



རྒྱལ་ཁྲིམས་ལྷན་ཁག་གི་འཕེལ་རྒྱུ་ལྷན་ཁག་
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 HYDROLOGY & WATER RESOURCES SERVICES DIVISION
 NATIONAL CENTER FOR HYDROLOGY & METEOROLOGY
 THIMPHU: BHUTAN



Status and River Level Trends:

Tuesday, October 08, 2019

Issued at: 10:00 AM

Glacier Lake Outburst Flood (GLOF) Early Warning System

1. Punaatshang Chhu Sub Basin

SI Nos.	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 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	Basin II	Punaatshang Chhu	Pho Chhu	Luggay Tsho		7.80	10.00	6.49	6.49	0.00	Thanza, Tenchey, Lhedri and Lunama area and Downstream of Pho Chhu and Puna-Wangdue Valley
2				Thorthormi Tsho		7.50	5.00	NR	NR	#VALUE!	
3				Rapstreng Tsho		7.40	5.00	6.14	6.13	-0.01	
4				Bay Tsho		7.40	5.00	6.34	6.31	-0.03	
5				Thanza		7.70	8.70	6.55	6.53	-0.02	
6				Tarina Wachey		8.50	10.50	6.69	6.68	-0.01	Pho Chhu Valley (Tamidanchu, Wolathang, Samdingkha, Khawajara, Shengana, Khuruthang) Puna-Wangdue Valley and Downstream
7				Dangsa		5.50	7.00	4.35	4.44	0.09	
8				Taksemakhang		7.50	8.50	5.54	5.54	0.00	
9				Tashithang		9.00	10.50	6.21	6.48	0.27	
10				Yebesa		5.00	7.00	1.90	2.14	0.24	

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 Downstream	Approx. Distance from Sensor (Bay Tsho)	Approx. Distance from Sensor (Rapstreng Tsho)	Approx. Distance from Sensor (Thorthormi Tsho)	Approx. Distance from Sensor (Luggay Tsho)	Approx. Time 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. 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	Lhedri	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
							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 Nos.	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 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	Basin III	Manas	Chamkhar Chhu	Tshampa		5.00	6.50	4.14	4.14	0.00	Chokortoe Pry School, Kurjey Village, Wangdicholing, Chamkhar Town, Gangriting Pry School, Gyelkhar Village and Downstream settlement under Zhengang.	
2				Khagthang		5.50	6.00	4.68	4.71	0.03		
3				Kurjey		5.72	3.30	5.00	2.17	2.24		0.07
4				Jongthang			5.90	7.00	4.62	4.70	0.08	Bjizam Community, MHPA Dam, Power House and Downstream settlement of Trongsa and Zhengang
5				Bjizam		5.52	4.20	5.50	2.34	2.49	0.15	

