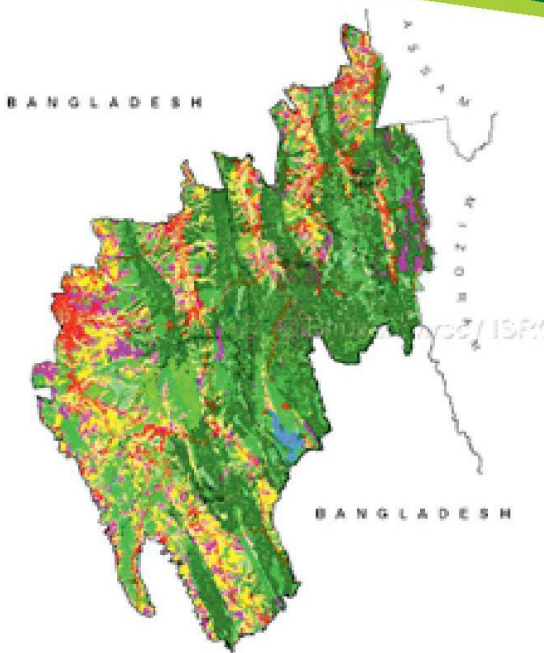


COVID-19

Improvement of
Air & Water Quality in Tripura

Pre **Lockdown** and
During **Lockdown**



Janata Curfew at Agartala

Tripura Climate Change Cell

Department of Science, Technology & Environment
Government of Tripura

Details of Lockdown Period due to COVID-19 (Year 2020)

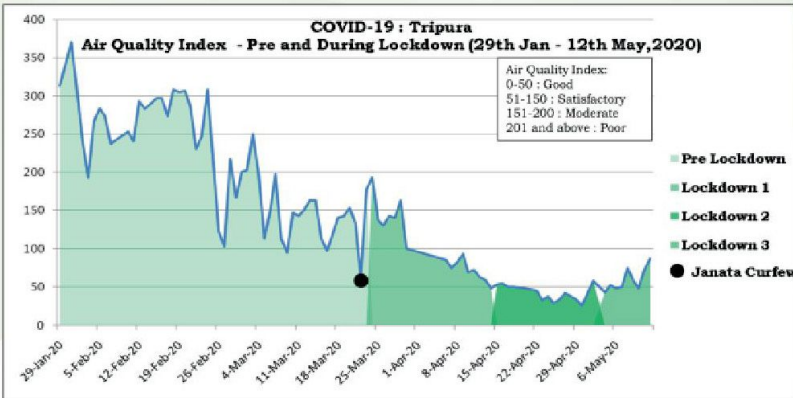
Lockdown Period	Movement of Vehicle	Construction Work	Industrial Activities
1 st (24 th March- 14 th April)	Suspended	Suspended	Closed
2 nd (15 th April-3 rd May)	Suspended	Suspended	Closed
3 rd (4 th – 17 th May)	Suspended	Partially Permitted	Partially Permitted
4 th (18 th – 31 st May)	Partially Permitted	Permitted	Permitted
5 th (Unlock-1) (1 st – 30 th June)	Permitted	Permitted	Permitted

COVID-19 Impact on Environment (Facts, Figures & Analysis)

Particulars	Details
Duration of Data Collection	th 29 January - th 12 May, 2020
Data Source	Tripura State Pollution Control Board
Method of Data Collection	Air - Continuous Ambient Air Quality Monitoring station. Water – Surface Water Collection and analyzed
Parameters	Air – AQI, PM10, PM2.5, NH3, CO and NO2. Water - DO, BOD, Fecal Coliform and Total Coliform

AIR

Air Quality Index (AQI)



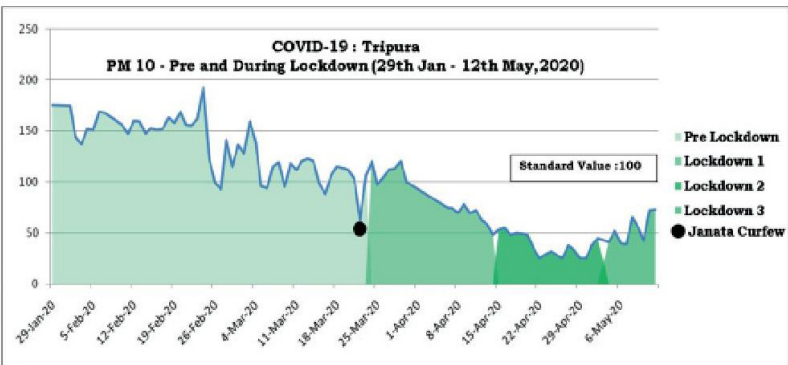
Lockdown 1 : 24th March – 14th April, 2020

