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

Saturday, September 14, 2019



10:00 AM

Issued at:

Status and River Level Trends:

Glacier Lake Outbrust Flood (GLOF) Early Warning System 1. Punatshang Chhu Sub Basin

Sl 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	6.67	6.68	0.01			
2				Thorthormi Tsho		7.50	5.00	5.81	5.81	0.00			
3				Rapstreng Tsho		7.40	5.00	6.29	6.31	0.02	Thanza, Tenchey, Lhedi and Lunana area and Downstream of Pho Chhu and Puna-Wangdu Vallev		
4			Pho Chhu	Bay Tsho		7.40	5.00	6.45	6.49	0.04	vancy		
5	Basin II	Punatshang		Thanza		7.70	8.70	NR	NR	#VALUE!			
6	Basin II	Chhu	-	Tarina Wachey		8.50	10.50	6.93	6.92	-0.01	Pho Chhu Valley (Tamidamchu, Wolathang, Samidingkha, Khawajara, Shengana		
7				Dangsa		5.50	7.00	4.79	4.79	0.00	Khuruthang) Puna-Wangdue Valley and Downstream		
8				Taksemakhang		7.50	8.50	5.79	5.90	0.11			
9			Mo Chhu	Tashithang	Tashithang	9.00	10.50	7.17	7.39	0.22	Gasa,Mo Chhu Valley,Puna-Wangdue Valley and Downstream		
10				Yebesa		5.00	7.00	2.36	2.44	0.08			
							1		1				
	Approximate	Lead Time for H	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		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. 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 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				Tshampa		5.00	6.50	4.40	NR	#VALUE!						
2			Chamkhar Chhu	Chamkhar Chhu	Chamkhar Chhu	Chamkhar Chhu	Chamkhar Chhu	Chamkhar Chhu	Khagthang		5.50	6.00	4.39	NR	#VALUE!	Chokortoe Pry School, Kurjey Village, Wangdicholing, Chamkhar Town, Gangrithng Pry School, Gvelkhar Village and Downstream settlement under Zhemgang.
3	Basin III	Manas		Kurjey	5.72	3.30	5.00	2.47	NR	#VALUE!	Sensor, eyennin vinnige und Downsteam senement under zureingung.					
4			Mangdue Chhu	Jongthang		5.90	7.00	4.98	NR	#VALUE!	Bjizam Community, MHPA Dam, Power House and Downstream settlement of Trongsa					
5			Manguue Chinu	Biizam	5 52	4 20	5 50	2.74	NP	#VALUE!	and Zhemgang					

Approximate Lead Time for Evacuation of Chamkhar Chhu Sub Basin Approximate Lead Time for Evacuation after the detection of Flood at the 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.Distance from the Tshampa AWLS	Approx. Cumlative Distance from Tshampa AWLS	Elevation	Approx. Lead Time	Sl Nos	Name of Place Downstream	Approx.Distance from the Tshampa AWLS	Approx. Cumlative Distance from 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

l 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		1.95	2.03	0.08	Cloudy	Thimphu Valley and Downstream
2	Principal			Thim Chhu	Lungtenphu	2.82	1.42	1.52	0.10	Cloudy	minipite valley and Downstream
3	Principal				Damchu	6.00	3.06	3.15	0.09	Sunny	Chukha and Downstream
4	Secondary	Basin l	Wang Chhu	hhu Haa Chhu	Haa	2.60	1.11	1.18	0.07	Sunny	Haa and Wang Chhu Downstream
5	Principal			Pa Chhu	Bonday		1.55	1.63	0.08	foggi	Downstream of Paro Valley and Wang Chhu Basin
6	Principal			Amo Chhu	Dorokha		3.20	3.10	-0.10	Cloudy	Samtse, Phuntsholing and Downstream
7	Secondary			Ano Cinu	Droyagang	7.07	3.68	3.59	-0.09	Sunny	Phunsholing and Downstream
8	Secondary			Pho Chhu	Samdingkha	6.10	4.27	4.20	-0.07	Cloudy	Puna-Wangdue Valley and Downstream
9	Principal			Mo Chhu	Yebesa	3.94	2.35	2.41	0.06	Sunny	Mo Chhu Valley and Downstream
10	Secondary				Wangdue Bridge		3.35	3.35	0.00	Cloudy	PHPA I, PHPA II and Downstream
11	Principal	Basin II	Punatshang Chhu		Wangdue Rapid	7.82	3.80	3.85	0.05	Sunny	
12	Principal	Duan n	r unatshang Child	Punatshang Chhu	Turitar Sunkosh	6.68	3.85	3.90	0.05	Cloudy	Downstream of Dagana and Lhamoizingkha
13	Secondary				Sunkosh Bridge		3.00	3.05	0.05	Cloudy	Dominican of Diguna and Linnovingena
14	Principal				Kerabari	11.90	6.17	6.20	0.03	Cloudy	Lhamoizingkha and Downstream
15	Secondary			Mao Chhu	Sherzhong		4.00	4.00	0.00	Cloudy	Gelelephu Valley and Downstream
16	Principal			Mangdue Chhu	Bjizam	5.35	2.75	2.80	0.05	Cloudy	MHPA Dam, Power House and Downstream of Trongsa & Zhemgang
17	Secondary				Dakpai Chhu	2.26	1.61	1.62	0.01	Cloudy	Downstream of Zhmgang and Panbang
18	Principal				Tingtibi	7.45	4.20	4.23	0.03		
19	Principal			Chamkhar Chhu Kuri Chhu	Kurjey	4.00	2.47	2.49	0.02		Chamkhar Valley, Zhemgang and Downstream
20	Principal				Shingkhar (Bemethang)		2.21	2.20	-0.01	Sunny	Zhemgang and Downstream
21	Principal				Sumpa	7.65	4.92	5.13	0.21	Clauda	Lhuntse Downstream,Kurizampa,KHPA and Downstream along the Kuri Chhu
22	Secondary				Khoma	5.30	2.30	2.33	0.03	Cloudy	
23	Secondary				Autsho	8.48	4.94	5.05	0.11	cloudy with sunny	Kurizampa,KHPA and Downstream along the Kuri Chhu
24	Principal	Basin III	Manas		Kurizampa	18.45	9.35	9.30	-0.05	Cloudy	KHPA and Downstream along the Kuri Chhu
25	Principal			Kholong Chhu	Muktirap	6.00	2.85	2.90	0.05	Cloudy	Doksum, Kholong Chhu Hydro Power Project and Downstream of Gongri Ch
26	Secondary				Doksum		4.43	4.32	-0.11	Cloudy	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
27	Secondary			Drangme Chhu	Chazam		10.10	9.55	-0.55	Sunny	Downstream Settlement of Kuri-Gongri and Panbang
28	Principal	1			Ozorong	6.75	3.50	3.00	-0.50	partly cloudy	Downstream of Kuri-Gongri and Panbang
29	Secondary	1			Sheri Chhu	2.58	1.68	1.70	0.02		Downstream of Kurt-Oongri and Panbang
30	Principal	I			Panbang	12.48	7.56	6.93	-0.63	Light rainy	Manas and Downstream
31	Principal	1	-	Ngara Ama Chhu	Pangzam		6.00	6.10	0.10	Sunny	Bangtar Settlement and Downstream
32	Principal				Bangtar		2.54	2.36	-0.18	cloudy	Downstream of Bangtar Settlement

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

ISSUED BY: FMCR, HWRSD, NCHM