

क्:रश्चर:द्रवा:च:र्-:क्वेद:ब्रॅब्र:क्वेर:ब्रव्य:ह्रेव:ब्रें:कवा म्रील लूटका की टीनिट टिनाविका गीनिका स्था निवास हो। या

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



Status and River Level Trends:

Wednesday, September 04, 2019

10:00 AM Issued at:

Glacier Lake Outbrust Flood (GLOF) Early Warning System

1. Punatshang Chhu Sub Basin

SI Nos.	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 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				Luggay Tsho		7.80	10.00	6.65	6.64	-0.01									
2				Thorthormi Tsho		7.50	5.00	5.81	5.81	0.00									
3				Rapstreng Tsho		7.40	5.00	6.29	6.30	0.01	Thanza, Tenchey, Lhedi and Lunana area and Downstream of Pho Chhu and Puna-Wangdue Valley								
4			Pho Chhu	Bay Tsho		7.40	5.00	6.46	6.45	-0.01	İ								
5	Basin II	Punatshang			Thanza		7.70	8.70	NR	6.40	#VALUE!								
6	Duam ii	Chhu							l		I	1	Tarina Wachey		8.50	10.50	6.87	6.89	0.02
7				Dangsa		5.50	7.00	4.85	4.78	-0.07	Khuruthang) Puna-Wangdue Valley and Downstream								
8			Mo Chhu	Taksemakhang		7.50	8.50	5.76	5.87	0.11									
9				Tashithang		9.00	10.50	6.99	7.02	0.03	Gasa,Mo Chhu Valley,Puna-Wangdue Valley and Downstream								
10				Yebesa		5.00	7.00	2.21	2.17	-0.04									

	Approximate	Lead Time for E	vacuation after	the detection of flood at	Four lake Sensor		Approximate Lead Time for Evacuation after the detection of flood at Dangsa Sensor						
Sl Nos		from Sensor (Bay	Approx. Distance from Sensor (Rapstreng Tsho)	Approx. Distance from Sensor (Thorthormi Tsho)	Approx. Distance from Sensor (Luggey Tsho)	Approx. Tme 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. 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	i	4	Khuruthang Town	24 km	120 minutes	2 hours		
5	Puna-Wangdue Valley	100 km	100 km	100 km	100 km	5-7 hours	5	Bajo Town	30.5 km	145 minutes	2 hours 25 minutes		
							- 6	Wanadua Pridas	22 lcm	150 minutes	2 house 20 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 Nos.	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 AM Yesterday		Water Level Rise (+)/Fall (-) in meters during last 24 Hrs ending at 9 AM Today	Downstream Settlement
1				Tshampa		5.00	6.50	NR	4.36	#VALUE!	
2			Chamkhar Chhu	Khagthang		5.50	6.00	4.85	4.80	-0.05	Chokortoe Pry School, Kurjey Village, Wangdicholing, Chamkhar Town, Gangrithng Pry School, Gyelkhar Village and Downstream settlement under Zhemgang.
3	Basin III	Manas		Kurjey	5.72	3.30	5.00	2.50	2.35	-0.15	Servote Jennia 4 mage and Downsteam settement under Zarengang.
4			Mangdue Chhu	Jongthang		5.90	7.00	5.04	5.01	-0.03	Bjizam Community,MHPA Dam, Power House and Downstream settlement of Trongsa
5	Ì		Mangaue Chiu	Riizam	5.52	4.20	5.50	2.83	2.61	-0.22	and Zhemgang

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	Si Nos Downstream Approx. Distance from the Tshampa AWLS Approx. Cambative Distance from Time Tshampa AWLS				SI Nos	Name of Place Downstream	Approx.Distance from the 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	Wangdicholling	5.7 km	42.9 km	2600 m	79 minutes									
5	Bumthang	1 km	43.9 km	2562 m	83 minutes									
6	Congrithong PS	0.3km	44.2 km	2552 m	\$4 minutes	1								

