

1, Figure 5) may be due to process of anaerobic digestion of dead aquatic plant and fluctuation in the DO.

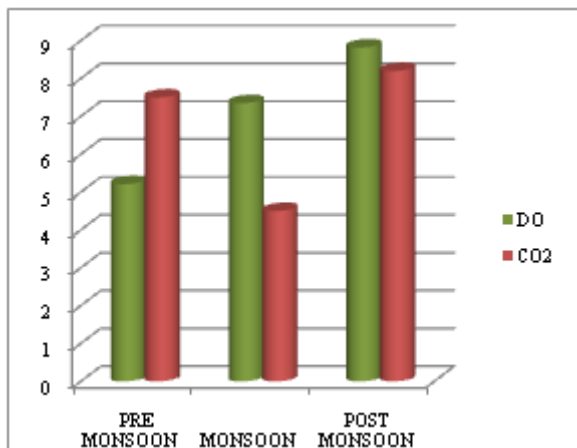


Figure 5: Histograms showing DO and CO₂ content of the lake

- Conductivity** - Electrical conductivity of water indicates pollution. In the present study the EC values were maximum in pre monsoon and minimum in the monsoon (Table 1; Fig 6) (Mohamed and Korium, 2009). The high value may be due to bathing, domestic waste sewage, low level of conductance may be due to dilution of salts by rain water (George and Koshy, 2008; Koshy and Nair, 2000, Helen et al., 2008).
- Salinity**—The salinity act as a limiting factor in the distribution of living organisms and its variation is caused by dilution and evaporation and influence the distribution of fauna (Gibson 1982). High values were observed during the pre-monsoon, and lowest in the post monsoon (Table 1; Fig 6). Salinity higher in the pre monsoon may be due to evaporation leaving high content of chloride. It can be correlated with conductance, as chlorides increase electric conductance increases.
- Turbidity** - Values were maximum during monsoon and minimum in post monsoon (Table 1; Fig 6). Higher values in monsoon may be due to the addition of the influx of run off during the monsoon (Shashikala, 2007; Patil and Auti, 2005; Sahib, 2004).

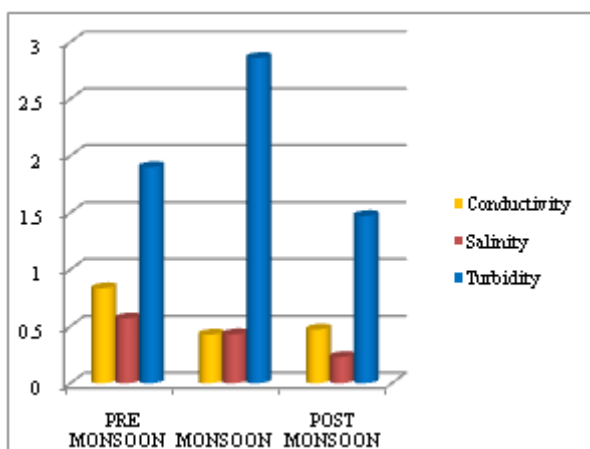


Figure 6: Histograms showing Conductivity, Salinity and Turbidity content of the lake.

- Alkalinity**— Alkalinity is a measure of the buffering capacity of a solution or the capacity of bases to neutralize acids without an increase in pH. Alkalinity is due to carbonate (CO_3^{2-}), bicarbonate (HCO_3^-) and hydroxides. Maximum values were observed in post monsoon and minimum in monsoon (Table 1, Fig 7). This is in accordance with the Roy et al. (2010).
- Hardness**—Hardness is used as an indicator of water quality which depends on the concentration of carbonates and bicarbonates, salts of calcium and magnesium or sulphate chloride or other anions. It is found to be highest in the monsoon, (Table 1; Fig 7). The result showed that water of the lake is hard (Thorat, 2000; Patil and Auti, 2005). Increase in hardness of water may be due to leaching of road and dissolution by flood waters as reported by Reshma Bhalla et al. (2007).

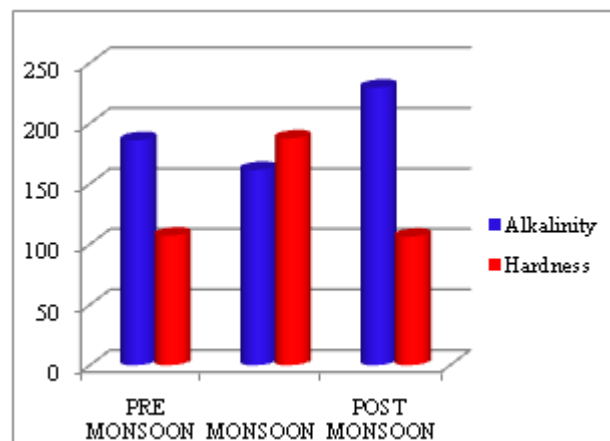


Figure 7: Histograms showing Alkalinity and Hardness content of the lake

- COD**—It is a method to determine the organic load of water body i.e. susceptibility to oxidation. It is maximum in post – monsoon and minimum in pre – monsoon (Table 1, figure 8). Enhanced level of COD may be due chemical pollutants (Patra and et al., 2010).
- Acidity**—It is higher in pre – monsoon and lower in monsoon. Higher level may be due to low level of water and lower due to dilution of water by rain (Table 1; Fig 8).
- Silicates**—Maximum in post – monsoon may be attributed to the increased level of organic decomposition which adds silica to water body (Table 1; Fig 8).

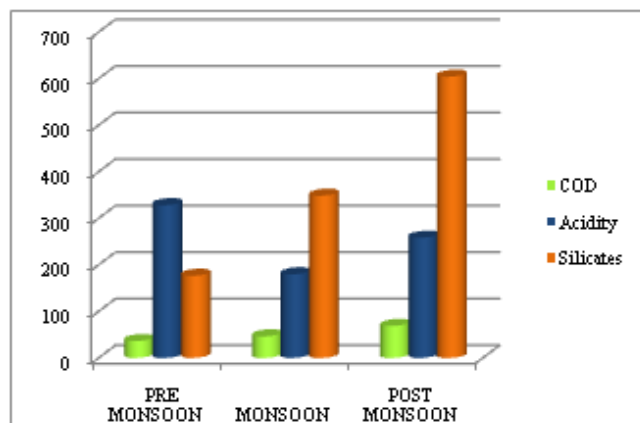


Figure 8: Histograms showing COD, Acidity and Silicates content of the lake

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Author Profile



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