

ह्:५५५-ऱ्या:य:५८-हुतै:र्वतःश्चे५:लयशःर्नेगःश्चे:र्वता क्तुत्यःर्वेदस्यः हुः द्धुनः द्वाववयः मृत्येशः देवाः यदेः श्लेषा

HYDROLOGY & WATER RESOURCES SERVICES DIVISION NATIONAL CENTER FOR HYDROLOGY & METEOROLOGY THIMPHU: BHUTAN



Status and River Level Trends: Glacier Lake Outbrust Flood (GLOF) Early Warning System

Tuesday, October 29, 2019

Issued at: 10:00 AM

1. Punatshang Chhu Sub Basin

SI No.	River Basin Number	Basin Name	Name of River	Station Name	Highest Water Level Recorded	Alert Water Level	Alerm Water Level		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				Luggay Tsho		7.80	10.00	6.32	6.32	0.00	
2			Pho Chhu	Thorthormi Tsho		7.50	5.00	5.59	5.59	0.00	TI T I I I I I I I I I I I I I I I I I
3				Rapstreng Tsho		7.40	5.00	6.03	6.04	-0.01	Thanza, Tenchey, Lhedi and Lunana area and Downstream of Pho Chhu and Puna- Wangdue Valley
4				Bay Tsho		7.40	5.00	6.21	6.22	-0.01	,
5	Basin II	Punatshang		Thanza		7.70	8.70	6.32	6.32	0.00	
6	Dasiii II	Chhu		Tarina Wachey		8.50	10.50	6.52	6.51	0.01	Pho Chhu Valley (Tamidamchu, Wolathang, Samidingkha, Khawajara, Shengana,
7				Dangsa		5.50	7.00	3.83	3.81	0.02	Khuruthang) Puna-Wangdue Valley and Downstream
8				Taksemakhang		7.50	8.50	5.36	5.35	0.01	
9			Mo Chhu	Tashithang		9.00	10.50	5.46	5.43	0.03	Gasa,Mo Chhu Valley,Puna-Wangdue Valley and Downstream
10				Yebesa		5.00	7.00	1.56	1.55	0.01	

	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.	Approx. Distance	Approx. Tme	SI Nos	Name of Place	Approx.	Approx. Time for	Approx. Tme available for Evacuation		
1	Thanza	1.5 km	2.8 km	3.3 km	6.7 km		1	Wolathang	5.8 km	30 minutes	30 minutes		
2	Tenchey	2.9 km	4.1 km	4.6 km	8.2 km	20-60	2	Samdingkha	12.0 km	55 minutes	55 minutes		
3	Tshojo	8.1 km	10.0 km	10.5 km	13.8 km	minutes	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		
								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 Outbrust Flood (GLOF) & Rainstorm Flood Early Warning System.
2. Chamkhar Chhu and Mangdue Chhu Sub Basin

SI No.	River Basin Number	Basin Name	Name of River	Station Name	Highest Water Level Recorded (m)	Alert Water Level (m)	Alerm Water Level (m)		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	3.85	0.01	
2				Khagthang		5.50	6.00	4.51	4.51	0.00	Chokortoe Pry School, Kurjey Village, Wangdicholing, Chamkhar Town, Gangrithng Pry School, Gyelkhar Village and Downstream settlement under Zhemgang.
3	Basin III			Kurjey	5.72	3.30	5.00	1.81	1.80	-0.01	School, Systems 1 mage and Downsteam Settlement under Entengang.
4			Mangdue Chhu	Jongthang		5.90	7.00	4.12	NR	#VALUE!	Bjizam Community,MHPA Dam, Power House and Downstream settlement of Trongsa
5	1			Biizam	5.52	4.20	5.50	1.95	1.92	-0.03	and Zhemgang

				Chhu Sub Basin tion of Flood at th	e Tshampa AWLS	Approximate Lead Time for Evacuation of Mangdue Chhu Sub Basin 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						SI 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

