



ལྷན་པོ་རྒྱུ་ལེན་པའི་ལྷན་པོ་རྒྱུ་ལེན་པའི་ལྷན་པོ་
 ལྷན་པོ་རྒྱུ་ལེན་པའི་ལྷན་པོ་རྒྱུ་ལེན་པའི་ལྷན་པོ་
HYDROLOGY & WATER RESOURCES SERVICES DIVISION
NATIONAL CENTER FOR HYDROLOGY & METEOROLOGY
THIMPHU: BHUTAN



Status and River Level Trends:

Wednesday, September 11, 2019

Issued at: 10:00 AM

Glacier Lake Outburst Flood (GLOF) Early Warning System

1. Punatsang 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	Punatsang Chhu	Pho Chhu	Luggay Tsho		7.80	10.00	6.64	6.65	0.01	Thanza, Tenchey, Lhedri and Lunama area and Downstream of Pho Chhu and Puna-Wangdue Valley
2				Thorthormi Tsho		7.50	5.00	5.79	5.79	0.00	
3				Rapstreng Tsho		7.40	5.00	6.28	6.29	0.01	
4				Bay Tsho		7.40	5.00	6.45	6.48	0.03	
5				Thanza		7.70	8.70	NR	NR	#VALUE!	Pho Chhu Valley (Tamidanchu, Wolathang, Samdingkha, Khawajara, Shengana, Khuruthang) Puna-Wangdue Valley and Downstream
6				Tarina Wachey		8.50	10.50	6.84	6.86	0.02	
7				Dangsa		5.50	7.00	4.67	4.66	-0.01	Pho Chhu Valley (Tamidanchu, Wolathang, Samdingkha, Khawajara, Shengana, Khuruthang) Puna-Wangdue Valley and Downstream
8				Taksemakhang		7.50	8.50	5.76	5.79	0.03	
9			Tashithang		9.00	10.50	6.82	6.89	0.07	Gasa, Mo Chhu Valley, Puna-Wangdue Valley and Downstream	
10			Yebesa		5.00	7.00	2.15	2.19	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				
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	5-7 hours	4	Khuruthang Town	24 km	120 minutes	2 hours
5	Puna-Wangdue Valley	100 km	100 km	100 km	100 km		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 diastance 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	4.38	4.40	0.02	Chokortoe Pny School, Kurje Village, Wangdicholing, Chamkhar Town, Gangriting Pny School, Gyelkhar Village and Downstream settlement under Zhenqang.
2				Khagthang		5.50	6.00	4.81	4.81	0.00	
3				Kurje		5.72	3.30	5.00	2.33	2.37	
4			Jongthang		5.90	7.00	4.91	4.92	4.92	0.01	Bjizam Community, MHPA Dam, Power House and Downstream settlement of Trongsa and Zhenqang
5			Bjizam		5.52	4.20	5.50	2.59	2.66	0.07	

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	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	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	0.3km	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 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		1.90	1.90	0.00	Sunny	Thimphu Valley and Downstream		
2	Principal				Lungtenphu	2.82	1.23	1.18	-0.05	Sunny			
3	Principal				Damchu	6.00	2.82	2.78	-0.04	Cloudy			
4	Secondary			Basin I	Wang Chhu	Haa Chhu	Haa	2.60	0.99	0.97	-0.02	Cloudy	Haa and Wang Chhu Downstream
5	Principal						Pa Chhu		1.41	1.37	-0.04	Cloudy	Downstream of Paro Valley and Wang Chhu Basin
6	Principal					Amo Chhu	Dorokha		3.15	3.10	-0.05	Light Rain	Sanise, Phunsholing and Downstream
7	Secondary						Droyagang	7.07	3.24	3.16	-0.08	Light Rain	Phunsholing and Downstream
8	Secondary						Samdingkha	6.10	4.00	3.93	-0.07	Sunny	Puna-Wangdue Valley and Downstream
9	Principal	Basin II	Punatshang Chhu	Pho Chhu	Yebesa	3.94	2.13	2.18	0.05	Sunny	Mo Chhu Valley and Downstream		
10	Secondary				Mo Chhu			2.70	2.80	0.10	Sunny	PHPA I,PHPA II and Downstream	
11	Principal			Punatshang Chhu	Wangdue Bridge		7.82	3.24	3.33	0.09	Sunny		
12	Principal				Wangdue Rapid		6.68	3.35	3.40	0.05	Cloudy	Downstream of Dagana and Lhamoizingkha	
13	Secondary				Turitar Sunkosh		2.60	2.65	0.05	Cloudy			
14	Principal				Sunkosh Bridge		11.90	5.62	5.61	-0.01	Cloudy	Lhamoizingkha and Downstream	
15	Secondary			Basin III	Manas	Mao Chhu	Sherzhong		3.95	3.95	0.00	Light Rain	Gelephu Valley and Downstream
16	Principal						Bijzam	5.35	2.60	2.66	0.06	Sunny	MHPA Dam,Power House and Downstream of Trongsa & Zhemgang
17	Secondary					Mangdue Chhu	Dakpai Chhu	2.26	1.62	1.66	0.04	Partly Cloudy	Downstream of Zhemgang and Panbang
18	Principal						Tingtibi	7.45	3.86	3.93	0.07		
19	Principal	Kurjey	4.00				2.33	2.37	0.04	Chankhar Valley, Zhemgang and Downstream			
20	Principal	Chamkhar Chhu	Shingkar (Benshang)				2.13	2.10	-0.03	Zhemgang and Downstream			
21	Principal		Sumpa			7.65	4.63	4.92	0.29	Cloudy	Lhuntse Downstream,Kurizampa,KHPA and Downstream along the Kuri Chhu		
22	Secondary	Kuri Chhu	Khoma			5.30	2.20	2.28	0.08				
23	Secondary		Autsho			8.48	4.65	5.03	0.38			Partly Cloudy	Kurizampa,KHPA and Downstream along the Kuri Chhu
24	Principal		Kurizampa			18.45	8.90	9.40	0.50			Cloudy	KHPA and Downstream along the Kuri Chhu
25	Principal	Kholong Chhu	Muktirap			6.00	3.14	2.78	-0.36	Cloudy	Doksam,Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu		
26	Secondary		Drangme Chhu			Doksum		4.34	4.35	0.01	Sunny	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu	
27	Secondary			Chazam		8.95	9.25	0.30	Sunny	Downstream Settlement of Kuri-Gongri and Panbang			
28	Principal			Omzong	6.75	2.52	2.32	-0.20	Sunny	Downstream of Kuri-Gongri and Panbang			
29	Secondary			Sheri Chhu	2.58	1.65	1.62	-0.03					
30	Principal	Panbang	12.48	6.33	6.87	0.54	Light Rain	Manas and Downstream					
31	Principal	Ngara Ama Chhu	Pangzam		6.00	5.95	-0.05	Sunny	Bangtar Settlement and Downstream				
32	Principal		Bangtar		2.27	2.34	0.07	Cloudy	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

MISSING

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

ISSUED BY: FMCR,HWRSD,NCHM