

Pollution Control In India

1. Like any developing country, India too is plagued with pollution. After gaining independence in these 61 years the following factors have been contributing in the pollution of water, environment and soil:
 1. Migration of rural population to urban areas creating slums and unsanitary conditions.
Result – Poor environmental condition.
 2. Discharge of untreated sewerage and industrial waste water in nalas and rivers.
Result – Pollution of water.
 3. Unscientific disposal of solid waste by municipalities or Local Bodies.
Result – Pollution of atmosphere.
 4. Discharge of affluent from automobiles whose number is increasing every year.
Result – Air Pollution increasing every day.
 5. Poor governance system on the control of pollution of water, environment and sanitary conditions.

2. Thus we can divide the factor of pollution on the following areas :

- (1) Water Pollution.
- (2) Environmental Pollution
- (3) Soil Pollution

3. A Short Study

- 3.1 To improve health, you need clean drinking water, good sanitary condition, and clean environment. Availability of drinking water is less than 1 percent of total water demand.
- 3.2 Eleventh plan has a target to cover Rural Water Supply under Bharat Nirman Programme as :
 - 55,067 not covered
 - 2.8 lakh slip back
 - 2.17 lakh quality affected
- 3.3 **Urban water supply:** The Tenth Plan projected a requirement of Rs. 28,240 crores for achieving 100 percent coverage with drinking water supply facility.
- 3.4 In the Eleventh Five Year Plan special stress has been laid on healthy nutrition, pollution and drinking water.
- 3.5 Various controlling methods were evolved to control pollution.
- 3.6 Tenth Plan was a period of extensive review of environmental process and law. The first National Environment policy was put into place in May, 2006.

The Eleventh Plan must build on this experience by integrating environment consideration into a policy making in all sectors.

- 3.7 Environment is a residual central subject, since regulation and enforcement in this area cannot be handled by central government alone. This responsibility of maintenance rests at all level of governments.
- 3.8 To control pollution the following steps have been taken.
 - (1) Environment (Protection) Act. 1986.
 - (2) National River Conservation Plan.
 - (3) Water (Prevention and Control of Pollution) Act 1974.
 - (4) Central Pollution Control Board formed.
 - (5) State Pollution Control Boards formed.

They need restructure to be converted into statutory Environment Protection authorities with the mandate of developing regulations, standards and up graded facilities for enforcing compliance.

3.9 Improving Air Quality

Air (Prevention and Control of Pollution) Act 1981 was brought into force for regulating air quality through State Pollution Control Boards in the States.

The Central P.C. Bd has identified 2301 medium and large scale industries polluting, out of which 17 were in highly pollution categories.

The requisite pollution control device are reported to have been provided in 1927 units while 235 have been closed while 139 are still defaulting.

The C.P. CBd monitor 308 station covering 125 cities/towns in 28 states and 4 UTs in India to collect time to time data.

In the Tenth Plan – a programme for real time quality monitoring for cities with population above 1 million was covered.

- 3.10 Automatic air quality monitoring system are operational in Jodhpur, Patna and Sholapur while at Kanpur, Varanasi, Jharia and Kolkata will be operational soon.

As many as 76 cities/towns are found to exceed acceptable limits of parameter mainly due to vehicular and industrial pollution measured in terms of ambient air quality in residential, industrial and sensitive areas for SO₂, Oxide of nitrogen, suspended particulate matters (RSPM), ammonia carbon mono-oxide. New Delhi, Mumbai, Kolkata have failed to meet WHO standards.

- 3.11 **Action Plan:** On advice of the Supreme Court of India an action plan has been drawn for identification of 16 cities. CPCB and SPCB have been asked to evolve such plans.

- 3.12 **During the Eleventh Plan :** National Air Quality Plan has been given a due recognition.

This is intended to cover :

- (i) City based Clean Act Plan (CAAPs)
- (ii) Pollution Control and Prevention in Industrial Area Programme.

