



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

Status and River Level Trends:

Monday, August 19, 2019

Issued at: 10:00 AM

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	6.69	6.69	0.00			
2				Thorthormi Tsho		7.50	5.00	5.87	5.87	0.00			
3				Rapstreng Tsho		7.40	5.00	6.33	6.32	-0.01	Thanza, Tenchey, Lhedi and Lunana area and Downstream of Pho Chhu and Puna-Wangdue Vallev		
4			Pho Chhu	Bay Tsho		7.40	5.00	6.52	6.49	-0.03	,		
5	Basin ll	Punatshang Chhu		Thanza		7.70	8.70	NR	NR	#VALUE!			
6	Dasin n		Chhu	Chhu		Tarina Wachey		8.50	10.50	7.02	6.99	-0.03	Pho Chhu Valley (Tamidamchu, Wolathang, Samidingkha, Khawajara, Shengana,
7				Dangsa		5.50	7.00	4.87	4.79	-0.08	Khuruthang) Puna-Wangdue Valley and Downstream		
8			Mo Chhu	Taksemakhang		7.50	8.50	5.96	5.87	-0.09			
9				Io Chhu Tashithang		9.00	10.50	7.50	7.05	-0.45	Gasa,Mo Chhu Valley,Puna-Wangdue Valley and Downstream		
10				Yebesa		5.00	7.00	2.49	2.30	-0.19			
	Approximate	Lead Time for E	Vacuation after	he 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 Downstream	Approx. Distance from Sensor (Bay Tsho)	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. The 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 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	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 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(m) recorded at 9 AM Today	Water Level Rise (+)/Fall (-) in meters during last 24 Hrs ending at 9 AM Today	Downstream Settlement							
1			Manas Chamkhar Chhu Mangdue Chhu	Tshampa		5.00	6.50	4.48	4.44	-0.04	Chokortoe Pry School,Kurjey Village,Wangdicholing,Chamkhar Town,Gangrithng Pry School,Gvelkhar Village and Downstream settlement under Zhemeane.							
2				Khagthang		5.50	6.00	4.92	4.83	-0.09								
3	Basin III	Manas			Kurjey	5.72	3.30	5.00	2.59	2.47	-0.12	School, Sychinal Vinage and Downsteam sedenkin under Eakingung.						
4				M 1 (11)	N 1 611	Manadas China	Manadas Chias	Manadau China	Manadau China	Manadas Chha	Jongthang		5.90	7.00	5.18	5.07	-0.11	Bjizam Community, MHPA Dam, Power House and Downstream settlement of Trongsa
5				Bjizam	5.52	4.20	5.50	2.95	2.79	-0.16	and Zhemgang							
	Approximate Lead Time for Evacuation of Chamkhar Chhu Sub Basin						Approximate Lead Time for Evacuation of Mangdue Chhu Sub Basin											

