

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

(Updated until 6h00' on 03/10/2025)

1. Typhoon near the East Sea (Typhoon Matmo)

At 01:00 on October 3, the center of the storm was at about 15.8 degrees North latitude; 123.7 degrees East longitude, in the sea area east of Luzon Island (Philippines). The strongest wind near the center of the storm is level 9 (75-88km/h), gusting to level 11. Moving in the West Northwest direction, speed about 25km/h.

Forecast:

- By 01:00 on October 4: The center of the storm is at 17.7 degrees North latitude; 118.5 degrees East longitude, in the sea area east of the North East Sea; wind force level 10, gusting to level 12; moving in the West Northwest direction, speed 25km/h, entering the East Sea and likely to strengthen. Dangerous area: Latitude 16.0N-20.5N; East of longitude 116.5E; Level 3 RRTT: sea area east of the North East Sea.

- By 01:00 on October 5: The center of the storm is at 19.2-N-113.3E; in the sea area northwest of the North East Sea, about 340km East Southeast of Leizhou Peninsula (China); wind force level 12, gust level 15; moving in the West Northwest direction, speed 20-25km/h, likely to continue to strengthen. Dangerous area: Latitude 16.5-21.5N; East of longitude 111.0E; Level 3 RRTT: sea area north of the North East Sea.

- By 01:00 on October 6: The center of the storm is at 21.1N-108.8E; in the area north of the Gulf of Tonkin; Wind force level 11, gust level 14; moving in the West Northwest direction, speed 20-25km/h. Dangerous area: Latitude 17.0N; Longitude 107.0-115.5E; RRTT level 3: Northwest sea area, North East Sea area and North Gulf of Tonkin area.

2. Rainfall

Rain during the day (19:00/01/10 - 19:00/02/10): The provinces of Tuyen Quang, Nghe An, Ha Tinh, An Giang and Ho Chi Minh City have moderate to heavy rain, commonly 20-40mm, some stations have heavy rainfall such as: Phuong Do (Tuyen Quang) 71mm, Don Phuc 1 (Nghe An) 85mm, Son Lam (Ha Tinh) 61mm, Ho Da Bang (Ho Chi Minh City) 70mm, Thoi Binh (An Giang) 75mm.

- Rain at night (19:00/02/10 - 07:00/03/10): The Southern region and the Northwestern provinces have moderate to heavy rain, commonly 20-40mm; Some stations have more rainfall: Phuoc Tan (Dong Nai) 100mm, Minh Lap (Dong Nai) 74mm, Duc Hoa (Tay Ninh) 46mm, An Phu (Ho Chi Minh) 46mm, Thuan Hung (Can Tho) 45mm.

- Rain in 3 days (7pm/29/9 - 7pm/02/10): The northern mountainous provinces and from Thanh Hoa - Hue have 100-300mm of rain, some stations have heavy rain such as: Cam Lien 2 (Thanh Hoa) 374mm, Kim Anh (Hanoi) 327mm, Phuong Do (Tuyen Quang) 368mm, Ho Thau 1 (Tuyen Quang) 330mm.

2. Flooding

Heavy rains have caused major floods on rivers from the North to Ha Tinh at levels LV2 to LV3, some places above LV3; Lo River in Ha Giang is 106.47m, above LV3 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 LV3 is 2.33m and exceeding the historical flood by 0.08m.

Updated water levels at 05:00/03/10 on some major rivers are as follows:

- Tuyen Quang: on Lo River at Tuyen Quang station 25.78m (at 01:00) below LV3 0.22m, falling; at Ha Giang station 101.41m (at 1:00) above LV2 0.41m, falling; on Gam River at Chiem Hoa station 39.59m (at 1am) above LV3 1.59m, falling; at Bac Me station 121.89m (at 5am) above LV1 0.89m, falling (peaked 127.2m at 01am/01/10).

- Lao Cai (at 1am): on Thao River at Lao Cai 78.88m, below LV1, falling (peaked 83.44m at 05am/30/9); at Yen Bai 28.61m below LV1, falling (peaked 34.39m at 11am/30/9).

- Bac Ninh: on Thuong River at Cau Son 14.99m (at 1am), above LV1 0.99m, falling; Cau River at Dap Cau 6.46m (at 4am), 0.16m above LV3, falling, at Phuc Loc Phuong 8.05m (at 4am) 0.05m above LV3, falling.

