

PANDEMIC COVID-19 AND ENVIRONMENT – THE STORY SO FAR

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It's a usual morning as I had earlier, rouse and having tea with ToI (Times of India). ToI is articulated with the news about freshness of rivers, air quality and fearless movement of wildlife creatures. "Lockdown leads to sharp decline in pollution in two major river The Ganga and Yamuna"- within per week of 21-day long lockdown in India that started in the dead of night on March 24, 2020, several reports in print, electronic and social media do rounds showing remarkable improvements in water quality in many rivers with within the country. Because the tea was on the point of finish my mind is on the mode of full stack of questions and eagerness to understand and gather more information about the story behind that. Most of those news are on the premise of oculus observations within the kind of pictures and videos that's spread on media platforms by people. There's no afterthought that COVID-19 strikes our life brutally in every aspects globally but we cannot deny that the lockdown period reveals fresh air, Cleaner River and massive relief to the wildlife species and habitat from human's irresponsibility. On Annunciation Day, the primary day of the lockdown, the common PM 2.5 levels decreased by 22% and dioxide — which comes from burning fossil fuels — dropped by 15%, consistent with pollution data analyzed by the middle for Research on Energy and Clean Air. Some of the reports quote pollution control boards' officials and experts with some analytical data. BOD the biological oxygen demand much needed parameter for aquatic life, is improving significantly day by day as lockdown extended by the GoI. The rivers in North India Ganga and Yamuna are much tormented by the industries, developmental activities and plenty of much human procedures. Recently report on the Ganga River's health stating the incredible improvement in Rishikesh and Haridwar on account of closing down of hotels, tourism activities aside from industrial units. Even in lower stretches of river between Kanpur and Allahabad, there are several reports stating significant change in river health pre and post lockdown scenario. The country's capital Delhi is now revealing new story, at Nizamuddin Bridge, the analysis results showed that pH was 7.2 as compared to 7.3 in March, BOD levels were 5.6mg/l from 57 mg/l and COD was 16mg/l as compared to 90mg/l previously. DO levels weren't detected.

"The results don't meet the primary criteria of being fit bathing with relevance DO and BOD," it said. At Okhla barrage (upstream), the report said the results don't meet the prescribed standards for bathing. The pH was 7.1 as compared to 7.2, BOD was 6.1mg/l from .27mg/l, COD level was 18mg/l from 95 mg/l. DO was 1.2 mg/l, but couldn't be compared as values for March couldn't be detected. "Though water quality doesn't meet the primary criteria, there was substantial reduction in concentration of BOD (77.41) and COD (81.05%) levels, which can be attributed to no industrial effluent discharges and therefore the stretch of about 7.5km (after Nizamuddin Bridge) that may be helping in self-purification of river Yamuna,". The report has attributed the post-lockdown overall improvement within the water quality to numerous factors, including release of abundant water and availability of dilution within the river; no industrial effluent discharge (only about 35.9MLD); good penetration of radiation in water body, thanks to the washing out of bottom sediments and colloidal kind of pollutants; and reduced act like throwing of spiritual offerings, materials and solid waste; bathing and washing of garments within the river.

Besides the closure of industries and reduced human action too has contributed to the higher health of the river," the committee concluded in its report. According to the real time water monitoring data of the Central Pollution control panel (CPCB), out of the 36 monitoring units placed at various points of the Ganga river, the water quality around 27 points is suitable for bathing and propagation of wildlife and fisheries. The analysis indicates that there's considerable improvement in water quality, in terms of DO (dissolved oxygen), BOD (biochemical oxygen demand) and COD (chemical oxygen demand), when put next with the pre-lockdown period, in any respect monitored locations.

According to Prof PK Mishra from the department of chemical engineering at the IIT Banaras Hindu University-30% of the overall BOD load is thanks to industries along the river Ganga, which amounts to 130 to 150 tons per day. The overall effluent dumped into the Ganga is around 6500 to 6700 MLD (in) UP stretch and onwards. Around 10% is toxic load from industries, which is adequate to approximately 700 MLD. Since all the main polluting industries are closed thanks to the lockdown, this toxic load isn't entering the river now. Commenting on the problem, noted environmentalist and Padma Bhushan awardee Anil Prakash Joshi said, "Corona pandemic is simply a mode of telling us what quantity we've got disturbed the character and one must see what the governments couldn't neutralize last 30 years, nature has worn out just few days". We believe that the shutting down of industrial/factory units has led to reduction in discharge of industrial harmful effluents into the rivers, breathing fresh life in pollution laden streams. It's true that there is completely silence, no brutal sounds of machine penetrating our ears in industrial belts and there's no chemical by products or industrial pollution reaching the rivers, or any water bodies'. The present scenario should shape our future approach of how authorities should work towards rejuvenation.

However there are other factors contributing to the change in the scenario, the improvement in water quality and flows in the rivers in India now is not just because of halt in industrial effluents entering the rivers. These factors including good and prolonged snowfall spells in mountain area during winter season accompanied with recurring hailstorm. Now with temperature going up, snow melt is also contributing to river flows. Rivers are known to have self-cleansing properties if allowed to flow.

Lessons for government agencies

For years, the central governments and states as well have not efficiently and sincerely worked for revival of rivers in India. Despite plans and funds the number of polluted river stretches have increased from 302 in 2016 to 351 as per 2018 assessment of CPCB. Another report of Union Environment Ministry submitted to NGT in April 2019 submitted that the total sewage generation in the country is 61,754 MLD while the treatment capacity is 22963 MLD and the remaining 38791 MLD sewage is flowing into river without treatment. Moreover, the government plans are heavily centered on creating infrastructure (STPs, CETPs, sewers, surface cleaning), funding and technology. The coronavirus pandemic, and India's subsequent lockdown, offer several lessons in river hydrology, ecological flow, pollution and the role of the community. What 'Namami Gange', the Centre's flagship program to clean the Ganga, couldn't achieve in several years nature has done in few weeks/months. How then can the government justify spending Rs 7,000 crore to clean this river with only few positive outcomes?

When a river can clean itself and regain its original flows, the use of tertiary systems like sewage treatment plants (STP), costing several hundred crores of rupees, appears fallacious. STPs can't be the solution – a lesson we also refused to learn when other countries stopped using them to clean their water bodies, but should learn now as we stand humbled by a tiny virus. This is less because STPs can't handle the volume and more because their maintenance and upkeep quickly outweigh their usefulness. It's crucial that we revive the rivers' hydrology without knowing how the fish and marine plant population, the river banks, the livelihoods of people living nearby and their socio-economic profile are all linked with the multitude of ecosystems they're a part of. The outcomes of the pandemic clearly indicates that their approach wasn't scientific and environmentally viable, with communities as the principal stakeholders were the major reasons of failure.

In the final word we shall conclude that such PANDEMIC teaches the Human being that nature can revive itself. We the best creature of god creating problems and try to find solution through the scientific manner. The solution is in the problem only, why we need to spent crores of rupees if we use natural resources for our need only not for our greed. We need to act smartly once the economic activities starts after the lockdown and keep the rivers as pure as they are now. This should be on priority because if we are able to protect the nature by bartering the same with economic benefit, we are not at lost. If nature survive then only we can survive.

References:

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- Central Pollution control panel (CPCB)
- Rejuvenation on Yamuna River
- National Mission for Clean Ganga