutes	
2	Tenchev	2.9 km	4.1 km	4.6 km	8.2 km		2	Samdingkha	12.0 km	55 minutes	55 minutes	
3	Tshojo	8.1 km	10.0 km	10.5 km	13.8 km		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	24 km	120 minutes	2 hours	
5	Puna-Wangdue	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 distance were approximate only.

Glacier Lake Outburst Flood (GLOF) & Rainstorm Flood Early Warning System.

2. Chamkhar Chhu and Mangdue Chhu Sub Basin

SI No.	River Basin Number	Basin Name	Name of River	Station Name	Highest Water Level Recorded (m)	Alert Water Level (m)	Alarm Water Level (m)	Water Level (m) recorded at 9:00 AM Yesterday	Water Level(m) recorded at 9:00 AM Today	Water Level Rise (+)/Fall (-) in meters during last 24 Hrs ending at 9 AM Today	Downstream Settlement
1	Basin III	Manas	Chamkhar Chhu	Tshampa	5.00	6.50	NR	3.88	#VALUE!	Chokortoe Pry School, Kurjev Village, Wangdicholing, Chamkhar Town, Gangrithang Pry School, Gyelkhar Village and Downstream settlement under Zhemgang.	
2				Khaathang	5.50	6.00	4.53	4.54	0.01		
3				Kurjev	5.72	3.30	5.00	1.85	1.86		0.01
4			Mangdue Chhu	Jonshang	5.90	7.00	4.18	NR	#VALUE!		Bjizam Community, MHPA Dam, Power House and Downstream settlement of Trongsa and Zhemgang
5				Blizam	5.52	4.20	5.50	1.99	1.99		

Approximate Lead Time for Evacuation of Chamkhar Chhu Sub Basin					
Approximate Lead Time for Evacuation after the detection of Flood at the Tshampa AWLS					
SI Nos	Name of Place	Approx. Dista	Approx. Elevation	Approx. Lead	Approx. Lead
1	Khaathang	20.3 km	20.3 km	3704 m	27 minutes
2	Chorkhor Toe	4.5 km	24.8 km	2904 m	34 minutes
3	Kurjev	12.4 km	37.2 km	2771 m	60 minutes
4	Wangdichollin	5.7 km	42.9 km	2600 m	79 minutes
5	Bumthang	1 km	43.9 km	2562 m	83 minutes
6	Gangrithang	0.3 km	44.2 km	2552 m	84 minutes
7	Gyelkhar	1.7 km	45.9 km	2538 m	91 minutes

Approximate Lead Time for Evacuation of Mangdue Chhu Sub Basin					
Approximate Lead Time for Evacuation after the detection of Flood at the Jongthang AWLS					
SI Nos	Name of Place	Approx. Distan	Approx. Elevation	Approx. Lead	Approx. Lead
1	Blizam	18.5 km	18.5 km	2223 m	34 minutes
2	Dam Site	7.8 km	26.3 km	1848 m	50 minutes
3	Power Plant	20.4 km	46.7 km	1024 m	88 minutes

3. River Level Status of Gauging Station

Sl No.	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 9:00 AM Today	Water Level Rise (+)/Fall (-) in meters during last 24 Hours ending at 9:00 AM Today	Weather Condition	Downstream Settlement		
1	AWLS	Basin I	Wang Chhu	Thim Chhu	Dodena		1.64	1.66	0.02	Partly Sunny	Thimphu Valley and Downstream		
2	Principal				Lungtenphu	2.82	0.77	0.75	-0.02	Partly Sunny			
3	Principal				Damchu	6.00	2.36	2.35	-0.01	Sunny	Chukha and Downstream		
4	Secondary			Haa Chhu	Haa	2.60	0.71	0.69	-0.02	Cloudy	Haa and Wang Chhu Downstream		
5	Secondary			Pa Chhu	Bonday		1.03	1.02	-0.01	Sunny	Downstream of Paro Valley and Wang Chhu Basin		
6	Principal			Amo Chhu	Dorokha		2.75	2.70	-0.05	Sunny	Samtse, Phunsholing and Downstream		
7	Principal				Doyayang	7.07	2.69	2.67	-0.02	Sunny	Phunsholing and Downstream		
8	Secondary	Basin II	Punatshang Chhu	Pho Chhu	Samdingkha	6.10	3.06	3.05	-0.01	Sunny	Puna-Wangdue Valley and Downstream		
9	Principal			Mo Chhu	Yebesa	3.94	1.57	1.53	-0.04	Sunny	Mo Chhu Valley and Downstream		
10	Secondary				Wangdue Bridge		1.40	1.40	0.00	Sunny	PHPA I,PHPA II and Downstream		
11	Principal				Wangdue Rapid	7.82	1.88	1.84	-0.04	Sunny			
12	Principal				Turitar Sunkosh	6.68	2.40	2.30	-0.10	Sunny	Downstream of Dagana and Lhamoizongkha		
13	Secondary				Sunkosh Bridge		1.70	1.70	0.00	Cloudy			
14	Principal				Kerabari	11.90	4.36	4.34	-0.02	Sunny	Lhamoizongkha and Downstream		
15	Secondary				Sherzhong		3.75	3.75	0.00	Sunny	Gelephu Valley and Downstream		
16	Principal			Basin III	Manas	Mangdue Chhu	Bjizam	5.35	1.99	1.99	0.00	Clear Weather	MHPA Dam,Power House and Downstream of Trongsa & Zhemgang
17	Secondary						Dakpai Chhu	2.26	1.40	1.39	-0.01	Sunny	Downstream of Zhmgang and Panbang
18	Principal		Tingtibi			7.45	3.18	3.16	-0.02				
19	Principal	Chamkhar Chhu	Kurjey			4.00	1.85	1.86	0.01	Sunny	Chamkhar Valley, Zhemgang and Downstream		
20	Principal		Shingkhari				1.66	1.67	0.01	Cloudy	Zhemgang and Downstream		
21	Principal	Kuri Chhu	Sumpa			7.65	3.48	3.56	0.08	Sunny	Lhunse Downstream,Kurizampa,KHPA and Downstream along the Kuri Chhu		
22	Secondary		Khoma			5.30	1.56	1.62	0.06				
23	Secondary		Autsho			8.48	3.37	3.40	0.03	Sunny	Kurizampa,KHPA and Downstream along the Kuri Chhu		
24	Principal		Kurizampa			18.45	7.41	7.45	0.04	Cloudy	KHPA and Downstream along the Kuri Chhu		
25	Principal	Kholong Chhu	Muktirap			6.00	1.84	1.98	0.14	Cloudy	Doksum,Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu		
26	Principal					Doksum		3.34	3.34	0.00	Light Rainny	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu	
27	Secondary	Drangme Chhu	Chazam				7.70	7.80	0.10	Cloudy	Downstream Settlement of Kuri-Gongri and Panbang		
28	Principal		Ozorong			6.75	1.62	1.65	0.03	Cloudy	Downstream of Kuri-Gongri and Panbang		
29	Secondary		Sheri Chhu			2.58	1.50	1.50	0.00				
30	Principal		Panbang	12.48	4.68	4.69	0.01	Sunny	Manas and Downstream				
31	Principal	Ngara Ama Chhu	Pangzam		5.65	5.70	0.05	Cloudy	Bangtar Settlement and Downstream				
32	Principal		Bangtar		1.95	2.04	0.09	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.

ALERT
ALARM

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

ISSUED BY: FMCR,HWRSD,NCHM