- Ninh Binh (at 4am): on Hoang Long River at Ben De 3.84m, 0.16m below LV3, falling (peaked at 4.88m at 01am/01/10); at Gian Khau 3.72m, 0.02m above LV3, falling (peaked at 4.16m at 19pm/01/10).

- Thanh Hoa: on Chu River at Bai Thuong 14.06m (at 1am) below LV1, falling (peaking at 18.57m at 1am/September 30), at Xuan Khanh 5.79m (at 1am) below LV1, falling (peaking at 10.78m at 2am/September 30); on Yen River at Chuoi 2.63m (at 1am), below LV2 0.17m, falling (peaking at 4.85m at 1am/September 30); on Ma River at Giang 3.51m (at 1am), below LV1, falling (peaking at 6.97m at 9am/September 30); Len River at Cu Thon is 3.35m (at 1am), 0.15m below LV3, falling (peaked at 5.63m at 3pm/9/30); Buoi River at Kim Tan is 12.43m (at 6am), 0.43m above LV3 (peaked at 14.33m at 6am/01/10, exceeding the historical flood by 0.08m), falling; at Thach Quang is 14.61m (at 1am), 0.61m above LV1 (peaked at 17.93m at 3pm/9/30), falling. - Nghe An (at 4am): on Ca River at Muong Xen 138.7m above LV1 0.70m (peaked at 142.11m at 8am/9/30) is going down, at Con Cuong 27.89m below LV1, going down (peaked at 31.11m at 1am/9/30), at Cho Trang 4.49m above LV2 0.49m is going down, Lam River at Yen Thuong 9.28m above LV3 0.28m, going down.

- Ha Tinh (at 4am): on Ngan Pho River at Son Diem 6.22m, below LV1, (peaked at 11.52m at 1am/9/30), going down; Ngan Sau River at Chu Le 7.65m, below LV1, going down (peaked at 13.05m at 1am/9/30); La River at Linh Cam 4.75m, 0.25m above LV1, slowly falling. Forecast: flood on Cau River continues to fall and is below LV3; on Lo River, Thuong River continues to fall and is above

LV2; on Thai Binh River and downstream of Ca River will fall slowly and be below LV2.

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

Tuyen Quang Hydropower Reservoir opens 04 bottom spillway gates and Thac Ba Hydropower Reservoir opens 02 surface spillway gates, Son La Hydropower Reservoir opens 01 bottom spillway gate at 8:00 a.m. on October 3.

Irrigation reservoirs

- Northern region: There are 2,495 reservoirs, with an average storage capacity of 68-98% of the design capacity. Currently, there are 137 damaged reservoirs; 52 reservoirs are being repaired, upgraded, or 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, with an average storage capacity of 76% - 99% of the design capacity. There are currently 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 30 reservoirs operating through spillway regulation with a flow rate of 100 m³/s or more, specifically spillway discharge/flow to reservoir (m³/s): Bac Ha: 329/511; Bac Me: 126/1440; Bao Lam 3: 522/610; Bao Nhai Level 1: 139/408; Bao Nhai Level 2: 134/407; Chiem Hoa: 3150/3150; Nam Luc: 509/730; Nho Que 1: 449/560; Nho Que 2: 494/578; Pa Ke: 101/197; Phieng Con: 99/119; Phuc Long: 336/604; Sap Viet: 112/146; Song Chay 3: 121/143; Song Chay 5: 102/152; Song Chay 6: 190/249; Song Lo 2: 2473/2500; Song Lo 4: 2439/2439; Song Lo 6: 3283/3283; Song Lo 7: 3481/3481; Song Lo 8B: 3714/3714; Song Mien: 330/357; Song Mien 5A: 778/817; Thac Ba: 670/888; Thac Ba 2: 950/960; Thai An: 549/618; Thuan Hoa: 531/580; Tuyen Quang: 2450/2460; Van Chan: 230/290; Vinh Ha: 305/514.

- North Central region: There are 11 reservoirs operating to regulate the flow through spillways with a flow rate of 100 m³/s or more, specifically the spillway flow rate/flow to the reservoir (m³/s): Ba Thuoc 1: 498/922; Ba Thuoc 2: 651/1266; Ban Ang: 356/406; Ban Ve: 367/834; Chi Khe: 1185/1587; Dong Van: 633/833; Hua Na: 876/1032; Khe Bo: 1009/1497; Nam Mo: 249/282; Nam Non: 382/710; Trung Son: 304/716.

