



རྒྱུ་ཕྱོད་རྒྱུ་ལ་དང་རྒྱུ་ལ་ཐོན་སྐྱོད་ཞབས་ཏུ་གྲུ་ཚན།
 རྒྱུ་ལོངས་རྒྱུ་ཕྱོད་དང་གནམ་གཤིས་རྒྱུ་ལ་འབྲེ་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

Thursday, October 31, 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	6.31	0.00	Thanza, Tenchey, Lhedi and Lunana area and Downstream of Pho Chhu and Puna-Wangdue Valley
2				Thorhormi Tsho		7.50	5.00	5.58	5.58	0.00	
3				Rapstreng Tsho		7.40	5.00	6.04	6.04	0.00	
4				Bay Tsho		7.40	5.00	6.26	6.22	0.04	
5				Thanza		7.70	8.70	6.33	6.32	0.01	
6				Tarina Wachey		8.50	10.50	6.51	6.50	0.01	
7			Mo Chhu	Dangsa		5.50	7.00	3.80	3.79	0.01	Pho Chhu Valley (Tamidamchu, Wolathang, Samdingkha, Khawajara, Shengana, Khuruthang) Puna-Wangdue Valley and Downstream
8				Taksemakhang		7.50	8.50	5.36	5.35	0.01	
9				Tashithang		9.00	10.50	5.40	5.38	0.02	
10				Yebesa		5.00	7.00	1.51	1.47	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	5-7 hours	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 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	3.84	3.83	-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	4.50	4.50	0.00	
3				Kurjey		5.72	3.30	5.00	1.78	1.78	
4			Mangdue Chhu	Jongthang		5.90	7.00	NR	4.08	#VALUE!	Bjizam Community, MHPA Dam, Power House and Downstream settlement of Trongsa and Zhemgang
5				Bjizam		5.52	4.20	5.50	1.91	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	1.61	-0.01	Sunny	Thimphu Valley and Downstream		
2	Principal				Lungtenphu	2.82	0.68	0.68	0.00	Sunny			
3	Principal					Damchu	6.00	2.30	2.29	-0.01	Sunny	Chukha and Downstream	
4	Secondary					Haa Chhu	2.60	0.66	0.69	0.03	Sunny	Haa and Wang Chhu Downstream	
5	Secondary					Pa Chhu		0.98	0.97	-0.01	Sunny	Downstream of Paro Valley and Wang Chhu Basin	
6	Principal					Amo Chhu		2.60	2.60	0.00	Sunny	Samtse, Phunsholing and Downstream	
7	Principal						Dorokha		2.60	2.58	-0.02	Sunny	Phunsholing and Downstream
8	Secondary					Pho Chhu	Samdingkha	6.10	2.89	2.85	-0.04	Sunny	Puna-Wangdue Valley and Downstream
9	Principal					Mo Chhu	Yebesa	3.94	1.46	1.45	-0.01	Sunny	Mo Chhu Valley and Downstream
10	Secondary			Basin II	Punatshang Chhu	Punatshang Chhu	Wangdue Bridge		1.20	1.15	-0.05	Sunny	PHPA I,PHPA II and Downstream
11	Principal						Wangdue Rapid	7.82	1.68	1.66	-0.02	Sunny	
12	Principal						Turitar Sunkosh	6.68	2.20	2.20	0.00	Sunny	
13	Secondary						Sunkosh Bridge		1.50	1.45	-0.05	clear	
14	Principal						Kerabari	11.90	4.20	4.17	-0.03	Sunny	
15	Secondary	Mao Chhu	Sherzhong				3.70	3.75	0.05	Sunny	Gelephu Valley and Downstream		
16	Principal					Bizam	5.35	1.92	1.91	-0.01	Sunny	MHPA Dam,Power House and Downstream of Trongsa & Zhengang	
17	Secondary					Mangdue Chhu	Dakpai Chhu	2.26	1.37	1.36	-0.01	Sunny	Downstream of Zhmgang and Panbang
18	Principal				Tingtibi	7.45	3.13	3.12	-0.01	Sunny	Chamkhar Valley, Zhengang and Downstream		
19	Principal			Chamkhar Chhu	Kurjey	4.00	1.79	1.78	-0.01	Sunny	Chamkhar Valley, Zhengang and Downstream		
20	Principal				Shingkar		1.60	1.60	0.00	Sunny	Zhengang and Downstream		
21	Principal	Basin III	Manas	Kuri Chhu	Sumpa	7.65	3.34	3.31	-0.03	Sunny	Lhunse Downstream,Kurizampa,KHPA and Downstream along the Kuri Chhu		
22	Secondary				Khoma	5.30	1.50	1.50	0.00	Sunny	Kurizampa,KHPA and Downstream along the Kuri Chhu		
23	Secondary				Autsho	8.48	3.23	3.21	-0.02	Sunny	KHPA and Downstream along the Kuri Chhu		
24	Principal				Kurizampa	18.45	7.25	7.22	-0.03	Sunny	KHPA and Downstream along the Kuri Chhu		
25	Principal					Kholong Chhu	Muktirap	6.00	1.79	1.77	-0.02	Sunny	Doksum,Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
26	Principal						Doksum		3.32	3.32	0.00	Sunny	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
27	Secondary					Drangme Chhu	Chazam		7.70	7.75	0.05	Sunny	Downstream Settlement of Kuri-Gongri and Panbang
28	Principal						Ozorong	6.75	1.46	1.42	-0.04	Sunny	Downstream of Kuri-Gongri and Panbang
29	Secondary						Sheri Chhu	2.58	1.42	1.41	-0.01	Sunny	Manas and Downstream
30	Principal						Panbang	12.48	4.53	4.53	0.00	Sunny	Bangtar Settlement and Downstream
31	Principal					Ngara Ama Chhu	Pangzam		5.65	5.65	0.00	Sunny	Downstream of Bangtar Settlement
32	Principal						Bangtar		1.93	1.95	0.02	Sunny	

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