Water bodies data: Descriptive data analysis using R

The data on waterbodies of some states are downloaded from data.gov.in. Using the data, complete the following tutorial.

General Instructions

- *All plots should have the x- and y-axes labelled.*
- *All plots should be given a title.*

1. Load the data on waterbodies (Waterbodies.csv).
2. Plot the minimum pH level of all the waterbodies of Goa – as a scatter plot, and as a histogram.
3. Plot the maximum pH level of all the waterbodies in Gujarat. On the x-axis, the names of the waterbodies should be printed. Plot this as a bar plot.
4. Plot the mean pH against the total coliform (Mean : < 5000 MPN/100ml) for all waterbodies in Madhyapradesh. Do you see any correlation?
5. Plot the mean pH against the total coliform (Mean : < 5000 MPN/100ml) for all waterbodies in Madhyapradesh and Rajasthan – next two each other so that a comparison can be made.
6. Calculate the mean and median of the pH of all lakes in Goa and Gujarat. Are they very different? From this data, can you guess if you expect any outliers? If yes, can you make a dotchart and box-plot and identify these outliers?
7. Plot two pie charts: one for the minimum and the other for the maximum amount of nitrates in all waterbodies of Goa. They should be next to each other.
8. Make two dot charts of the mean nitrate levels of all waterbodies of Rajasthan and Gujarat and plot them one below the other for easy comparison.