

**REPORT ON THE DEVELOPMENTS OF TYPHOON NO. 10  
(TYPHOON BUALOI)  
AND RAIN, FLOODS, INUNDATION, LANDSLIDES AND  
THUNDERSTORMS**

*(Updated until 6h00' on 02/10/2025)*

**1. Rainfall during night (19h/01/9-06h/02/10):**

- Rain during the day (7pm/9/30 - 7pm/10/01): The provinces/cities of Tuyen Quang, Son La, Phu Tho, Thai Nguyen, Thanh Hoa, Nghe An, Quang Ngai, Lam Dong, Khanh Hoa, Dong Nai, Ho Chi Minh City have heavy to very heavy rain, commonly 50-100mm, some stations have heavy rain: Phuong Do (Tuyen Quang) 198mm, Thuan Hoa (Tuyen Quang) 191mm, Tinh Gia (Thanh Hoa) 198mm, Quy Chau (Nghe An) 126mm, Thanh Son (Dong Nai) 110mm.

- Rain at night (7pm/10/01-7am/2/10): The mountainous areas of the North and North Central regions have common rainfall of 20-40mm; Some stations had heavier rainfall: Phuong Do (Tuyen Quang) 62mm, Bao Lac (Cao Bang) 44mm, Don Phuc 1 (Nghe An) 85mm, Son Lam (Ha Tinh) 61mm.

- Rain period (19h/25/9-07h/02/10): The northern mountainous provinces and from Thanh Hoa - Hue had rain of 200-400mm, some places over 600mm, some stations had heavy rain such as: Ta Si Lang (Lao Cai) 685mm, Km46 (Son La) 557mm; Ngoc Son (Phu Tho) 595mm; Xuan Binh (Thanh Hoa) 836mm, Cam Lien 2 (Thanh Hoa) 811mm; My Son 1 (Nghe An) 651mm, Hua Na (Nghe An) 659mm; Son Hong 1 (Ha Tinh) 609mm; Duc Hoa (Quang Tri) 593mm; Bach Ma (Hue) 857mm, Quan Tuong Dai (Hue) 695mm.

**2. Flooding**

Heavy rains have caused major floods on rivers in the North to Ha Tinh at levels BD2 to BD3, some places above BD3; Lo River in Ha Giang is 106.47m, above BD3 is 3.47m, exceeding the historical flood of 1969 by 0.90m; Buoi River water level in Kim Tan (Thanh Hoa) is 14.33m, above BD3 is 2.33m and exceeding the historical flood by 0.08m.

Updated water levels at 07:00/02/10 on some major rivers are as follows:

- Tuyen Quang (at 7:00): on Lo River at Tuyen Quang station 26.28m above BD3 0.28m, falling (peaked 26.34m at 04:00/02/10); at Ha Giang station 103.82m above BD3 0.82m, falling; on Gam River at Chiem Hoa station 41.84m above BD3 3.34m, falling; at Bac Me station 124.24m above BD3 0.24m, falling (peak 127.2m at 01:00/01/10).

- Lao Cai (at 07:00): on Thao River at Lao Cai 79.32m, below BD1, falling (peak 83.44m at 05:00/30/9); at Yen Bai 29.96m below BD1, falling (peak 34.39m at 11:00/30/9).

- Bac Ninh (at 07:00): on Thuong River at Cau Son 15.6m, below BD3 0.4m, falling; Cau River at Dap Cau 6.38m, above BD3 0.08m, rising, at Phuc Loc Phuong 8.22m, above BD3 0.22m, rising.

- Hanoi (at 7am): on the Red River at Hanoi station 9.52m, above BĐ1 0.02m, falling.

- Ninh Binh (at 7am): on the Hoang Long River at Ben De 4.31m, above BĐ3 0.31m, falling (peaked at 4.88m at 01am/01/10); at Gian Khau 3.96m, above BĐ3 0.26m, falling (peaked at 4.16m at 19h/01/10).

