



རྒྱུ་ཕྱེད་རྒྱུ་ལ་དང་རྒྱུ་ལོ་ཐོན་སྐྱེད་ཞབས་ཏུ་གྲུ་ཚོན།
 རྒྱུ་ལོ་དང་རྒྱུ་ཕྱེད་དང་གནམ་གཤིས་རྒྱུ་ལོ་ལོ་ལྷོ་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, October 30, 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	6.32	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	5.59	5.58	0.01	
3				Rapstreng Tsho		7.40	5.00	6.04	6.04	0.00	
4				Bay Tsho		7.40	5.00	6.22	6.26	-0.04	
5				Thanza		7.70	8.70	6.32	6.33	-0.01	
6				Tarina Wachey		8.50	10.50	6.51	6.51	0.00	
7			Mo Chhu	Dangsa		5.50	7.00	3.81	3.80	0.01	Pho Chhu Valley (Tamidamchu, Wolathang, Samdingkha, Khawajara, Shengana, Khuruthang) Puna-Wangdue Valley and Downstream
8				Taksemakhang		7.50	8.50	5.35	5.36	-0.01	
9				Tashithang		9.00	10.50	5.43	5.40	0.03	
10				Yebesa		5.00	7.00	1.55	1.51	0.04	

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	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	3.85	3.84	-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	4.51	4.50	-0.01	
3				Kurjey		5.72	3.30	5.00	1.80	1.78	
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	1.92	1.91	

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	0.3 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		1.62	1.62	0.00	Sunny	Thimphu Valley and Downstream		
2	Principal				Lungtenphu	2.82	0.71	0.68	-0.03	Sunny			
3	Principal				Damchu	6.00	2.31	2.30	-0.01	Sunny			
4	Secondary				Haa Chhu	2.60	0.69	0.66	-0.03	cloudy			
5	Secondary				Pa Chhu		0.98	0.98	0.00	Sunny			
6	Principal				Amo Chhu		2.65	2.60	-0.05	Sunny			
7	Principal				Doyagang	7.07	2.62	2.60	-0.02	Sunny			
8	Secondary	Basin II	Punatshang Chhu	Pho Chhu	Samdinkha	6.10	2.92	2.89	-0.03	Sunny	Puna-Wangdue Valley and Downstream		
9	Principal				Mo Chhu	3.94	1.47	1.46	-0.01	Sunny	Mo Chhu Valley and Downstream		
10	Secondary				Wangdue Bridge		1.25	1.20	-0.05	Sunny	PHPA I,PHPA II and Downstream		
11	Principal				Wangdue Rapid	7.82	1.71	1.68	-0.03	Sunny			
12	Principal				Turitar Sunkosh	6.68	2.25	2.20	-0.05	Sunny			
13	Secondary				Sunkosh Bridge		1.55	1.50	-0.05	clear			
14	Principal					Kerabari	11.90	4.23	4.20	-0.03	Sunny	Lhamoizinkha and Downstream	
15	Secondary		Sherzhong		3.75	3.70	-0.05	Sunny	Gelephu Valley and Downstream				
16	Principal	Basin III	Manas	Mangdue Chhu	Bizam	5.35	1.93	1.92	-0.01	Sunny	MHPA Dam,Power House and Downstream of Trongsa & Zhengang		
17	Secondary				Dakpai Chhu	2.26	1.38	1.37	-0.01	Sunny	Downstream of Zhmgang and Panbang		
18	Principal				Tingtibi	7.45	3.14	3.13	-0.01				
19	Principal				Chamkhar Chhu		Kurjey	4.00	1.80	1.79	-0.01	Sunny	Chamkhar Valley, Zhengang and Downstream
20	Principal						Shingkar		1.61	1.60	-0.01	Sunny	Zhengang and Downstream
21	Principal				Kuri Chhu		Sumpa	7.65	3.40	3.34	-0.06	Sunny	Lhuntse Downstream,Kurizampa,KHPA and Downstream along the Kuri Chhu
22	Secondary						Khoma	5.30	1.52	1.50	-0.02		
23	Secondary						Autsho	8.48	3.26	3.23	-0.03	Sunny	Kurizampa,KHPA and Downstream along the Kuri Chhu
24	Principal						Kurizampa	18.45	7.27	7.25	-0.02	Sunny	KHPA and Downstream along the Kuri Chhu
25	Principal				Kholong Chhu		Muktirap	6.00	1.81	1.79	-0.02	clear	Doksum,Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
26	Principal						Doksum		3.28	3.32	0.04	Sunny	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
27	Secondary						Chazam		7.70	7.70	0.00	Sunny	Downstream Settlement of Kuri-Gongri and Panbang
28	Principal	Drangme Chhu		Ozorong	6.75	1.50	1.46	-0.04	Sunny	Downstream of Kuri-Gongri and Panbang			
29	Secondary			Sheri Chhu	2.58	1.42	1.42	0.00					
30	Principal			Panbang	12.48	4.58	4.53	-0.05	clear	Manas and Downstream			
31	Principal	Ngara Ama Chhu		Pangzam		5.65	5.65	0.00	Sunny	Bangtar Settlement and Downstream			
32	Principal			Bangtar		1.96	1.93	-0.03	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