SI 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				Dodena		1.63	1.62	-0.01	Partly Sunny	Thimphu Valley and Downstream
2	Principal			Thim Chhu	Lungtenphu	2.82	0.73	0.71	-0.02	Partly Sunny	innipita vancy and Downsteam
3	Principal				Damchu	6.00	2.32	2.31	-0.01	Sunny	Chukha and Downstream
4	Secondary	Basin 1	Wang Chhu	Haa Chhu	Haa	2.60	0.64	0.69	0.05	cloudy	Haa and Wang Chhu Downstream
5	Secondary			Pa Chhu	Bonday		1.00	0.98	-0.02	Sunny	Downstream of Paro Valley and Wang Chhu Basin
6	Principal			Amo Chhu	Dorokha		2.65	2.65	0.00	Sunny	Samtse, Phuntsholing and Downstream
7	Principal			Amo Ciniu	Doyagang	7.07	2.64	2.62	-0.02	Sunny	Phunsholing and Downstream
8	Secondary			Pho Chhu	Samdingkha	6.10	2.95	2.92	-0.03	Sunny	Puna-Wangdue Valley and Downstream
9	Principal		Punatshang Chhu	Mo Chhu	Yebesa	3.94	1.49	1.47	-0.02	Sunny	Mo Chhu Valley and Downstream
10	Secondary				Wangdue Bridge		1.25	1.25	0.00	clear	PHPA LPHPA II and Downstream
11	Principal	Basin II			Wangdue Rapid	7.82	1.75	1.71	-0.04	Sunny	rnrA1,rnrA11 and Downstram
12	Principal	Basin II			Turitar Sunkosh	6.68	2.25	2.25	0.00	Sunny	Downstream of Dagana and Lhamoizingkha
13	Secondary				Sunkosh Bridge		1.65	1.55	-0.10	Cloudy	Downstrain of Dagana and Litanioizingkia
14	Principal				Kerabari	11.90	4.28	4.23	-0.05	Sunny	Lhamoizingkha and Downstream
15	Secondary			Mao Chhu	Sherzhong		3.75	3.75	0.00	Sunny	Gelelephu Valley and Downstream
16	Principal				Bjizam	5.35	1.95	1.93	-0.02	Sunny	MHPA Dam, Power House and Downstream of Trongsa & Zhemgang
17	Secondary			Mangdue Chhu	Dakpai Chhu	2.26	1.38	1.38	0.00	Sunny	Downstream of Zhmgang and Panbang
18	Principal				Tingtibi	7.45	3.16	3.14	-0.02		
19	Principal			Chamkhar Chhu	Kurjey	4.00	1.81	1.80	-0.01	Sunny	Chamkhar Valley, Zhemgang and Downstream
20	Principal				Shingkhar		1.64	1.61	-0.03	Sunny	Zhemgang and Downstream
21	Principal				Sumpa	7.65	3.42	3.40	-0.02	Sunny	Lhuster Development Visioners VIIDA and Development the Vision Chlor
22	Secondary			Kuri Chhu	Khoma	5.30	1.55	1.52	-0.03	Sumy	Lhuntse Downstream, Kurizampa, KHPA and Downstream along the Kuri Chhu
23	Secondary		Manas		Autsho	8.48	3.31	3.26	-0.05	cloudy with sunny	Kurizampa,KHPA and Downstream along the Kuri Chhu
24	Principal	Basin 111			Kurizampa	18.45	7.34	7.27	-0.07	Sunny	KHPA and Downstream along the Kuri Chhu
25	Principal			Kholong Chhu	Muktirap	6.00	1.84	1.81	-0.03	cloudy	Doksum, Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
26	Principal				Doksum		3.29	3.28	-0.01	Sunny	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
27	Secondary				Chazam		7.75	7.70	-0.05	Sunny	Downstream Settlement of Kuri-Gongri and Panbang
28	Principal			Drangme Chhu	Ozorong	6.75	1.55	1.50	-0.05	Sunny	Double de la Company de la Com
29	Secondary				Sheri Chhu	2.58	1.44	1.42	-0.02	Suilly	Downstream of Kuri-Gongri and Panbang
30	Principal				Panbang	12.48	4.65	4.58	-0.07	Sunny	Manas and Downstream
31	Principal			Ngara Ama Chhu	Pangzam		5.65	5.65	0.00	Sunny	Bangtar Settlement and Downstream
32	Principal				Bangtar		1.98	1.96	-0.02	Sunny	Downstream of Bangtar Settlement

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

NOTE

ISSUED BY: FMCR,HWRSD,NCHM