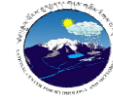




ཐུང་ཕྱེད་རྒྱུ་ལ་དང་ཐུང་ཐོན་སྐྱོད་ཞབས་ཏེ་གཞུང་ཚན།
 རྒྱལ་ཡོངས་ཐུང་ཕྱེད་དང་གནམ་གཤིས་རྒྱུ་ལ་འབྲེལ།

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

Monday, October 28, 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	6.33	6.32	0.01	Thanza,Tenchey,Lhedi and Lunana area and Downstream of Pho Chhu and Puna-Wangdue Valley
2				Thorhormi Tsho		7.50	5.00	5.59	5.59	0.00	
3				Rapstreng Tsho		7.40	5.00	6.04	6.03	0.01	
4				Bay Tsho		7.40	5.00	6.20	6.21	-0.01	
5				Thanza		7.70	8.70	6.33	6.32	0.01	
6				Tarina Wachey		8.50	10.50	6.53	6.52	0.01	
7			Mo Chhu	Dangsa		5.50	7.00	3.85	3.83	0.02	Pho Chhu Valley (Tamidamchu, Wolathang, Samidingkha, Khawajara, Shengana, Khuruthang) Puna-Wangdue Valley and Downstream
8				Taksemakhang		7.50	8.50	5.36	5.36	0.00	
9				Tashithang		9.00	10.50	5.51	5.46	0.05	
10				Yebesa		5.00	7.00	1.54	1.56	-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	3.87	3.84	-0.03	Chokortoe Pry School,Kurjey Village,Wangdicholing,Chamkhar Town,Gangrithing Pry School,Gyelkhar Village and Downstream settlement under Zhemgang.
2				Khagthang		5.50	6.00	4.53	4.51	-0.02	
3				Kurjey		5.72	3.30	5.00	1.83	1.81	
4			Mangdue Chhu	Jongthang		5.90	7.00	4.15	4.12	-0.03	Bjizam Community,MHPA Dam, Power House and Downstream settlement of Trongsa and Zhemgang
5				Bjizam		5.52	4.20	5.50	1.96	1.95	

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		NR	1.63	#VALUE!	Sunny	Thimphu Valley and Downstream		
2	Principal				Lungtenphu	2.82	0.75	0.73	-0.02	Sunny			
3	Principal					Damchu	6.00	2.33	2.32	-0.01	Partly Sunny	Chukha and Downstream	
4	Secondary					Haa Chhu	2.60	0.69	0.64	-0.05	Partly Sunny	Haa and Wang Chhu Downstream	
5	Secondary					Pa Chhu			1.01	1.00	-0.01	Sunny	Downstream of Paro Valley and Wang Chhu Basin
6	Principal					Amo Chhu			2.70	2.65	-0.05	Sunny	Samtse, Phunsholing and Downstream
7	Principal						Doyagang	7.07	2.66	2.64	-0.02	Sunny	Phunsholing and Downstream
8	Secondary	Basin II	Punatshang Chhu	Pho Chhu	Samdinkha	6.10	3.04	2.95	-0.09	Cloudy	Puna-Wangdue Valley and Downstream		
9	Principal				Mo Chhu	Yebesa	3.94	1.51	1.49	-0.02	Sunny	Mo Chhu Valley and Downstream	
10	Secondary								1.35	1.25	-0.10	Cloudy	PHPA I,PHPA II and Downstream
11	Principal								7.82	1.79	1.75	-0.04	
12	Principal					Punatshang Chhu	Turitar Sunkosh	6.68	2.30	2.25	-0.05	Sunny	Downstream of Dagana and Lhamoizingkha
13	Secondary						Sunkosh Bridge			1.65	1.65	0.00	
14	Principal						Kerabari	11.90	4.32	4.28	-0.04	Sunny	Lhamoizingkha and Downstream
15	Secondary			Mao Chhu	Sherzhong		3.70	3.75	0.05	Sunny	Gelephu Valley and Downstream		
16	Principal				Bizam	5.35	1.97	1.95	-0.02	Sunny	MHPA Dam,Power House and Downstream of Trongsa & Zhemgang		
17	Secondary	Basin III	Manas	Mangdue Chhu	Dakpai Chhu	2.26	1.39	1.38	-0.01	Partly Sunny	Downstream of Zhemgang and Panbang		
18	Principal						Tingtibi	7.45	3.15			3.16	0.01
19	Principal					Chamkhar Chhu	Kurjey	4.00	1.84	1.81	-0.03	Sunny	Chamkhar Valley, Zhemgang and Downstream
20	Principal						Shingkhar			1.65	1.64	-0.01	Sunny
21	Principal					Kuri Chhu	Sumpa	7.65	3.50	3.42	-0.08	Sunny	Lhuntse Downstream,Kurizampa,KHPA and Downstream along the Kuri Chhu
22	Secondary						Khoma	5.30	1.60	1.55	-0.05		
23	Secondary						Autsho	8.48	3.37	3.31	-0.06		
24	Principal						Kurizampa	18.45	7.44	7.34	-0.10	Sunny	KHPA and Downstream along the Kuri Chhu
25	Principal					Kholong Chhu	Muktirap	6.00	1.91	1.84	-0.07	Sunny	Doksum,Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
26	Principal						Doksum		3.30	3.29	-0.01	Sunny	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
27	Secondary					Drangme Chhu	Chazam		7.90	7.75	-0.15	Sunny	Downstream Settlement of Kuri-Gongri and Panbang
28	Principal						Ozorong	6.75	1.60	1.55	-0.05	Sunny	Downstream of Kuri-Gongri and Panbang
29	Secondary			Sheri Chhu	2.58		1.47	1.44	-0.03				
30	Principal				Panbang	12.48	4.73	4.65	-0.08	Sunny	Manas and Downstream		
31	Principal			Ngara Ama Chhu	Pangzam		5.70	5.65	-0.05	Sunny	Bangtar Settlement and Downstream		
32	Principal				Bangtar		2.00	1.98	-0.02	Sunny	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
ALARM

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

ISSUED BY: FMCR,HWRSD,NCHM