4. Dike situation

a) Sea dykes and river dykes in the provinces from Quang Ninh to Hue City:

- On the sea dykes and river dykes in the provinces from Quang Ninh to Hue, there are 62 key locations of weak dykes (Quang Ninh: 02, Hai Phong: 08, Hung Yen: 09, Ninh Binh: 09, Thanh Hoa: 01, Ha Tinh: 15; Quang Tri: 14; Hue: 04); there are 05 dyke and embankment projects under construction (Hai Phong: 02; Hung Yen: 01; Ninh Binh: 01; Hue: 01).

The sea dykes are currently designed to withstand storms of level 9-10, tides of 5%; there is a high risk of being unsafe when strong storms of level 12, gusts of level 15 make landfall during high tides (exceeding the design level).

- Localities need to pay attention to reinforcing and ensuring safety for key locations of weak dikes that have been damaged by storm No. 10 and dike lines facing the sea, with low dike elevations such as: Section K10-K15 of Ha Nam dike facing the sea, narrow beach (Quang Ninh); Nam Hai dike and revetment (collapsed, damaged dike roof, revetment) belonging to sea dike line II (Hai Phong city); Dong Minh dike and revetment, sea dike 6 damaged, sagging dike roof (Hung Yen province); Hai Thinh 3 sea dike section belonging to Hai Hau sea dike had landslides, collapsed dike roof at K25+570 due to storm No. 10, Con Tron, Hai Thinh sea dike lines, Thinh Long revetment (Ninh Binh province) are often eroded, damaged by storms and tides; Quang Nham sea dike (old Quang Xuong district), Hai Binh sea dike (old Tinh Gia district); Bai Ngang sea dyke, Quynh Long sea dyke suffered from collapse, landslides of the dike roof and body due to storm No. 10 and the Dien Thanh sea dyke, Quynh Tho sea dyke, Long - Thuan sea dyke facing the sea, vulnerable (Nghe An); Nghen left dyke, Cam Nhuong dyke, Hoi Thong dyke frequently suffered landslides due to storms and tides (Ha Tinh), Vinh Thai sea dyke, Ben Hai left estuary dyke (Quang Tri); ... and dike and embankment projects under construction.

b) Dike incidents due to storm No. 10 and floods:

Due to the impact of storm No. 10 and floods after the storm, 45 dike incidents occurred, specifically: Bac Ninh (02 incidents), Hanoi (01 incident), Ninh Binh (15 incidents), Thanh Hoa (15 incidents), Nghe An (04 incidents), Ha Tinh (04 incidents) and Quang Tri (02 incidents); increased by 18 incidents (Phu Tho: 02, Ninh Binh: 14, Thanh Hoa: 02) compared to the report on October 1. Localities have handled the first hour; measures need to be taken to continue reinforcing and ensuring safety to cope with storm Matmo and post-storm floods.

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, Hanoi, 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 3, storm No. 10 and floods, landslides, and tornadoes have caused the following damage:

- In terms of people: 65 people dead and missing.

+ 51 people died (Lao Cai: 07 people due to floods and landslides; Cao Bang: 06 people due to floods and landslides; Tuyen Quang: 04 people due to landslides; Son La: 02 people due to landslides; Lang Son: 02 people due to landslides and floods; Thai Nguyen: 03 people 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: 04 people drowned; Ha Tinh: 01 person fell while repairing a house; Quang Tri: 04 people on the BV92754 ship at Cua Gianh; Hue: 01 person was swept away by the water; Da Nang: 01 person was swept away by the flood);

+ 14 people missing (Lao Cai: 03 people were swept away by floods and landslides; Tuyen Quang: 03 people due to landslides; Quang Tri: 08 people on 02 ships at Cua Viet, Cua Gianh and people were swept away by the flood);

+ 164 people were injured (Lao Cai 10, Cao Bang 03, Thai Nguyen 02, Quang Ninh 09, Hai Phong 09, Hung Yen 17, Ninh Binh 61, Thanh Hoa 06, Nghe An 14, Ha Tinh 17, Quang Tri 15, Hue 01).

