



ཆུ་དཔྱད་རིག་པ་དང་ཆུ་འཛོམས་ཆེན་ཞབས་ཏྲ་ག་ཁྲེ་ཚན།

ཆུ་ལ་ཡོངས་ཆུ་དཔྱད་དང་གནམ་གཤིས་རིག་པའི་ལྷན་ཁག།

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



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

Friday, February 28, 2025

Issued at: 10:00 AM

1. Punatshang Chhu Sub Basin

| Sl No. | River Basin Number | Basin Name | Name of River | Station Name | Highest Water Level Recorded | Alert Water Level | Alarm Water Level | Water Level (m) recorded at 9:00 AM Yesterday | 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 Areas Coverage |
|--------|--------------------|-----------------|---------------|-----------------|------------------------------|-------------------|-------------------|---|---|--|---|
| 1 | Basin II | Punatshang Chhu | Pho Chhu | Luggay Tsho | | 7.80 | 10.00 | 6.25 | 6.25 | 0.00 | Thanza, Tenchey, Lhadi, Lunana area and downstream of Pho-Chu and Puna-Wangdue Valley. |
| 2 | | | | Thorthorni Tsho | | 7.50 | 5.00 | 5.20 | 5.20 | 0.00 | |
| 3 | | | | Rapstreng Tsho | | 7.40 | 5.00 | 6.08 | 6.08 | 0.00 | |
| 4 | | | | Bay Tsho | | 7.40 | 5.00 | NR | NR | #VALUE! | |
| 5 | | | | Thanza | | 7.70 | 8.70 | 6.29 | 6.30 | 0.01 | Pho Chhu Valley (Tamidamchu, Wolathang, Samidngkha, Khawajara, Shengana, Khuruthang) Puna-Wangdue Valley and Downstream |
| 6 | | | | Tarina Wachey | | 8.50 | 10.50 | 6.10 | 6.10 | 0.00 | |
| 7 | | | | Dangsa | | 5.50 | 7.00 | 3.25 | 3.26 | 0.01 | |
| 8 | | | Mo Chhu | Taksemakhang | | 7.50 | 8.50 | NR | NR | #VALUE! | Gasa, Mo Chhu Valley, Puna-Wangdue Valley and Downstream |
| 9 | | | | Tashithang | | 9.00 | 10.50 | 4.41 | 4.11 | -0.30 | |
| 10 | | | | Yebesa | | 5.00 | 7.00 | 1.11 | 1.11 | 0.00 | |

| 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 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. Time available for Evacuation | Sl Nos | Name of Place Downstream | Approx. Distance from Sensor (Bay Tsho) | Approx. Time for Flood to reach at the Place | Approx. Time available for Evacuation |
| 1 | Thanza | 1.5 km | 2.8 km | 3.3 km | 6.7 km | 20-60 minutes | 1 | Wolathang | 5.8 km | 30 minutes | 30 minutes |
| 2 | Tenchey | 2.9 km | 4.1 km | 4.6 km | 8.2 km | | 2 | Samdingkha | 12.0 km | 55 minutes | 55 minutes |
| 3 | Tshojo | 8.1 km | 10.0 km | 10.5 km | 13.8 km | | 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 distance were approximate only

Glacier Lake Outburst Flood (GLOF) & Rainstorm Flood Early Warning System.

2. Chamkhar Chhu and Mangdue Chhu Sub Basin

| Sl No. | River Basin Number | Basin Name | Name of River | Station Name | Highest Water Level Recorded (m) | Alert Water Level (m) | Alarm Water Level (m) | Water Level (m) recorded at 9:00 AM Yesterday | 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 Areas Coverage |
|--------|--------------------|------------|---------------|--------------|----------------------------------|-----------------------|-----------------------|---|---|--|---|
| 1 | Basin III | Manas | Chamkhar Chhu | Tsampa | | 5.00 | 6.50 | 3.49 | 3.51 | 0.02 | Chokhortoe Primary School, Kurjey Valley, Wangdue Choling, Chamkhar Town, Gangrihang Primary School, Gyelkhar Village and downstream settlement under Zhemgang. |
| 2 | | | | Khagthang | | 5.50 | 6.00 | 4.18 | 4.18 | 0.00 | |
| 3 | | | | Kurjey | 5.72 | 3.30 | 5.00 | 1.33 | 1.35 | 0.02 | |
| 4 | | | Mangdue Chhu | Jongthang | | 5.90 | 7.00 | 3.29 | 3.23 | -0.06 | Bjizam Community, MHPA Dam, Power House and Downstream settlement of Trongsa and Zhemgang |
| 5 | | | | Bjizam | 5.60 | 4.20 | 5.50 | NR | NR | #VALUE! | |

| 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 Downstream | Approx. Distance from the Tshampa AWLS | Approx. Cumulative Distance from Tshampa AWLS | Elevation | Approx. Lead Time | Sl Nos | Name of Place Downstream | Approx. Distance from the Jongthang AWLS | Approx. Cumulative Distance from Jongthang 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 | Gangrihang PS | 0.3 km | 44.2 km | 2552 m | 84 minutes | | | | | | |
| 7 | Gyelkhar | 1.7 km | 45.9 km | 2538 m | 91 minutes | | | | | | |