1. Introduction

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

The Division collects and archives daily data from river gauging stations 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. Kerabari station in Punatsangchhu basin
3. Wangdirapids station in Punatsangchu basin
4. Kurjey station in Chamkharchhu basin
5. **Kurizampa station in Kurichhu, Manas basin**
6. Sumpa station in Kurichhu, Manas basin
7. Panbang station in Dangmechhu, Manas 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.

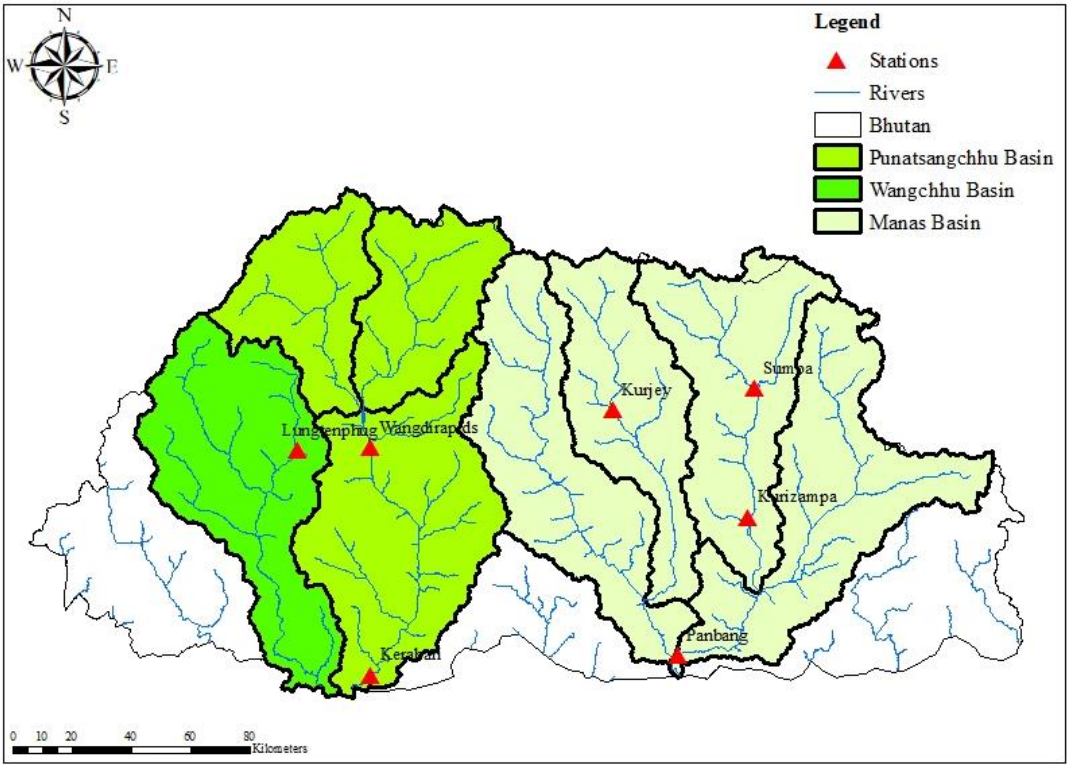

Figure 1 Map showing the selected stations for Flow monitoring

2. Methodology

The flow of October 2022 is compared to the flow of historical October months. The historical flow data is available from 1991 to 2021. The measures of dispersion such as mean, maximum and minimum flows are computed to make comparison.

3. Observation

The mean flow recorded for the month of October 2022 was 334.44m^3/s which is higher than the mean Historical October months (i.e., 258.88m^3/s). Maximum flow of October 2022 (i.e., 611.05m^3/s) was observed to be lower than the maximum flow observed in the past October months (i.e., 1201.1m^3/s). Meanwhile Minimum flow of October 2022 (i.e., 178.33m^3/s) was observed to be higher than the past October months (105.29m^3/s).