Lockdown 2 : 15th April – 3rd May, 2020

Lockdown 3 : 4th May – 12th May (Contd. to 30th May), 2020

Janata Curfew : 22nd March, 2020

Particulate Matter (PM 10)



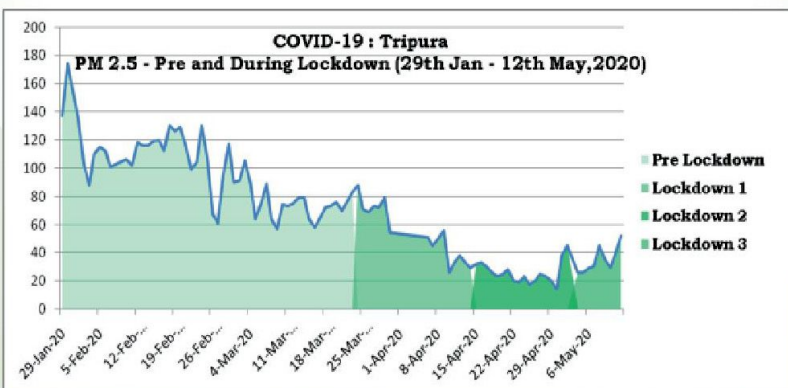
Lockdown 1 : 24th March – 14th April, 2020

Lockdown 2 : 15th April – 3rd May, 2020

Lockdown 3 : 4th May – 12th May (Contd. to 30th May), 2020

Janata Curfew : 22nd March, 2020

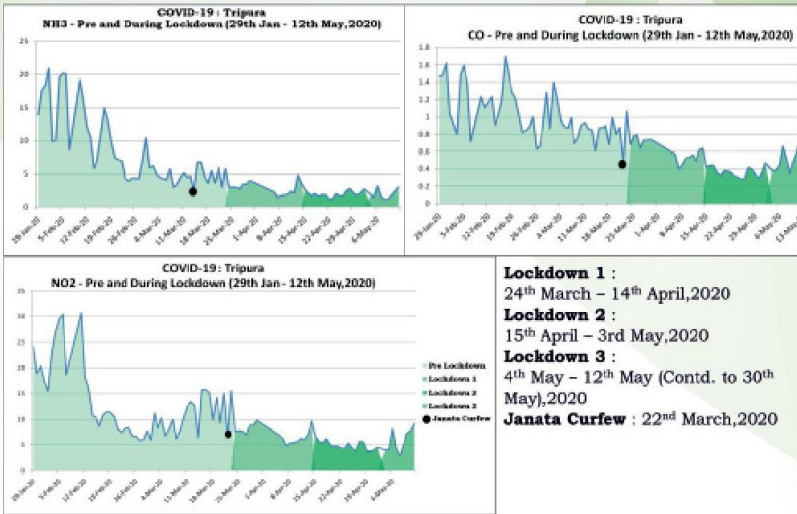
Particulate Matter (PM 2.5)