- Thanh Hoa (at 7:00 a.m.): on Chu River at Bai Thuong, 14.04 m below BĐ1 is going down (peaking at 18.57 m at 1:00 a.m. on September 30), at Xuan Khanh, 6.17 m below BĐ1 is going up (peaking at 10.78 m at 2:00 a.m. on September 30); on Yen River at Chuoi, 3.03 m, above BĐ2 0.23 m, going down (peaking at 4.85 m at 1:00 a.m. on September 30); on Ma River at Giang, 4.23 m, above BĐ1 0.23 m, going down (peaking at 6.97 m at 9:00 a.m. on September 30); Len River at Cu Thon, 3.98 m, above BĐ3 0.48 m, going down (peaking at 5.63 m at 3:00 p.m. on September 30); Buoi River at Kim Tan is 13.53m, above BĐ3 is 1.53m (peaked at 14.33m at 6:00/01/10, exceeding historical flood by 0.08m), is falling; at Thach Quang is 15.68m, below BĐ3 0.32m (peaked at 17.93m at 15:00/30/9), is falling. - Nghe An (at 04:00): on Ca River at Muong Xen 139.34m below BĐ2 0.66m (peaked at 142.11m at 8:00/9/30) is falling, at Con Cuong 29.1m above BĐ2 0.1m is falling (peaked at 31.11m at 1:00/9/30), at Cho Trang 4.71m below BĐ3 0.29m is falling, Lam River at Yen Thuong 9.56m above BĐ3 0.56m, is falling.

- Ha Tinh (at 04:00): on Ngan Pho River at Son Diem 7.18m, below BĐ1, (peaked at 11.52m at 1:00/9/30), is rising again; Ngan Sau River at Chu Le is 9.33m, below BĐ1, and is falling (peaking at 13.05m at 1am/9/30); La River at Linh Cam is 5.07m, 0.43m below BĐ2, and is slowly falling.

Forecast: In the next 12-24 hours, floods on Lo River, Cau River, and Thuong River will continue to fall and be below BĐ3; floods on Thai Binh River will continue to fall and be at BĐ2; floods in the downstream of Ca River will continue to fall and be above BĐ2.

### **3. Inter-reservoir situation in the Red River basin:**

Tuyen Quang Hydropower Reservoir opens 06 bottom discharge gates and Thac Ba Hydropower Reservoir opens 03 surface discharge gates.

#### ***Irrigation reservoirs***

- Northern region: There are 2,495 reservoirs, the average storage capacity reaches 68-97% of the design capacity. Currently, there are 137 damaged reservoirs; 52 reservoirs are being repaired, upgraded, and newly built (Tuyen Quang 17, Lai Chau 01, Cao Bang 03, Dien Bien 3, Lao Cai 4, Thai Nguyen 11, Lang Son 3, Phu Tho 6, Bac Ninh 2, Ninh Binh 2).

- North Central region: There are a total of 2,323 reservoirs, the average storage capacity reaches 76% - 99% of the design capacity. Currently, there are 132 damaged reservoirs, 65 reservoirs are being repaired and upgraded (Thanh Hoa 33, Nghe An 7, Ha Tinh 4, Quang Tri 18, Hue City 3).

### ***Hydroelectric reservoirs***

- Northern region: There are 33 reservoirs operating to regulate the flow through spillways with a flow rate of 100 m<sup>3</sup>/s or more, specifically the spillway flow rate/flow to the reservoir (m<sup>3</sup>/s): Bac Ha: 611/798; Bac Me: 2272/2272; Ban Nhung: 312/447; Bao Lam 3: 895/1015; Bao Nhai Level 1: 313/574; Bao Nhai Level 2: 403/615; Chiem Hoa: 4450/4450; Khanh Khe: 360/410; Nam Luc: 707/964; Nho Que 1: 794/904; Nho Que 2: 871/965; Pa Ke: 234/374; Phuc Long: 635/845; Sap Viet: 251/285; Song Chay 5: 146/195; Song Chay 6: 285/342; Song Lo 2: 3565/3226; Song Lo 6: 3220/3110; Song Lo 7: 3585/3585; Song Lo 8B: 3890/3890; Song Mien: 561/523; Song Mien 5: 1455/1397; Song Mien 5A: 1718/1723; Song Mien 6: 1825/1836; Suoi Chan 1: 124/165; Suoi Chan 2: 130/170; Thac Ba: 2197/2170; Thac Ba 2: 2503/2503; Thai An: 1133/1195; Thuan Hoa: 1130/1120; Tuyen Quang: 3178/3539; Van Chan: 350/410; Vinh Ha: 388/569.

