



རྒྱུ་ཕྱོད་ལྷན་པོ་ལྷན་སྐྱོད་ཞབས་ཏྲུག་ལྷན་ཚན།  
 རྒྱལ་ཡོངས་རྒྱུ་ཕྱོད་ལྷན་པོ་ལྷན་སྐྱོད་ཞབས་ཏྲུག་ལྷན་ཚན།  
**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

Monday, November 4, 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	6.31	6.31	0.00	Thanza, Tenchey, Lhedi and Lunana area and Downstream of Pho Chhu and Puna-Wangdue Valley
2				Thorhormi Tsho		7.50	5.00	5.07	5.56	0.01	
3				Rapstreng Tsho		7.40	5.00	6.03	6.03	0.00	
4				Bay Tsho		7.40	5.00	6.20	6.20	0.00	
5				Thanza		7.70	8.70	6.30	6.31	-0.01	
6				Tarina Wachey		8.50	10.50	NR	NR	#VALUE!	
7			Mo Chhu	Dangsa		5.50	7.00	3.76	3.75	0.01	Pho Chhu Valley (Tamidamchu, Wolathang, Samdingkha, Khawajara, Shengana, Khuruthang) Puna-Wangdue Valley and Downstream
8				Taksemakhang		7.50	8.50	5.32	NR	#VALUE!	
9				Tashithang		9.00	10.50	5.31	NR	#VALUE!	
10				Yebesa		5.00	7.00	1.44	1.44	0.00	

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. Distance	Approx. Time	Sl Nos	Name of Place	Approx.	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	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	5-7 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**

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	3.82	3.81	-0.01	Chokortoe Pry School, Kurjey Village, Wangdicholing, Chamkhar Town, Gangrithang Pry School, Gyelkhar Village and Downstream settlement under Zhemgang.
2				Khagthang		5.50	6.00	4.49	4.48	-0.01	
3				Kurjey		5.72	3.30	5.00	1.74	1.73	
4			Mangdue Chhu	Jongthang		5.90	7.00	NR	NR	#VALUE!	Bjizam Community, MHPA Dam, Power House and Downstream settlement of Trongsa and Zhemgang
5				Bjizam		5.52	4.20	5.50	1.88	1.87	

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	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	Wangdichollin	5.7 km	42.9 km	2600 m	79 minutes						
5	Bumthang	1 km	43.9 km	2562 m	83 minutes						
6	Gangrithang	0.3km	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

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	1.58	-0.01	Sunny	Thimphu Valley and Downstream	
2	Principal				Lungtenphu	2.82	0.66	0.65	-0.01	Sunny		
3	Principal				Damchu	6.00	2.27	2.25	-0.02	Sunny		
4	Secondary				Haa Chhu	2.60	0.68	0.66	-0.02	Sunny		
5	Secondary				Pa Chhu		0.95	0.94	-0.01	Sunny		
6	Principal				Amo Chhu		2.55	2.55	0.00	Sunny		
7	Principal				Dorokha		2.53	2.51	-0.02	Sunny		
8	Secondary	Basin II	Punatshang Chhu	Pho Chhu	Samdinkha	6.10	2.83	2.82	-0.01	Sunny	Puna-Wangdue Valley and Downstream	
9	Principal				Mo Chhu	3.94	1.41	1.41	0.00		Mo Chhu Valley and Downstream	
10	Secondary				Punatshang Chhu	Wangdue Bridge		1.15	1.15	0.00	Sunny	Downstream of Dugana and Lhamoizinkha
11	Principal					Wangdue Rapid	7.82	1.59	1.58	-0.01	Sunny	
12	Principal					Turitar Sunkosh	6.68	2.10	2.10	0.00	Sunny	
13	Secondary					Sunkosh Bridge		1.40	1.35	-0.05	Clear Weather	
14	Principal					Kerabari	11.90	4.08	4.06	-0.02	Sunny	
15	Secondary	Mao Chhu	Sherzhong		3.75	3.75	0.00	Sunny	Lhamoizinkha and Downstream			
16	Principal	Basin III	Manas	Mangdue Chhu	Bizam	5.35	1.89	1.89	0.00	cloudy	MHPA Dam, Power House and Downstream of Trongsa & Zhengang	
17	Secondary				Dakpai Chhu	2.26	1.35	1.34	-0.01		Downstream of Zhmgang and Panbang	
18	Principal				Tingtibi	7.45	3.10	3.09	-0.01	Sunny		
19	Principal				Chamkhar Chhu	Kurjey	4.00	1.74	1.73	-0.01	Sunny	Chamkhar Valley, Zhengang and Downstream
20	Principal					Shingkar		1.55	1.54	-0.01	Sunny	Zhengang and Downstream
21	Principal				Kuri Chhu	Sumpa	7.65	3.27	3.25	-0.02		Lhuntse Downstream, Kurizampa, KHPA and Downstream along the Kuri Chhu
22	Secondary					Khoma	5.30	1.45	1.44	-0.01	Sunny	
23	Secondary					Autsho	8.48	3.15	3.13	-0.02	Sunny	
24	Principal					Kurizampa	18.45	7.15	7.12	-0.03	Sunny	
25	Principal					Muktirap	6.00	1.73	1.72	-0.01	Sunny	
26	Principal				Kholong Chhu	Doksum		3.30	3.28	-0.02	Sunny	Doksum, Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
27	Secondary					Chazam		7.55	7.55	0.00	Sunny	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
28	Principal	Ozorong	6.75	1.42		1.42	0.00		Downstream Settlement of Kuri-Gongri and Panbang			
29	Secondary	Sheri Chhu	2.58	1.40	1.40	0.00	Sunny					
30	Principal	Panbang	12.48	4.43	4.44	0.01	Sunny	Manas and Downstream				
31	Principal	Pangzam		5.65	5.65	0.00	Sunny	Bangtar Settlement and Downstream				
32	Principal	Ngara Ama Chhu	Bangtar		1.90	1.88	-0.02	Sunny	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