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

Status and River Level Trends: Friday, November 15, 2019 Issued at: 10:00 AM

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

1. 1 0112	. Funatsnang Chinu Suo 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	6.31	6.32	0.01							
2			Pho Chhu anatshang Chhu	Thorthormi Tsho		7.50	5.00	5.56	5.56	0.00							
3				Rapstreng Tsho		7.40	5.00	6.07	6.08	0.01	Thanza,Tenchey,Lhedi and Lunana area and Downstream of Pho Chhu and Puna-Wangdue Valley						
- 4				Bay Tsho		7.40	5.00	6.28	6.31	0.03	1						
5	Basin II	Punatshang				Thanza		7.70	8.70	6.32	6.33	0.01					
6	D	Chhu				1	1	1					Tarina Wachey		8.50	10.50	6.47
7		Mo Chhu		Dangsa		5.50	7.00	3.68	3.68	0.00	Khuruthang) Puna-Wangdue Valley and Downstream						
8				Taksemakhang		7.50	8.50	5.29	5.29	0.00							
9			Mo Chhu	Tashithang		9.00	10.50	5.14	5.14	0.00	Gasa,Mo Chhu Valley,Puna-Wangdue Valley and Downstream						
10				Yebesa		5.00	7.00	1.36	1.37	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					
SI Nos		Approx. Distance from Sensor (Bay Tsho)	from Sensor	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

2	a. Chamkhai Chinu and Mangude Chinu 300 Dashi											
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			Chamkhar Chhu	Tshampa		5.00	6.50	3.75	3.76	0.01		
2					Khagthang		5.50	6.00	4.44	4.44	0.00	Chokortoe Pry School, Kurjey Village, Wangdicholing, Chamkhar Town, Gangrithng Pry School, Gvelkhar Village and Downstream settlement under Zhemgang.
3	Basin III					Kurjey	5.72	3.30	5.00	1.65	1.65	0.00
4			Manadua Chhu	Jongthang		5.90	7.00	3.94	3.94	0.00	Bjizam Community,MHPA Dam, Power House and Downstream settlement of Trongsa	
5		Mangdue Chhu	Bjizam	5.52	4.20	5.50	1.80	1.79	-0.01	and Zhemgang		

	Approximate Lead Time for Evacuation of Chamkhar Chhu Sub Basin						Approximate Lead Time for Evacuation of Mangdue Chhu Sub Basin						
App	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	Nos Name of Place Downstream Approx. Cambative Combative Distance from the Tshampa AWLS Distance from Tshampa AWLS				SI 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	Canarithana PS	ft 31cm	44.2 km	2552 m	\$4 minutes	1							

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			Thim Chhu	Dodena		1.53	NR	#VALUE!	Sunny	Thimphu Valley and Downstream
2	Principal				Lungtenphu	2.82	0.55	0.54	-0.01	Sunny	
3	Principal				Damchu	6.00	2.17	2.17	0.00	Sunny	Chukha and Downstream
4	Secondary	Basin I	Wang Chhu	Haa Chhu	Haa	2.60	0.60	0.59	-0.01	Sunny	Haa and Wang Chhu Downstream
5	Secondary			Pa Chhu	Bonday		0.89	0.89	0.00	Sunny	Downstream of Paro Valley and Wang Chhu Basin
6	Principal			Amo Chhu	Dorokha		2.50	2.50	0.00	Sunny	Samtse, Phuntsholing and Downstream
7	Principal				Doyagang	7.07	2.39	2.38	-0.01	Sunny	Phunsholing and Downstream
8	Secondary			Pho Chhu	Samdingkha	6.10	2.73	2.71	-0.02	Sunny	Puna-Wangdue Valley and Downstream
9	Principal			Mo Chhu	Yebesa	3.94	1.33	1.33	0.00	Sunny	Mo Chhu Valley and Downstream
10	Secondary			ng Chhu Punatshang Chhu	Wangdue Bridge		0.95	0.95	0.00	Sunny	PHPA I,PHPA II and Downstream
11	Principal	Basin II	Punatshang Chhu		Wangdue Rapid	7.82	1.41	1.40	-0.01	Sunny	
12	Principal	Danii II			Turitar Sunkosh	6.68	2.00	2.00	0.00	Sunny	Downstream of Dagana and Lhamoizingkha
13	Secondary				Sunkosh Bridge		1.30	1.25	-0.05	Sunny	Downsteam of Dagma and Litamotzingsia
14	Principal				Kerabari	11.90	3.86	3.84	-0.02	Sunny	Lhamoizingkha and Downstream
15	Secondary			Mao Chhu	Sherzhong		3.65	3.65	0.00	Sunny	Gelelephu Valley and Downstream
16	Principal			Mangdue Chhu Chamkhar Chhu	Bjizam	5.35	1.81	1.80	-0.01	Sunny	MHPA Dam,Power House and Downstream of Trongsa & Zhemgang
17	Secondary				Dakpai Chhu	2.26	1.27	1.26	-0.01	Sunny	Downstream of Zhmgang and Panbang
18	Principal				Tingtibi	7.45	2.95	2.90	-0.05	Sumy	
19	Principal				Kurjey	4.00	1.65	1.65	0.00	Sunny	Chamkhar Valley, Zhemgang and Downstream
20	Principal				Shingkhar (Remethano)		1.46	1.46	0.00	Sunny	Zhemgang and Downstream
21	Principal				Sumpa	7.65	3.13	3.12	-0.01	Sunny	Lhuntse Downstream, Kurizampa, KHPA and Downstream along the Kuri Chhu
22	Secondary			Kuri Chhu	Khoma	5.30	1.39	1.40	0.01	Juliy	Littline Dominicality Carle and Dominical arong the Part Cities
23	Secondary			Kuiremu	Autsho	8.48	3.00	3.00	0.00	Clear/Sunny	Kurizampa,KHPA and Downstream along the Kuri Chhu
24	Principal	Basin III	Manas		Kurizampa	18.45	6.96	6.95	-0.01	Sunny	KHPA and Downstream along the Kuri Chhu
25	Principal			Kholong Chhu	Muktirap	6.00	1.64	1.63	-0.01	Clear	Doksum, Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
26	Principal				Doksum		3.16	3.15	-0.01	Sunny	Kholong Chhu Hydro Power Project and Downstream of Gongri Chhu
27	Secondary				Chazam		7.40	7.25	-0.15	Sunny	Downstream Settlement of Kuri-Gongri and Panbang
28	Principal			Drangme Chhu	Ozorong	6.75	1.23	1.21	-0.02	Summy	Downstream of Kuri-Gongri and Panbang
29	Secondary				Sheri Chhu	2.58	1.35	1.35	0.00	Sunny	Downsteam of Kurr-Jongri and Fanoang
30	Principal				Panbang	12.48	4.24	4.23	-0.01	Sunny	Manas and Downstream
31	Principal				Pangzam		5.56	5.56	0.00	Sunny	Bangtar Settlement and Downstream
32	Principal			Ngara Ama Chhu	Bangtar		1.90	1.89	-0.01	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.

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

ISSUED BY: FMCR,HWRSD,NCHM