- North Central region: There are 12 reservoirs operating to regulate the flow through spillways with a flow rate of 100 m<sup>3</sup>/s or more, specifically the spillway flow rate/flow to the reservoir (m<sup>3</sup>/s): Ba Thuoc 1: 1169/1529; Ba Thuoc 2: 1357/1861; Ban Ang: 612/612; Ban Ve: 480/1075; Chi Khe: 1873/2263; Dakrong 3: 118/163; Dong Van: 979/1179; Hua Na: 876/1030; Khe Bo: 1549/2037; Nam Mo: 428/422; Nam Non: 521/806; Trung Son: 666/1180.

### **4. Dike situation**

On river dikes of level III or higher in the provinces of Thai Nguyen, Phu Tho, Bac Ninh, Hanoi, Ninh Binh, Thanh Hoa, Nghe An, Ha Tinh, there are 173 key locations of weak dikes (Thai Nguyen: 09, Phu Tho: 18, Bac Ninh: 36, Hanoi: 31, Ninh Binh: 50; Thanh Hoa: 16; Nghe An: 05; Ha Tinh: 08). On October 1, 04 dike incidents occurred, specifically:

- Bac Ninh province (02 incidents):

+ Incident of landslide on the dike side at position K37+600 right dike Cau, Yen Trung commune, length 15m. The locality has organized to handle the first hour (planting bamboo piles at the foot of the landslide, filling with soil sacks to reinforce and restore the dike slope, to be completed before 7:00 p.m. on October 1, 2025).

+ The incident of the ebb and flow at K7+200 on the left of Cau dike, Hop Thinh commune, is 4-7m from the foot of the dike, about 25m long along the dike, 15m wide. The locality has handled the first hour (made a filter well at the ebb and flow location), completed at 7:30 p.m. on October 1, 2025.

- Thanh Hoa province (02 incidents):

+ The incident of the riverside dike slope collapse at location K26+050-K26+070 on the right of Cau Chay dike, Yen Dinh commune, 20m long. The locality has organized the handling of the first hour (driving bamboo stakes, arranging soil bags to stabilize the landslide arc and covering with tarpaulin to prevent water from flowing in).

+ The incident of a sinkhole on the surface of the Dung village dike at K0+250, Quang Chinh commune. The locality has organized the handling of the

first hour (digging and rebuilding the dike base at the sinkhole location and reinforcing the dike surface with asphalt concrete).

## **5. Damage caused by Typhoon No. 10 and rain, floods, landslides and thunderstorms**

According to reports from the provinces and cities of Lao Cai, Son La, Phu Tho, Tuyen Quang, Lang Son, Cao Bang, Thai Nguyen, Bac Ninh, Quang Ninh, Hai Phong, Hung Yen, Ninh Binh, Thanh Hoa, Nghe An, Ha Tinh, Quang Tri, Hue, Da Nang, as of 06:00 on October 2, storm No. 10 and floods, landslides, and tornadoes have caused the following damage:

- In terms of people: 57 people dead and missing.

- + 36 deaths (Lao Cai: 05 people due to rain, floods and landslides; Cao Bang: 02 people due to floods and landslides; Tuyen Quang: 01 person due to landslides; Son La: 01 person due to landslides; Lang Son: 02 people due to landslides and floods; Thai Nguyen: 01 person due to floods; Hung Yen: 02 people due to storms and tornadoes; Ninh Binh: 09 people due to storms and tornadoes; Thanh Hoa: 05 people due to fallen trees, collapsed houses, and capsized boats; Nghe An: 01 person drowned; Ha Tinh: 01 person fell while repairing a house; Quang Tri: 04 people on the BV92754 ship at Cua Gianh; Hue: 01 person swept away by water; Da Nang: 01 person swept away by floods);

- + 21 people missing (Lao Cai: 05 people swept away by floods and landslides; Cao Bang: 03 people swept away by floods; Tuyen Quang: 04 people due to landslides; Son La: 01 person; Quang Tri: 08 people on 02 ships at Cua Viet, Cua Gianh and people swept away by floods);

- + 147 people injured (Lao Cai: 10, Cao Bang: 02, Quang Ninh: 09, Hai Phong: 09, Hung Yen: 17, Ninh Binh: 50, Thanh Hoa: 06, Nghe An: 11, Ha Tinh: 17, Quang Tri: 15, Hue: 01).

