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Impact Of Domestic Activities On Water Quality Parameters Of Kasari Freshwater Tank, Tal- Shahuwadi, Dist- Kolhapur (M.S.), India.

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Abstract:

Kasari dam is mainly used for drinking, agricultural, domestic and industrial purpose. Human activity around the dam causes alteration in water quality parameters. The present study work is carried out to demonstrate effect of domestic activity on water quality of the dam. In this study work physico chemical parameters are analyzed monthly for the year 2018. In this investigation temperature, pH, turbidity, Total dissolved solids, conductivity and dissolved solids were analyzed. A considerable change in water quality parameters has been shown by this study work.

Key Words: Domestic activities, Kasari dam, Physico chemical parameters.

Introduction:

Aquatic ecosystem is very complex systems based on inter relationship between biotic and abiotic factors. Aquatic ecosystem is refuge for various plant and animal species also it is precious resources of fresh water. But it has been long used for domestic activities. The water reservoirs haven't capacity of self purification leading to destruction of this important ecosystem. Now day's large population influencing by these water resources. This ecology imbalance also effect ecological diversity of the dam. These are such many places influenced by domestic activities. Many workers denoted changing nature of water reservoirs such as Kumar (1985), Ruttner(1953) and Walia (1983). The present investigation shows the change in water quality of Kasari dam for year 2018.

Study area:

The present research work has been carried in freshwater tank of Kasari Freshwater, Tal- Shahuwadi, Dist- Kolhapur (MS), India. Kasari Tank is medium Irrigation tank having the catchment area 32.28 sq.km. This dam is constructed in 2006. This dams water get benifited to 61 villafes from Panhala and Shahuwadi tahsil from Kolhapur district.

Materials and methods:

For the investigation four different sampling stations were selected such as A,B,C and D for sampling . The samples were collected monthly throughout the year of 2018. The parameters liable to change with respect to place and time such as temperature and pH analyzed on the spot. The samples were collected in morning period. Samples were collected in 2 liter plastic can. The samples were brought to Laboratory and analyzed by using standard methods suggested by the Mohanta B.O. and Patra A.K. (2000), also APHA (1985). For turbidity method suggested by Sharma and Pandey (1998), Conductivity by Jaffer, Javed S.(1991), DO by Shivnikar et, al,(1999), temperature by Arvind et, al. were used.

Result and discussion:

The collected samples were analyzed by using standard methods and the results were compared with each sampling stations and normal standard values. The results are shown below.

1. **Turbidity:** Turbidity value is slightly more at each sampling stations due to domestic activities and agricultural wastes.
2. **pH :** Alkaline pH was recorded at sampling station 'A'. It was highest due to effluents such as alkaline salts and decomposition of organic matter.
3. **Temperature:** Highest temperature recorded at sampling station 'A' due to degradation of organic matter and domestic waste at the sampling station.
4. **Conductivity:** Domestic activity adds various salts in the water which causes increase in conductivity value. Maximum conductivity recorded at sampling station 'A'.
5. **Dissolved oxygen:** Dissolved oxygen values are more due to domestic activities.
6. **Total Dissolved solids:** Total dissolved solids were more at sampling stations 'A' due to most domestic activity at this sampling station.

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