Lockdown 1 : 24th March – 14th April, 2020

Lockdown 2 : 15th April – 3rd May, 2020

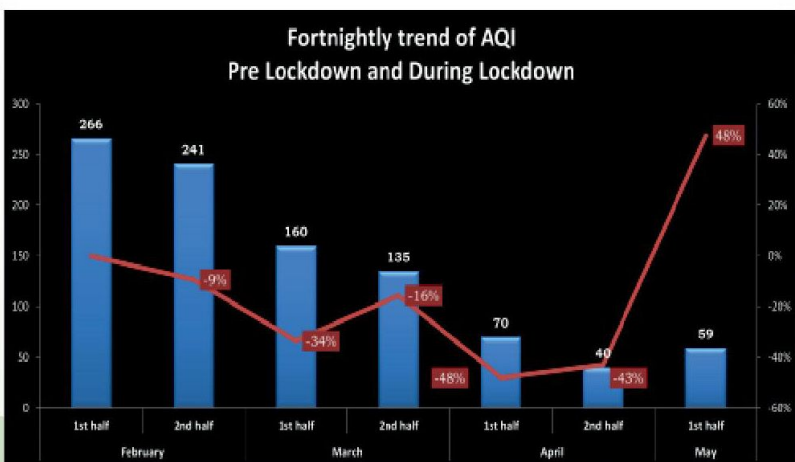
NH₃, CO, NO₂



Changes in Pre and During Lockdown

AIR

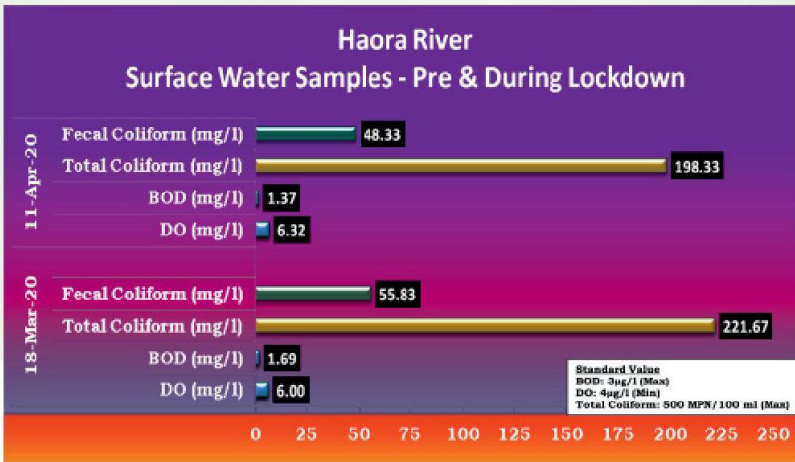
1. The spatial pattern of Air Quality Index in pre and during-lockdown phases shows significant improvement of Air Quality.
2. Improvement in air quality is identified just after 5-6 days of commencing lockdown.
3. Among the selected pollutants, concentrations of PM₁₀ and PM_{2.5} have witnessed maximum reduction in compare to the pre-lockdown phase.
4. During one day Janata Curfew on 22nd March, 2020 there was a significant improvement noticed in Air Quality index i.e. good as well as other pollutant parameters also.



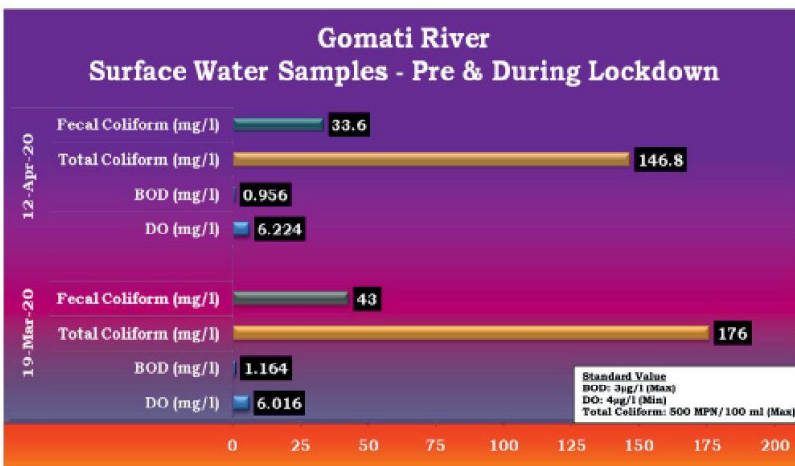
Air Quality Index (AQI) improved from 266 (1st half of February, 2020) to 40 (1st half of April, 2020) i.e. air quality improved by 84%.

WATER

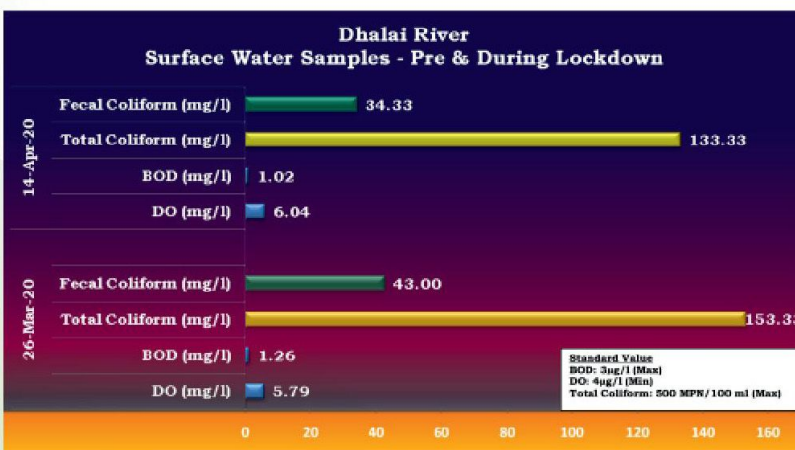
Analytical Results of Surface Water Sample from Haora River



