



རྒྱུ་ཕྱེད་རྒྱུ་ལ་དང་རྒྱུ་ལོ་ཐོན་སྐྱོད་ཞབས་ཏུ་གྲུ་ཚོན།
 རྒྱུ་ལོ་དང་རྒྱུ་ཕྱེད་དང་གནམ་གཤིས་རྒྱུ་ལོ་ལྟེ་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

Tuesday, November 5, 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	6.30	0.01	Thanza, Tenchey, Lhedi and Lunana area and Downstream of Pho Chhu and Puna-Wangdue Valley
2				Thorhormi Tsho		7.50	5.00	5.56	5.55	0.01	
3				Rapstreng Tsho		7.40	5.00	6.03	6.02	0.01	
4				Bay Tsho		7.40	5.00	6.20	6.19	0.01	
5				Thanza		7.70	8.70	6.31	6.30	0.01	
6				Tarina Wachey		8.50	10.50	NR	NR	#VALUE!	
7			Mo Chhu	Dangsa		5.50	7.00	3.75	3.74	0.01	Pho Chhu Valley (Tamdamchu, Wolathang, Samdingkha, Khawajara, Shengana, Khuruthang) Puna-Wangdue Valley and Downstream
8				Taksemakhang		7.50	8.50	NR	NR	#VALUE!	
9				Tashithang		9.00	10.50	NR	NR	#VALUE!	
10				Yebesa		5.00	7.00	1.44	1.46	-0.02	

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	3.81	3.80	-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	4.48	4.47	-0.01	
3				Kurjey		5.72	3.30	5.00	1.73	1.72	
4			Mangdue Chhu	Jongthang		5.90	7.00	NR	4.02	#VALUE!	Bjizam Community, MHPA Dam, Power House and Downstream settlement of Trongsa and Zhemgang
5				Bjizam		5.52	4.20	5.50	1.87	1.86	

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		1.58	NR	#VALUE!	cloudy	Thimphu Valley and Downstream			
2	Principal				Lungtenphu	2.82	0.65	0.64	-0.01	cloudy				
3	Principal				Damechu	6.00	2.25	2.25	0.00	Sunny	Chukha and Downstream			
4	Secondary				Haa Chhu	Haa	2.60	0.66	0.67	0.01	partly cloudy	Haa and Wang Chhu Downstream		
5	Secondary				Pa Chhu	Bonday		0.94	0.95	0.01	Clear Weather	Downstream of Paro Valley and Wang Chhu Basin		
6	Principal				Amo Chhu	Dorokha		2.55	2.55	0.00	Sunny	Samtse, Phuntsholing and Downstream		
7	Principal				Doyagang		7.07	2.51	2.50	-0.01	Sunny	Phunsholing and Downstream		
8	Secondary	Basin II	Punatshang Chhu	Pho Chhu	Samdinkha	6.10	2.82	2.80	-0.02	cloudy	Puna-Wangdue Valley and Downstream			
9	Principal				Mo Chhu	Yebesa	3.94	1.41	1.40	-0.01	cloudy	Mo Chhu Valley and Downstream		
10	Secondary				Punatshang Chhu	Wangdue Bridge			1.15	1.10	-0.05	cloudy	PHPA I,PHPA II and Downstream	
11	Principal					Wangdue Rapid			7.82	1.58	1.57	-0.01		cloudy
12	Principal					Turitar Sunkosh			6.68	2.10	2.10	0.00	Sunny	Downstream of Dugana and Lhamoizinkha
13	Secondary					Sunkosh Bridge				1.35	1.35	0.00		
14	Principal				Kerabari			11.90	4.06	4.06	0.00	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	Bijzam	5.35	1.89	1.88	-0.01	partly cloudy	MHPA Dam,Power House and Downstream of Trongsa & Zhemgang
17	Secondary							Dakpai Chhu	2.26	1.34	1.34	0.00		
18	Principal	Tingtibi	7.45	3.09				3.08	-0.01	Sunny				
19	Principal	Chamkhar Chhu	Kurjey	4.00				1.73	1.73	0.00	cloudy	Chamkhar Valley, Zhemgang and Downstream		
20	Principal		Shingkar						1.54	1.53	-0.01	Sunny	Zhemgang and Downstream	
21	Principal	Kuri Chhu	Sumpa	7.65				3.25	3.25	0.00	Sunny	Lhuntse Downstream,Kurizampa,KHPA and Downstream along the Kuri Chhu		
22	Secondary		Khoma	5.30				1.44	1.45	0.01				
23	Secondary		Autsho	8.48				3.13	3.13	0.00	cloudy with sunny	Kurizampa,KHPA and Downstream along the Kuri Chhu		
24	Principal		Kurizampa	18.45				7.12	7.11	-0.01	Sunny	KHPA and Downstream along the Kuri Chhu		
25	Principal	Kholong Chhu	Muktirap	6.00				1.72	1.73	0.01	cloudy	Doksum,Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu		
26	Principal		Doksum						3.28	3.26	-0.02	Sunny	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu	
27	Secondary		Chazam						7.55	7.55	0.00	Sunny	Downstream Settlement of Kuri-Gongri and Panbang	
28	Principal	Drangme Chhu	Ozorong	6.75	1.42	1.40	-0.02		Downstream of Kuri-Gongri and Panbang					
29	Secondary		Sheri Chhu	2.58	1.40	1.40	0.00	Sunny						
30	Principal		Panbang	12.48	4.44	4.41	-0.03	clear Weather	Manas and Downstream					
31	Principal	Ngara Ama Chhu	Pangzam			5.65	5.60	-0.05	Sunny	Bangtar Settlement and Downstream				
32	Principal		Bangtar			1.88	1.94	0.06	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