- Return home:

+ 349 houses collapsed (Lao Cai 30; Son La 04; Tuyen Quang 33; Lang Son 03; Cao Bang 05; Ninh Binh 101; Thanh Hoa 93; Nghe An 74; Quang Tri 06);

+ 172,104 houses were damaged or had their roofs blown off (Lao Cai 867 houses, Son La 168 houses, Phu Tho 2,167 houses, Tuyen Quang 680 houses, Lang Son 191 houses, Cao Bang 387 houses, Thai Nguyen 326 houses, Bac Ninh 02 houses, Quang Ninh 21 houses, Hai Phong 235 houses, Hung Yen 379 houses, Ninh Binh 3,186 houses, Thanh Hoa 1,953 houses, Nghe An 62,745 houses, Ha Tinh 95,310 houses, Quang Tri 3,396 houses, Hue 91 houses); + 65,820 flooded houses (Lao Cai 8,888, Son La 431, Tuyen Quang 6,321, Lang Son 250, Cao Bang 4,784, Thai Nguyen 238, Hanoi 1,784, Ninh Binh 6,430, Thanh Hoa 14,404, Nghe An 16,997, Ha Tinh 5,275, Quang Tri 18). Currently, the water is receding and localities continue to count. - Regarding agriculture and forestry: 88,999 hectares of rice, crops, and other plants were damaged (Lao Cai 4,123 hectares, Son La 646 hectares, Phu Tho 7,646 hectares, Tuyen Quang 3,774 hectares, Lang Son 604 hectares, Cao Bang 6,528 hectares, Thai Nguyen 2,254 hectares, Bac Ninh 1,675 hectares, Hai Phong 947 hectares, Hanoi 2,742 hectares, Hung Yen 870 hectares, Ninh Binh 483 hectares, Thanh Hoa 15,296 hectares, Nghe An 27,731 hectares, Ha Tinh 1,303 hectares, Quang Tri 8,418 hectares, Da Nang 37 hectares); 50,268 hectares of forest.

- Regarding livestock: 2,265 cattle, 519,713 poultry were dead or swept away.

- Aquaculture: 17,002 hectares of aquaculture were damaged (Lao Cai 103 hectares, Son La 16 hectares, Phu Tho 2,094 hectares, Tuyen Quang 285 hectares, Lang Son 03 hectares, Thai Nguyen 04 hectares, Bac Ninh 90 hectares, Hung Yen 50 hectares, Ninh Binh 242 hectares, Thanh Hoa 4,102 hectares, Nghe An 8,762 hectares, Ha Tinh 1,045 hectares, Quang Tri 205 hectares, Da Nang 01 hectares).

- Regarding irrigation: 58,361m of canals were eroded and damaged; 203 irrigation works damaged

- Regarding education: 1,486 schools were affected and damaged (Lao Cai 39, Son La 21, Phu Tho 38, Tuyen Quang 45, Lang Son 03, Cao Bang 18, Thai Nguyen 26, Quang Ninh 01, Hanoi 12, Hung Yen 01, Ninh Binh 06, Thanh Hoa 205, Nghe An 377, Ha Tinh 643, Quang Tri 39, Hue 12).

- Flooding, landslides, traffic jams at 7,573 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 landslides and flooding points.

- Landslides of 33,176m of embankments, river banks, and seashores (Tuyen Quang 7,017m, Thanh Hoa 410m, Nghe An 2,129m, Quang Tri 3,500m, Hue 15,900m).

- Regarding electricity: 8,827 electric poles were broken and felled (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; electricity has been restored to 2,243,119 customers, and 468,531 customers are still without electricity and are continuing to be restored (Thanh Hoa 28,664, Nghe An 296,837 customers, Ha Tinh 138,235 customers, Quang Tri 4,795 customers).

- Telecommunications: 268/722 dedicated data transmission networks (from provinces to communes) lost connection due to power outages; 1,103/8,879 BTS stations lost contact with the public network; communications met the work of local authorities at the commune level but the quality was not as good as usual.

- Regarding trees: 83,159 trees were broken (concentrated in Thanh Hoa, Nghe An, Quang Tri).

The total preliminary economic damage in some provinces is 15,864 billion VND (Lao Cai 2,750 billion VND, Son La 528 billion VND, Phu Tho 150 billion VND, Tuyen Quang 3,000 billion VND, Cao Bang 750 billion VND, Hai Phong 16 billion VND, Nghe An 2,120 billion VND, Ha Tinh 6,000 billion VND, Quang Tri 550 billion VND). Localities continue to review, update, summarize the damage and organize to overcome the consequences./.