



རྒྱུ་ཕྱུང་རྒྱུ་ལ་དང་རྒྱུ་ལྷན་སྦྲེང་ཞབས་ཏེ་གཞི་ཚན།  
 རྒྱལ་ཡོངས་རྒྱུ་ཕྱུང་དང་གནམ་གཤིས་རྒྱུ་ལྷན་སྦྲེང་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

Wednesday, November 6, 2019

Issued at: 10:00 AM

**1. Punatshang Chhu Sub Basin**

Sl 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	Punatshang Chhu	Pho Chhu	Luggay Tsho		7.80	10.00	6.30	6.31	-0.01	Thanza, Tenchey, Lhedi and Lunana area and Downstream of Pho Chhu and Puna-Wangdue Valley
2				Thorhormi Tsho		7.50	5.00	5.55	5.56	-0.01	
3				Rapstreng Tsho		7.40	5.00	6.02	6.02	0.00	
4				Bay Tsho		7.40	5.00	6.19	6.19	0.00	
5				Thanza		7.70	8.70	6.30	6.29	0.01	
6			Tarina Wachey		8.50	10.50	NR	6.49	#VALUE!	Pho Chhu Valley (Tamidamchu, Wolathang, Samdingkha, Khawajara, Shengana, Khuruthang) Puna-Wangdue Valley and Downstream	
7			Dangsa		5.50	7.00	3.74	3.73	0.01		
8			Taksema Khang		7.50	8.50	NR	5.31	#VALUE!		
9			Tashithang		9.00	10.50	NR	5.28	#VALUE!		
10			Yebesa		5.00	7.00	1.46	1.43	0.03		Gasa, Mo Chhu Valley, Puna-Wangdue Valley and Downstream

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				
Sl Nos	Name of Place	Approx.	Approx.	Approx.	Approx. Tme	Sl Nos	Name of Place	Approx.	Approx. Time for	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	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	Bajo Town	30.5 km	145 minutes	2 hours 25 minutes
					5-7 hours	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**

Sl 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	3.80	3.79	-0.01	Chokortoe Pry School, Kurje Village, Wangdicholing, Chamkhar Town, Gangrihang Pry School, Gyelkhar Village and Downstream settlement under Zhemgang.
2				Khagthang		5.50	6.00	4.47	4.47	0.00	
3				Kurje		5.72	3.30	5.00	1.72	0.00	
4			Mangdue Chhu	Jongthang		5.90	7.00	4.02	4.01	-0.01	Bjizam Community, MHPA Dam, Power House and Downstream settlement of Trongsa and Zhemgang
5				Bjizam		5.52	4.20	5.50	1.86	1.86	

Approximate Lead Time for Evacuation of Chamkhar Chhu Sub Basin						Approximate Lead Time for Evacuation of Mangdue Chhu Sub Basin					
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. Dista	Approx.	Elevation	Approx. Lead	Sl Nos	Name of Place	Approx. Distan	Approx.	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	4.5 km	24.8 km	2904 m	34 minutes	2	Dam Site	7.8 km	26.3 km	1848 m	50 minutes
3	Kurje	12.4 km	37.2 km	2771 m	60 minutes	3	Power Plant	20.4 km	46.7 km	1024 m	88 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	Gangrihang	0.3 km	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

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		1.59	1.57	-0.02	Sunny	Thimphu Valley and Downstream		
2	Principal				Lungtenphu	2.82	0.64	0.63	-0.01	Sunny			
3	Principal				Damchu	6.00	2.25	2.24	-0.01	Sunny	Chukha and Downstream		
4	Secondary				Haa Chhu	2.60	0.67	0.64	-0.03	Sunny	Haa and Wang Chhu Downstream		
5	Secondary				Pa Chhu	Bonday		0.95	0.94	-0.01	Clear Weather	Downstream of Paro Valley and Wang Chhu Basin	
6	Principal				Amo Chhu	Dorokha		2.55	2.50	-0.05	Sunny	Samtse, Phunsholing and Downstream	
7	Principal					Doyangang	7.07	2.50	2.49	-0.01	Sunny	Phunsholing and Downstream	
8	Secondary	Basin II	Punatshang Chhu	Pho Chhu	Samdingkha	6.10	2.80	2.79	-0.01	Sunny	Puna-Wangdue Valley and Downstream		
9	Principal					Yebesa	3.94	1.40	1.39	-0.01	Sunny	Mo Chhu Valley and Downstream	
10	Secondary				Wangdue Bridge		1.10	1.10	0.00	Sunny	PHPA I,PHPA II and Downstream		
11	Principal				Wangdue Rapid	7.82	1.57	1.55	-0.02				
12	Principal				Turitar Sunkosh	6.68	2.10	2.10	0.00	Sunny	Downstream of Dagana and Lhamoizingkha		
13	Secondary				Sunkosh Bridge		1.35	1.35	0.00	Sunny			
14	Principal				Kerabari	11.90	4.06	4.05	-0.01	Sunny		Lhamoizingkha and Downstream	
15	Secondary				Mao Chhu	Sherzhong		3.70	3.70	0.00	Cloudy	Gelelephu Valley and Downstream	
16	Principal			Basin III	Manas	Mangdue Chhu	Bjizam	5.35	1.88	1.86	-0.02	Sunny	MHPA Dam,Power House and Downstream of Trongsa & Zhemgang
17	Secondary							Dakpai Chhu	2.26	1.34	1.32	-0.02	Cloudy
18	Principal		Tingibi			7.45	3.08	3.03	-0.05				
19	Principal		Chamkhar Chhu			Kurjey	4.00	1.73	1.72	-0.01	Sunny	Chamkhar Valley, Zhemgang and Downstream	
20	Principal					Shingkar		1.53	1.53	0.00	Cloudy	Zhemgang and Downstream	
21	Principal		Kuri Chhu			Sumpa	7.65	3.25	3.22	-0.03	Sunny	Lhuntse Downstream,Kurizampa,KHPA and Downstream along the Kuri Chhu	
22	Secondary					Khoma	5.30	1.45	1.45	0.00	Cloudy		
23	Secondary					Autsho	8.48	3.13	3.11	-0.02			Kurizampa,KHPA and Downstream along the Kuri Chhu
24	Principal					Kurizampa	18.45	7.11	7.09	-0.02	Cloudy	KHPA and Downstream along the Kuri Chhu	
25	Principal		Kholong Chhu			Muktirap	6.00	1.73	1.71	-0.02	Sunny	Deksum,Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu	
26	Principal		Drangme Chhu			Doksum		3.26	3.23	-0.03	Sunny	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu	
27	Secondary					Chazam		7.55	7.55	0.00	Sunny	Downstream Settlement of Kuri-Gongri and Panbang	
28	Principal					Ozorong	6.75	1.40	1.40	0.00	Sunny	Downstream of Kuri-Gongri and Panbang	
29	Secondary		Sheri Chhu	2.58	1.40	1.40	0.00						
30	Principal			Panbang	12.48	4.41	4.40	-0.01	Clear Weather	Manas and Downstream			
31	Principal		Ngara Ama Chhu	Pangzam		5.60	5.60	0.00	Sunny	Bangtar Settlement and Downstream			
32	Principal				Bangtar		1.94	1.94	0.00	Cloudy	Downstream of Bangtar Settlement		

NOTE The Water Level are relative Gauge Hight of the Observation site reference to the Site Specific and does not represent the actual water depth.

ALERT  
ALARM

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

ISSUED BY: FMCR,HWRSD,NCHM