**PREDICTIONS OF METEOROLOGICAL TRENDS BETWEEN SEPTEMBER 2020 AND JANUARY 2021**

**1. ENSO Phenomenon**

Currently, ENSO is still determined to be in neutral state yet more inclined to cold phase with standard deviation of sea surface temperature in NINO 3.4 region in the first week of August as -0.60C which is 0.50C down compared to early July 2020.

It is forecasted that the ENSO will continue to remain neutral yet more inclined to cold phase in about one month; after that, the sea surface temperature in the central Pacific region (Nino 3.4) continues to be colder and is likely to transition to La Nina state in the last months of 2020 and early 2021 with a probability of 60%, yet the intensity is weak and is less likely to prolong.

**2. Storms/tropical depressions and dangerous weather phenomena**

It is forecasted that the number of storms and tropical depressions in the East Sea and their possible direct impacts on Vietnam mainland from now on to the end of 2020 are likely to be approximate the yearly average. Specifically: There is a possibility of 8-10 storms and tropical depressions in the East Sea, including 04-05 storms and tropical depressions having direct impacts on Vietnam mainland, mainly in the Central and Southern regions.

Be prepared for the occurrence of such dangerous weather phenomena as thunderstorms, lightning, whirlwinds, hail during season transition period; strong winds at sea due to Southwest monsoon in the second half of August and September 2020 in the southern sea area of ​​the East Sea; Northeast wind of cold air over the North of East Sea in December 2020.

*In the first months of 2021, the Central Highlands and Southern region are likely to have unseasonal rains.*

**3. Forecasts of rain and heat waves**

Heat waves are likely to happen in the 2nd half of August 2020 in the North and Mid-Central region, yet not severe. Cold air is likely to affect early than usual; the average winter temperature during 2020-2021 will tend to be lower than that of 2019-2020 winter.

Prevailing rainfall in the Northern Region in September 2020 is averagely 10-25% higher than the yearly average. From October 2020 onwards, rainfall will be 15-30% less than the yearly average. In October 2020: 15-30% higher than the yearly average. In November 2020: 20-40% higher than the yearly average. Therefore, heavy rains in the Central region will concentrate in October and November 2020.

**4. Hydrological developments**

Flood peaks in 2020 of rivers in the Northern region are commonly above alarming level 1 and 2 which is higher than in 2019. Particularly flood peaks of Thao River, Hoang Long River and small rivers are at alarming level 2 and 3. The downstream water level in Red River in Hanoi and downstream level of Thai Binh River is below alarming level 1. Flash floods and landslides are high risks to mountainous areas, especially in the Northwest of Vietnam.

Flood peaks of rivers in the Central and North Central Highlands regions are likely to be higher than in 2019. The flood peaks at the downstream of main rivers in North Central region in 2020 will be approx. yearly average; Water levels of rivers from Quang Binh to Binh Thuan and the Central Highlands region are around alarming level 2 and 3, some even exceeding alarming level 3 or equivalent to yearly average flood peak. Small rivers and streams and upstream areas of rivers are likely to observe flashflood and landslides.

Mekong floods will arrive late. Total flow through upper monitoring stations on Mekong river is likely to experience a deficit of 15-30% compared to the yearly average.

Flood peak at the upstream of Mekong River in 2020 is likely to be at alarming level 1 and 2 and may happen in the late September. The probability of big flood is small. However, floods may rise more quickly than usual in a short time due to heavy rains and this can negatively affect the Mekong Delta.

In the first months of dry season 2020-2021, upstream water level of the Mekong River will be strongly influenced by tides. Saltwater intrusion in river mouths in the Southern region will be higher than the yearly average, yet not as severe as in 2019-2020.

**5. Oceanography**

Over the Southern sea, it is necessary to watch out for storm surge of 2.0-3.0m due to the impacts of Southwest monsoon.

The Southern Coast will experience 04 high tides on 18-21 September, 15- 19 October, 14-18 November and 13-17 December. The record high tide can be measured on 18 October 2020 which is also the time of Northeast monsoon, leading to floods in the Southern coasts.