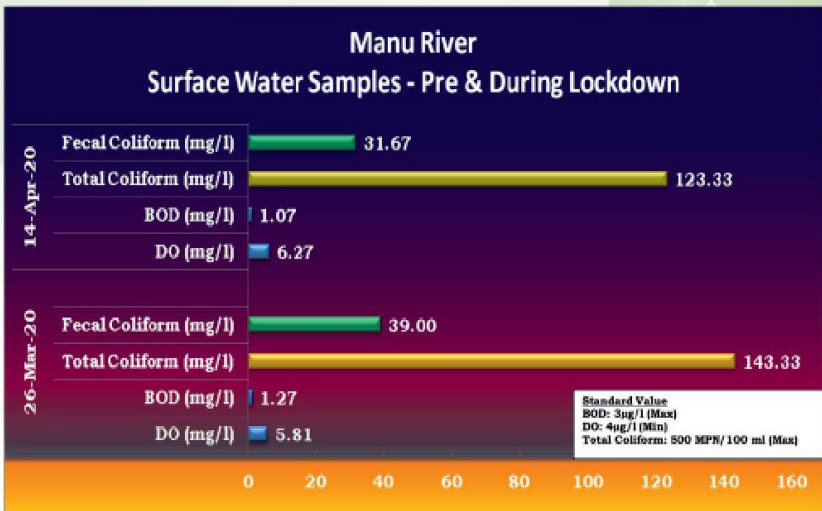
Analytical Results of Surface Water Sample from Gomati River



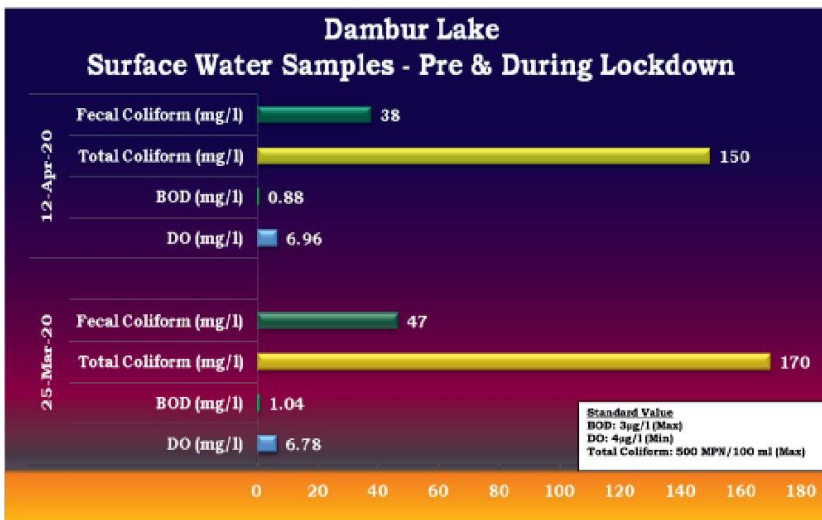
Analytical Results of Surface Water Sample from Dhalai River



Analytical Results of Surface Water Sample from Manu River



Analytical Results of Surface Water Sample from Dambur Lake



Changes in Pre and During Lockdown

WATER

1. Slight improvement in the water quality of 4 (four) major rivers and one lake with respect to the important parameters i.e. DO, BOD, Fecal Coliform and Total Coliform.
2. The Bio-Chemical Oxygen Demand (BOD) shows permissible limit within 3mg/l and also decrease trends in pre and during lock down.
3. Total Coliform also clearly depict significant declining trend with safe range i.e. 500 MPN.
4. Increase in the Dissolved Oxygen (DO) indicates improvement of water quality due to lockdown.

MEASURES FOR SUSTAINING ENVIRONMENTAL GAINS:

- ❖ Strict enforcement of environmental norms and rules & regulations governing pollution.
- ❖ Improvement of waste management, management of industrial discharge, river water quality and emission levels.
- ❖ Dust, smoke & other air pollution prevention measures shall be provided on the construction site like Sand, loose soil, cement and murrum stored on site should be covered adequately, water spraying should be used for grinding and stone cutting, unpaved surfaces and loose soil should be adequately sprinkled with water to suppress dust.
- ❖ All construction and demolition debris should be stored at the site before they are properly disposed. No construction should be allowed to obstruct the natural drainage.
- ❖ There should not be wastage of fresh water other than the essential requirement of a construction project approved under the local buildings by-laws and also no ground water should be used during construction phases.
- ❖ More Water recycling, water recharging and rainwater harvesting to increase/maintain the ground water table.

- ❖ Use of plastic Carry Bags & other single use plastics must be stopped. Paper, cloth, Jute etc. make bags can be use as alternatives.
- ❖ Littering in any form must be avoided. Proper disposal of solid/liquid waste should be made as per existing rules/guidelines.
- ❖ Use of more CNG Vehicle and Public Transport System should be encouraged to curve the air pollution. Cycling is a good option for short distance travel.
- ❖ For proper management of solid waste, biodegradable and non-bio degradable waste should be segregated at household level/by the waste generator.
- ❖ Planting more trees and take proper care of them.



Tripura Climate Change Cell

Department of Science, Technology
& Environment

Vigyan Prajukti O Paribesh Bhawan,
P.N. Complex, Gorkhabasti,
Agartala, West Tripura, PIN-799006

Phone no : (0381)-2325228

Fax no : (0381)2307751

Email: dste-tr@gov.in