3. River Level Status of Gauging Station

5. Kivei	· Level Status o	n Gauging Su	ation								
SI 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				Dodena		1.87	1.89	0.02	cloudy	Thimphu Valley and Downstream
2	Principal			Thim Chhu	Lungtenphu	2.82	1.18	1.22	0.04	cloudy	Inniplia valley and Dovinteam
3	Principal				Damchu	6.00	2.84	2.88	0.04	cloudy	Chukha and Downstream
4	Secondary	Basin l	Wang Chhu	Haa Chhu	Haa	2.60	1.00	1.12	0.12	L/Rainy	Haa and Wang Chhu Downstream
5	Principal			Pa Chhu	Bonday		1.48	1.53	0.05	L/Rainy	Downstream of Paro Valley and Wang Chhu Basin
6	Principal			Amo Chhu	Dorokha		3.25	3.25	0.00	cloudy	Samtse, Phuntsholing and Downstream
7	Secondary			Anio Ciniu	Droyagang	7.07	3.38	3.35	-0.03		Phunsholing and Downstream
8	Secondary			Pho Chhu	Samdingkha	6.10	4.30	4.25	-0.05	cloudy	Puna-Wangdue Valley and Downstream
9	Principal			Mo Chhu	Yebesa	3.94	2.18	2.15	-0.03	Rainny	Mo Chhu Valley and Downstream
10	Secondary			Punatshang Chhu	Wangdue Bridge		2.90	2.75	-0.15	cloudy	PHPA LPHPA II and Downstream
11	Principal	Basin II	Punatshang Chhu		Wangdue Rapid	7.82	3.40	3.29	-0.11	cloudy	THEA I, THEA II and Downsacani
12	Principal	Dasin n	Punatsnang Cnnu		Turitar Sunkosh	6.68	3.35	3.45	0.10	cloudy	Downstream of Dagana and Lhamoizingkha
13	Secondary				Sunkosh Bridge		2.50	2.60	0.10	cloudy	Dominical of Dagain and Lindon Ingelia
14	Principal				Kerabari	11.90	5.54	5.58	0.04	cloudy	Lhamoizingkha and Downstream
15	Secondary			Mao Chhu	Sherzhong		3.95	3.95	0.00	cloudy	Gelelephu Valley and Downstream
16	Principal				Bjizam	5.35	2.84	2.62	-0.22		MHPA Dam, Power House and Downstream of Trongsa & Zhemgang
17	Secondary			Mangdue Chhu Chamkhar Chhu Kuri Chhu Kuri Chhu Ass	Dakpai Chhu	2.26	1.65	1.62	-0.03	cloudy	Downstream of Zhmgang and Panbang
18	Principal				Tingtibi	7.45	4.02	3.74	-0.28	cloudy	Downsteam of Zinigang and Landang
19	Principal				Kurjey	4.00	2.50	2.36	-0.14	Cloudy	Chamkhar Valley, Zhemgang and Downstream
20	Principal				Shingkhar (Bemethang)		2.31	2.01	-0.30		Zhemgang and Downstream
21	Principal				Sumpa	7.65	4.45	4.35	-0.10	cloudy	The December of the Control of the C
22	Secondary				Khoma	5.30	2.08	2.02	-0.06	cloudy	Lhuntse Downstream, Kurizampa, KHPA and Downstream along the Kuri Chhu
23	Secondary				Autsho	8.48	4.37	4.15	-0.22	cloudy	Kurizampa,KHPA and Downstream along the Kuri Chhu
24	Principal	Basin III	Manas		Kurizampa	18.45	8.58	8.25	-0.33	cloudy	KHPA and Downstream along the Kuri Chhu
25	Principal				Muktirap	6.00	2.85	2.35	-0.50	L/Rainy	Doksum, Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
26	Secondary				Doksum		4.32	4.54	0.22	cloudy	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
27	Secondary			Drangme Chhu Ngara Ama Chhu	Chazam		8.90	8.80	-0.10	cloudy	Downstream Settlement of Kuri-Gongri and Panbang
28	Principal				Ozorong	6.75	2.83	2.38	-0.45	cloudy	Downstream of Kuri-Gongri and Panbang
29	Secondary				Sheri Chhu	2.58	1.82	1.69	-0.13		
30	Principal				Panbang	12.48	6.01	5.93	-0.08	cloudy	Manas and Downstream
31	Principal				Pangzam		6.10	6.00	-0.10	Sunny	Bangtar Settlement and Downstream
32	Principal				Bangtar		2.56	2.40	-0.16	L/Rainy	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.

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

ISSUED BY: FMCR,HWRSD,NCHM