Approximate Lead Thile for Evacuation of Chamkhar Child Sub Dash						Approximate i.e.au Time for Evacuation of Mangude Clinu Sub Dash							
App	roximate Lead Ti	me for Evacuati	on after the dete	ction of Flood at the Tsl	hampa AWLS	Approximate Lead Time for Evacuation after the detection of Flood at the Jongthang AWLS							
Sl Nos	Name of Place Downstream	Approx.Distance from the Tshampa AWLS	Distance from	Elevation	Approx. Lead Time	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	Gangrithang PS	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 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		2.14	2.08	-0.06	Sunny	Thimphu Valley and Downstream	
2	Principal			Thim Chhu	Lungtenphu	2.82	1.59	1.45	-0.14	Sunny	× •	
3	Principal				Damchu	6.00	3.10	2.99	-0.11	Sunny	Chukha and Downstream	
4	Secondary	Basin l	Wang Chhu	Haa Chhu	Haa	2.60	1.37	1.24	-0.13	Sunny	Haa and Wang Chhu Downstream	
5	Principal			Pa Chhu	Bonday		1.57	1.41	-0.16	Sunny	Downstream of Paro Valley and Wang Chhu Basin	
6	Principal			Amo Chhu	Dorokha		3.35	3.35	0.00	Cloudy	Samtse, Phuntsholing and Downstream	
7	Secondary				Droyagang	7.07	3.66	3.47	-0.19	Light Rain	Phunsholing and Downstream	
8	Secondary			Pho Chhu	Samdingkha	6.10	4.40	4.20	-0.20	Sunny	Puna-Wangdue Valley and Downstream	
9	Principal			Mo Chhu	Yebesa	3.94	2.47	2.27	-0.20	Sunny	Mo Chhu Valley and Downstream	
10	Secondary			hhu	Wangdue Bridge		3.40	3.05	-0.35		PHPA I, PHPA II and Downstream	
11	Principal	Basin II	Punatshang Chhu		Wangdue Rapid	7.82	4.00	3.58	-0.42	Sunny		
12	Principal	Dasin ii	I unatshang Chhu	Punatshang Chhu	Turitar Sunkosh	6.68	3.95	3.65	-0.30	Partly Cloudy	Downstream of Dagana and Lhamoizingkha	
13	Secondary				Sunkosh Bridge		3.10	2.80	-0.30	Cloudy	Downsteam of Dugant and Laurozzingena	
14	Principal				Kerabari	11.90	6.15	6.02	-0.13	Light Rain	Lhamoizingkha and Downstream	
15	Secondary			Mao Chhu	Sherzhong		4.05	4.15	0.10	Rainny	Gelelephu Valley and Downstream	
16	Principal			Mangdue Chhu	Bjizam	5.35	2.95	2.80	-0.15	Sunny	MHPA Dam, Power House and Downstream of Trongsa & Zhemgang	
17	Secondary	I			Dakpai Chhu	2.26	1.48	1.45	-0.03	Cloudy	Downstream of Zhmgang and Panbang	
18	Principal				Tingtibi	7.45	4.24	4.04	-0.20	Cioudy	Downstream of Zinngang and Fanoang	
19	Principal			Chamkhar Chhu	Kurjey	4.00	2.60	2.47	-0.13	Sunny	Chamkhar Valley, Zhemgang and Downstream	
20	Principal		Manas		Shingkhar (Bemethang)		2.43	2.33	-0.10		Zhemgang and Downstream	
21	Principal				Sumpa	7.65	4.90	4.64	-0.26	Sunny	Lhuntse Downstream, Kurizampa, KHPA and Downstream along the Kuri Chhu	
22	Secondary			Kuri Chhu		Khoma	5.30	2.32	2.10	-0.22	Sunny	Enuncse Downstream, Kurtzampa, KrrPA and Downstream along the Kurt Chnu
23	Secondary				Autsho	8.48	4.88	4.54	-0.34	Cloudy	Kurizampa,KHPA and Downstream along the Kuri Chhu	
24	Principal	Basin III		Manas		Kurizampa	18.45	9.10	8.67	-0.43	Cloudy	KHPA and Downstream along the Kuri Chhu
25	Principal			Kholong Chhu	Muktirap	6.00	2.95	2.44	-0.51	Sunny	Doksum, Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu	
26	Secondary				Doksum		4.39	4.35	-0.04	Sunny	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu	
27	Secondary			Drangme Chhu Ngara Ama Chhu	Chazam		9.35	8.85	-0.50	Sunny	Downstream Settlement of Kuri-Gongri and Panbang	
28	Principal				Ozorong	6.75	3.25	2.12	-1.13	Summer	Downstream of Kuri-Gongri and Panbang	
29	Secondary				Sheri Chhu	2.58	1.62	1.59	-0.03	Sunny	Downsteam of Kar-Gongri and Panoang	
30	Principal				Panbang	12.48	6.64	6.45	-0.19	Rainny	Manas and Downstream	
31	Principal	1			Pangzam		6.30	6.45	0.15	Cloudy	Bangtar Settlement and Downstream	
32	Principal				Bangtar		2.69	2.62	-0.07	Cloudy	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.

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

ISSUED BY: FMCR,HWRSD,NCHM