

## Climate Alteration in all Seasons Clearly Visible in Diamond Harbour

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### Abstract

Climate change is observed keenly for 12 months in Dimond harbour. Atmospheric Temperature alters surface temperature of river Hooghly. It only changes pH and salinity level for 12 months. Residents like phytoplanktons, zooplanktons, nektons, benthos shows alteration of numbers in nettings. Physicochemical parameters like Temperature, pH and Salinity show variation in surface water of Hooghly river. People living there are doing business with fish catch and sell those in Kolkata, Howrah and Haldia [1,2].

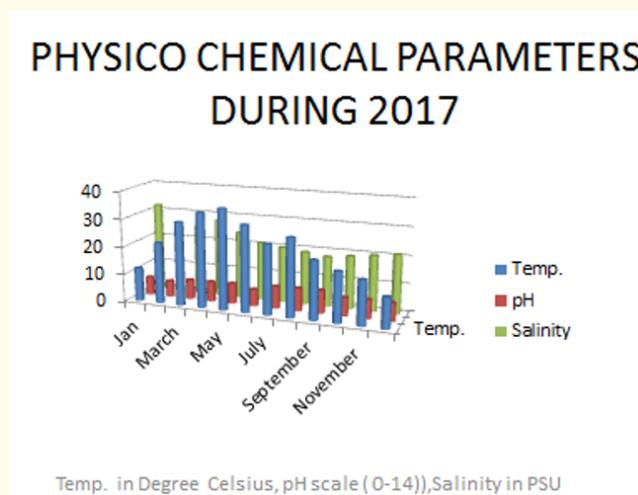
**Keywords:** Climate; Atmospheric Temperature; pH; Salinity

### Introduction

Temperature fluctuation alters number of residents of river Hooghly. One year observation of surface water Temperature measured by Thermometer, pH by pH meter and salinity by Refractometer shows variation throughout the year. People living over there make profit during monsoon seasons (July-October) whereas they are losing profit during summer (April-June). pH become decreasing during summer time and water turns acidic. Fish migrates to suitable hypo saline condition to get better water. Due to over population and transportation air accumulates dust particles which mixes in nearby water of river Hooghly. Carbon monoxide increases temperature also.

### Materials and Methods

Water samples collected from sites (D.H) and measured instantly shows following result.



**Figure 1:** Graph shows fluctuation during 12 months (2017).

Climate change alters 3 parameters throughout the seasons and affect fish catch during summer. During monsoon precipitation reduce Temperature and pH level increased and salinity level decreased for suitability to live in hypo saline condition. Gonadal maturity attains and they are profitable to sell in market as they attain table size (2 - 4 kgs) People depends for protein source from live fish and likes to eat very much in their diet. Protein helps to repair damaged cells in human system and produce new protein chain to DNA replication.



Figure 2: Hooghly river near Diamond Harbour.



Figure 3: Map showing Diamond Harbour.

### Result

More people are engaged to earn money from river water to get fish variety everyday. Climate change some times fluctuates profit but they get foreign money too by exporting shell fish. Commercially important fishes like *Hilsa ilisha*, *Lates calcarifer*, *Liza parsia*, *Liza tade*, *Notopterus chitala* are quite profitable fish.

### Discussion

Climate change impact on river residents are now under research to improve the situation. Many industries located near Diamond Harbour also release their effluents to the nearing river water change temperature of water and causes hazards to biota. Living creatures need better environment to sustain. Food chain gradually deteriorating due to release of hot chemicals (Both organic and inorganic). It need adequate treatment before release to river water (US EPA" 85) [3-5].

### Conclusion

Climate change in Diamond Harbour is clearly observed for twelve months. Temperature rise and prolonged summer time alters pH and salinity profile and hampers biota of river water. People depends fish catch and make profit. Climate change sometimes cause many problems to lead earning and healthy lifestyle. Cyclonic weather near Bay-of-Bengal also causes depletion of fish catch. To cope up situation more plantation beside road will be helpful in future. Greenhouse gas (NO, CO, SO<sub>2</sub>, etc.) effect causes global warming and depletion of ozone layer.

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