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						
SI Nos	Name of Place Downstream	Approx. Distance from the Tshampa AWLS	Approx. Cumulative Distance from Tshampa AWLS	Elevation	Approx. Lead Time	SI Nos	Name of Place Downstream	Approx. Distance from the Tshampa AWLS	Approx. Cumulative Distance from Tshampa AWLS	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 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	Wangdicholing	5.7 km	42.9 km	2600 m	79 minutes						
5	Bumthang	1 km	43.9 km	2562 m	83 minutes						
6	Gangriting PS	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 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	Basin I	Wang Chhu	Thin Chhu	Dodena		1.83	1.86	0.03	Light Rainy	Thimphu Valley and Downstream		
2	Principal				Lungtenphu	2.82	1.12	1.18	0.06	Cloudy			
3	Principal				Damchu	6.00	2.70	2.69	-0.01	Cloudy			
4	Secondary			Basin I	Wang Chhu	Haa Chhu	Haa	2.60	0.95	1.01	0.06	Cloudy	Haa and Wang Chhu Downstream
5	Principal						Pa Chhu		1.30	1.31	0.01	Cloudy	Downstream of Paro Valley and Wang Chhu Basin
6	Principal					Amo Chhu	Dorokha		3.10	3.20	0.10	Cloudy	Sanise, Phunsholing and Downstream
7	Secondary						Doyagang	7.07	3.08	3.24	0.16	Cloudy	Phunsholing and Downstream
8	Secondary						Samdingkha	6.10	3.55	3.74	0.19	Rainy	Puna-Wangdue Valley and Downstream
9	Principal	Basin II	Punatshang Chhu	Pho Chhu	Yebesa	3.94	1.85	2.07	0.22	Rainy	Mo Chhu Valley and Downstream		
10	Secondary				Mo Chhu								
11	Principal			Punatshang Chhu	Wangdue Bridge		2.15	2.75	0.60	Light Rainy	PHPA I,PHPA II and Downstream		
12	Principal				Wangdue Rapid	7.82	2.61	3.00	0.39	Rainy			
13	Secondary				Punatshang Chhu	Turitar Sunkosh	6.68	2.95	3.10	0.15	Rainy	Downstream of Dagana and Lhamoizingkha	
14	Principal					Sunkosh Bridge		2.20	2.25	0.05	Rainy		
15	Secondary			Basin III	Manas	Mangdue Chhu	Kerabari	11.90	5.15	5.22	0.07	Light Rainy	Lhamoizingkha and Downstream
16	Principal						Mao Chhu	Sherzhong		3.90	3.90	0.00	Rainy
17	Secondary	Mangdue Chhu	Bjizam			5.35	2.35	2.50	0.15	Rainy	MHPA Dam,Power House and Downstream of Trongsa & Zhengang		
18	Principal		Dakpai Chhu			2.26	1.56	1.60	0.04	Cloudy	Downstream of Zhengang and Panbang		
19	Principal		Tingtibi			7.45	3.74	3.78	0.04	Cloudy	Downstream of Zhengang and Panbang		
20	Principal	Chamkhar Chhu	Kurjey			4.00	2.17	2.24	0.07	Cloudy	Chamkhar Valley, Zhengang and Downstream		
21	Principal		Shingkar (Benshang)				1.82	1.90	0.08	Rainy	Zhengang and Downstream		
22	Secondary	Kuri Chhu	Sumpa			7.65	3.99	4.55	0.56	Cloudy	Lhuntse Downstream,Kurizampa,KHPA and Downstream along the Kuri Chhu		
23	Secondary		Khoma	5.30	1.87	1.98	0.11	Cloudy	Kurizampa,KHPA and Downstream along the Kuri Chhu				
24	Principal		Autsho	8.48	3.94	4.60	0.66	Cloudy	Kurizampa,KHPA and Downstream along the Kuri Chhu				
25	Principal		Kurizampa	18.45	8.15	8.22	0.07	Cloudy	KHPA and Downstream along the Kuri Chhu				
26	Secondary	Kholong Chhu	Muktrirap	6.00	2.19	2.43	0.24	Cloudy	Doksum,Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu				
27	Secondary		Doksum		4.09	4.05	-0.04	Cloudy	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu				
28	Principal	Drangme Chhu	Chazam		8.45	8.55	0.10	Sunny	Downstream Settlement of Kuri-Gongri and Panbang				
29	Secondary		Omzong	6.75	2.02	2.30	0.28	Cloudy	Downstream of Kuri-Gongri and Panbang				
30	Principal		Sheri Chhu	2.58	1.58	1.60	0.02	Rainy					
31	Principal	Ngara Ama Chhu	Panbang	12.48	5.47	5.55	0.08	Cloudy	Manas and Downstream				
32	Principal		Pangzam		6.00	6.00	0.00	Cloudy	Bangtar Settlement and Downstream				
				Bangtar		2.20	2.17	-0.03	Light Rainy	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

WARNING

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

ISSUED BY: FMCR,HWRSD,NCHM