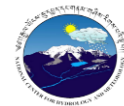




རྒྱུ་ཕྱུང་རྒྱུ་ལ་དང་རྒྱུ་ལོན་སྐྱོད་ལེན་ལྷན་ཁག་ཏུ་གྲྀ་ཚན།  
 རྒྱུ་ལོན་སྐྱོད་དང་གནམ་གཤིས་རྒྱུ་ལོན་སྐྱོད་ལྷན་ཁག་ཏུ་གྲྀ་ཚན།  
**HYDROLOGY & WATER RESOURCES SERVICES DIVISION**  
**NATIONAL CENTER FOR HYDROLOGY & METEOROLOGY**  
**THIMPHU: BBUTAN**



Status and River Level Trends:

Sunday, September 29, 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	6.52	6.51	-0.01	Thanza, Tenchey, Lhedri and Lunam area and Downstream of Pho Chhu and Puna-Wangdue Valley
2				Thorthormi Tsho		7.50	5.00	5.74	5.74	0.00	
3				Rapsteng Tsho		7.40	5.00	6.21	6.19	-0.02	
4				Bay Tsho		7.40	5.00	6.30	6.22	-0.08	
5				Thanza		7.70	8.70	6.57	6.54	-0.03	
6				Tarina Wachey		8.50	10.50	6.72	6.71	-0.01	
7				Dangsa		5.50	7.00	4.55	4.48	-0.07	
8				Taksemakhang		7.50	8.50	5.64	5.61	-0.03	
9			Tashithang		9.00	10.50	6.80	6.51	-0.29	Pho Chhu Valley (Tamidanchu, Wolathang, Samdingkha, Khawajara, Shengana, Khuruthang) Puna-Wangdue Valley and Downstream	
10			Yebesa		5.00	7.00	2.29	2.09	-0.20		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				
SI Nos	Name of Place Downstream	Approx. Distance from Sensor (Bay Tsho)	Approx. Distance from Sensor (Rapsteng 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	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	4.24	4.20	-0.04	Chokortoe Pry School, Kurjey Village, Wangdicholing, Chamkhar Town, Gangriting Pry School, Gyelkhar Village and Downstream settlement under Zhenjang.	
2				Khagthang		5.50	6.00	4.73	4.73	0.00		
3				Kurjey		5.72	3.30	5.00	2.29	2.26		-0.03
4				Jongthang		5.90	7.00	4.79	4.74	-0.05		
5			Mangdue Chhu		Bjizam		5.52	4.20	5.50	2.56	2.48	-0.08

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	0.3km	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		1.92	1.91	-0.01	Cloudy	Thimphu Valley and Downstream		
2	Principal				Lungtenphu	2.82	1.31	1.32	0.01	Cloudy			
3	Principal				Damchu	6.00	2.82	2.90	0.08	Cloudy			
4	Secondary			Basin II	Punatshang Chhu	Haa Chhu	Haa	2.60	1.00	1.13	0.13	Cloudy	Haa and Wang Chhu Downstream
5	Principal						Pa Chhu	Bondlay	1.37	1.43	0.06	Cloudy	Downstream of Paro Valley and Wang Chhu Basin
6	Principal					Amo Chhu	Dorokha	3.25	3.30	0.05	Cloudy	Sanise, Phunsholing and Downstream	
7	Secondary						Droyagang	7.07	3.33	3.43	0.10	Cloudy	Phunsholing and Downstream
8	Secondary						Samdingkha	6.10	3.88	3.70	-0.18	Sunny	Puna-Wangdue Valley and Downstream
9	Principal	Basin III	Manas	Mo Chhu	Yebesa	3.94	2.23	2.05	-0.18	Cloudy	Mo Chhu Valley and Downstream		
10	Secondary				Punatshang Chhu	Wangdue Bridge		2.95	2.70	-0.25	Cloudy	PHPA I,PHPA II and Downstream	
11	Principal			Wangdue Rapid		7.82	3.35	2.98	-0.37	Cloudy			
12	Principal			Turitar Sunkosh		6.68	3.55	3.25	-0.30	Cloudy	Downstream of Dagana and Lhamoizingkha		
13	Secondary			Mao Chhu	Sunkosh Bridge		2.70	2.45	-0.25	Cloudy	Lhamoizingkha and Downstream		
14	Principal				Kerabari	11.90	5.62	5.52	-0.10	Cloudy			
15	Secondary				Sherzhong		4.00	4.00	0.00	Cloudy		Gelephu Valley and Downstream	
16	Principal			Basin III	Manas	Mangdue Chhu	Bijam	5.35	2.57	2.49	-0.08	Cloudy	MHPA Dam,Power House and Downstream of Trongsa & Zhemgang
17	Secondary						Dakpai Chhu	2.26	0.68	0.65	-0.03	Cloudy	Downstream of Zhemgang and Panbang
18	Principal						Tingtibi	7.45	4.05	3.99	-0.06	Cloudy	Chankhar Valley, Zhemgang and Downstream
19	Principal	Kurjey	4.00			2.29	2.26	-0.03	Cloudy				
20	Principal	Chamkhar Chhu	Shingkar (Benshang)				2.00	2.07	0.07	Cloudy	Zhemgang and Downstream		
21	Principal		Sumpa			7.65	4.30	4.30	0.00	Cloudy	Lhuntse Downstream,Kurizampa,KHPA and Downstream along the Kuri Chhu		
22	Secondary	Kuri Chhu	Khoma			5.30	2.10	1.95	-0.15	Cloudy			
23	Secondary		Autsho			8.48	4.40	4.33	-0.07	Cloudy		Kurizampa,KHPA and Downstream along the Kuri Chhu	
24	Principal		Kurizampa			18.45	8.84	8.48	-0.36	Cloudy	KHPA and Downstream along the Kuri Chhu		
25	Principal	Kholong Chhu	Muktrirap			6.00	2.60	2.45	-0.15	Light Rain	Doksum,Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu		
26	Secondary		Doksum				4.32	4.30	-0.02	Cloudy	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu		
27	Secondary	Drangme Chhu	Chazam				9.00	8.90	-0.10	Sunny	Downstream Settlement of Kuri-Gongri and Panbang		
28	Principal		Omzong			6.75	2.38	2.49	0.11	Cloudy			
29	Secondary		Sheri Chhu			2.58	1.76	1.78	0.02	Cloudy			
30	Principal		Panbang			12.48	6.43	5.97	-0.46	Cloudy			
31	Principal	Ngara Ama Chhu	Pangzam				6.20	6.30	0.10	Sunny	Bangtar Settlement and Downstream		
32	Principal		Bangtar				2.37	2.38	0.01	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

NR

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

ISSUED BY: FMCR,HWRSD,NCHM