- Return home:

- + 160 houses collapsed (Lao Cai: 30; Tuyen Quang: 18; Lang Son: 03; Ninh Binh: 23; Thanh Hoa: 27; Nghe An: 53; Quang Tri: 06);

- + 154,807 houses damaged, roofs blown off (Lao Cai 867 houses, Son La 137 houses, Phu Tho 1,476 houses, Tuyen Quang 379 houses, Lang Son 191 houses, Cao Bang 220 houses, Thai Nguyen 264 houses, Quang Ninh 21 houses, Hai Phong 235 houses, Hung Yen 379 houses, Ninh Binh 1,202 houses, Thanh Hoa 1,429 houses, Nghe An 50,544 houses, Ha Tinh 93,976 houses, Quang Tri 3,396 houses, Hue 91 houses);

- + 57,915 flooded houses (Lao Cai 8,888, Son La 424, Tuyen Quang 180, Lang Son 250, Cao Bang 390, Thai Nguyen 210, Hanoi 3,035, Ninh Binh 5,090, Thanh Hoa 17,003, Nghe An 16,357, Ha Tinh 6,070, Quang Tri 18). Currently, the water is receding and localities continue to make statistics. - Regarding agriculture: 51,269 hectares of rice and crops were flooded and damaged (Lao Cai 3,461 hectares, Son La 242 hectares, Phu Tho 7,134 hectares, Tuyen Quang 2,225 hectares, Lang Son 604 hectares, Cao Bang 807 hectares, Thai Nguyen 1,796 hectares, Bac Ninh 545 hectares, Hai Phong 947 hectares, Hanoi 5,788 hectares,

Hung Yen 870 hectares, Ninh Binh 3,150 hectares, Thanh Hoa 10,379 hectares, Nghe An 11,536 hectares, Ha Tinh 1,303 hectares, Quang Tri 445 hectares, Da Nang 37 hectares).

- Regarding livestock: 1,638 cattle, 405,359 poultry were dead and swept away.

- Aquaculture: 13,478 hectares of aquaculture were damaged (Lao Cai 103 hectares, Son La 13 hectares, Phu Tho 784 hectares, Tuyen Quang 66 hectares, Lang Son 03 hectares, Thai Nguyen 04 hectares, Bac Ninh 03 hectares, Hung Yen 50 hectares, Ninh Binh 161 hectares, Thanh Hoa 3,844 hectares, Nghe An 7,196 hectares, Ha Tinh 1,045 hectares, Quang Tri 205 hectares, Da Nang 01 hectares).

- Regarding education: 1,429 schools were affected and damaged (Lao Cai 39, Son La 21, Phu Tho 38, Tuyen Quang 22, Lang Son 03, Cao Bang 10, Thai Nguyen 26, Quang Ninh 01, Hanoi 12, Hung Yen 01, Ninh Binh 12, Thanh Hoa 179, Nghe An 377, Ha Tinh 643, Quang Tri 39, Hue 06).

- Flooding, landslides, traffic jams at 6,819 points on roads in the provinces of Lao Cai, Son La, Phu Tho, Tuyen Quang, Lang Son, Cao Bang, Thai Nguyen, Bac Ninh, Hanoi, Thanh Hoa, Nghe An, Ha Tinh, Quang Tri. Currently, localities mobilize machinery and equipment to overcome and continue to count landslide and flood points.

- Landslides of 20,772m of embankments, river banks, and coastlines (Thanh Hoa 1,160m, Nghe An 212m, Quang Tri 3,500m, Hue 15,900m).

- Regarding electricity: 8,264 electric poles were broken and fell (concentrated in Thanh Hoa, Nghe An, Ha Tinh); Thanh Hoa, Nghe An, Ha Tinh, and Quang Tri provinces had nearly 2.7 million customers without electricity, and power had been restored to 1,937,091 customers. Currently, 774,559 customers are still without electricity and are continuing to be restored (Thanh Hoa 97,359 customers, Nghe An 469,317 customers, Ha Tinh 195,757 customers, Quang Tri 12,126 customers).

- Telecommunications: the dedicated level 2 data transmission network (from province to commune) lost connection due to power outage 268/722; Public network 1,103/8,879 BTS stations lost contact; communication meets the work of local authorities at the commune level but the quality is not as good as usual.

- Regarding trees: 64,881 trees were broken (concentrated in Thanh Hoa, Nghe An, Quang Tri).

The total preliminary economic damage in some provinces is 11,455 billion VND (Lao Cai 2,750 billion VND, Son La 528 billion VND, Nghe An 1,627 billion VND, Ha Tinh 6,000 billion VND, Quang Tri 550 billion VND).

Localities are reviewing, synthesizing the damage and organizing to overcome the consequences./.