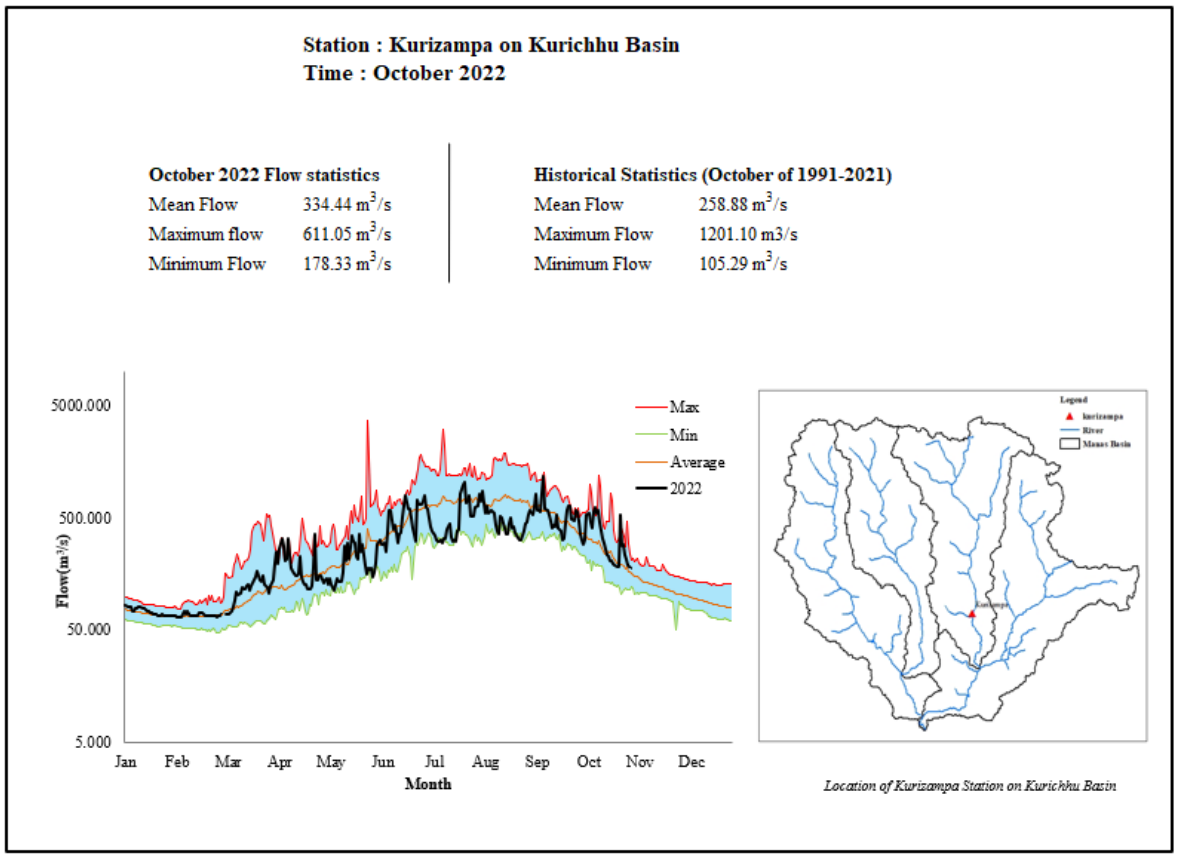

Figure 2 Daily flow status of October 2022 as compared to historical daily flow data of October months

Table 1 Table of flow statistics comparison October of 2022 and historical October months (1991-2021).

Statistics	October 2022 (m^3/s)	Historical October (1991-2021) m^3/s
Mean flow	334.44	258.88
Max flow	611.05	1201.10
Min flow	178.33	105.29

4. Summary

1. The mean flow of October 2022 is observed to be 75.56m^3/s higher than the mean of Normal flow (Historical October).
2. The Maximum flow for October 2022 is observed to be lower by 590.05m^3/s compared to the Maximum flow observed in the past October months.
3. The Minimum flow of October 2022 was higher by 73.04m^3/s from the past October months.