## 1. Introduction

Hydrology and Water Resources Services Division (HWRSD) is one of the four Divisions of the Center, responsible for generating and disseminating information and services related to hydrology and water resources.

The Division collects and archives daily data from the river gauging station located across the country, to keep updated on the status of the flow, the Division is coming up with Monthly Flow Monitoring Report in selected hydrological stations located in different river basins. Currently, following stations (figure 1) are selected for monthly monitoring of the flow;

- 1. Lungtenphu station in Wangchhu,
- 2. Kerabaristaion in Punatsangchhu basin and
- 3. Bjizam station in Mangdechhu basin.

The main objective of the report is to understand and keep updated flow status of the river and further provide information on the abnormal data observation while comparing with the historical flow data.



Figure 1 Map showing the selected stations for Flow monitoring

## 2. Methodology

The flow of May 2020 is compared to the flow of historical May months. The historical flow data is available from 1991 to 2018. The measures of dispersion such as mean, maximum and minimum flows are computed to make comparison.

## 3. Observation

During the May month the average flow (i,e 19.90 cumecs) was higher than the average of historical may months (i,e 12.87 cumecs). The maximum flow was observed lower than the Maximum flow in May of the past (starting from 1991). While Minimum flow was observed to be higher in May 2020 compared to the Minimum flow during May observed in the past.



Figure 2Daily flow status of May 2020 as compared to historical daily flow data of May months

Table 1 Table of flow statistics comparison between May of 2020 and historical May months (1991-2018).

Statistics	May 2020 (m <sup>3</sup> /s)	Historical May (1991- 2018)m <sup>3</sup> /s
Mean flow	19.90	12.87
Max flow	54.74	661.13
Min flow	9.08	4.07

## 4. Summary

- 1. The mean flow of May 2020 is observed to be 7.03 m<sup>3</sup>/s higher compared to the mean of Normal flow (Historical May).
- 2. The minimum flow for May 2020 is observed to be higher by 5.01 compared to the historical May flow.
- 3. The maximum flow for May 2020 didn't exceed the maximum of the past flow during May months.