This will help increasing early warning system and thus enforcing the plan target of confirming air and water quality to WHO standards.

- 3.13 In the Eleventh Plan great stress been laid on water, sanitation and clean environment. The total outlay would close to Rs. 1,00,000 crores (Urban Sector has Rs. 75,000 crores, Rural Sector has Rs. 25,000 crores)

4. Causes of Pollutions

- 4.1 **Water Pollutions:** The W.(P.C.P.) Act 1974 was enacted to regulate water through the state PCBs. The CPCB has established a national wide network for water quality monitoring comprising 1019 stations in 27 states and six UTs. The monitoring is done on monthly or quarterly basis for surface water and on half yearly basis for ground water.

The monitoring network covers 200 rivers, 60 lakes, 5 tanks, 3 ponds, three creeks, 13 canals, 17 drains and 321 wells.

- 4.2 Different standards of quality water is required for drinking, bathing and irrigation.

- 4.3 Total of 86 polluted stretch have been identified.

- 4.4 SSI are totally devoid of treating their industrial waste or scheme of effluent treatment plant as initiated in June 1990. 17 Units have been identified as highly polluting industries.

Large and medium scale industries have established treatment plants to be covered under law but their total efficiency is doubtful. Due to poor governess they violate norms without caring for citizens' health. Tanneries along with Ganga River at Kanpur is the living example. They are responsible for polluting Ganga in a big way. Pollution Ganga commences from Aligarh while Yamuna joins at Allahabad.

- 4.5 Untreated sewerage water dumped into our rivers is a major cause of river pollution. Total sewerage generated in India is about 33000 MLD (million liter per day). Against this the

treatment capacity is only 6190 MLD and 40% of that capacity is in Delhi. This is a very ghastly picture.

- 4.6 NRCP (National River Conservation Plan) has covered 160 town along with 34 polluted river stretches in 20 states and has created 2055 LMD of Sewerage Treatment Plant (STP) capacity till now, which is about 38% of the approved capacity of 5435 MLD to be setup under the plan.
- 4.7 All major feeding rivers like Ganga and its tributary, Tapti, Krishna, Sabarmati are highly polluted, rest are polluted by below 50% standard.
- 4.8 22KM stretch of Yamuna, Delhi between Wazirabad and Okhla is critically polluted. Sewerage treatment plant leaves a gap of 460 MLD. Strangely existing STPs are able to treat only 1600 MLD (against discharge of 2960 MLD) due to dipilidated conditions of trunk sewerage. This stretch too is also not fit for bathing. Smt. Sheela Dixit while gaining Chief Ministership had declared to make Delhi river water free from pollution within five years which could not be achieved till today.

5. Environmental Pollution

- 5.1 The factors contributing to environmental pollution which relates to:
 - (a) Clean air
 - (b) Clean living condition
 are described here in after.
- 5.2 During the Eleventh Plan – National Air Quality Plan is recognized which will cover:
 - (i) City based Clean Act Plan (CCBAPs)
 - (ii) Pollution Control and Prevention in Industrial Area Programme.

This will help in creating early warning system and thus enforcing plan target of confirming air and water quality to WHO standards.

- 5.3 To cover above objective – the entire Air Quality Monitoring network should be expanded from current 308 stations to 1000 stations.
- 5.4 **Vehicular Pollution:** Vehicular pollution is a major source of air pollution in all the cities of India. Due to sudden release of controlled licence manufacturing capacity to open unlimited manufacturing capacity has been contributing in air pollution. Compare these figures:

Before 1972 Two Wheelers: Licenced Capacity 2 lakh per year
Cars & Automobiles : Licenced Capacity 1 lakh per year

This also did not create strain on foreign exchange due to import of Petrol & oil, and pollution remained under control.

The picture today stands as under :-

- (1) After economic reform of 1991-19, the automotive industry has shown a growth by leaps and bound @ 17%.
- (2) In 2005-06 the passenger car crossed 1 million mark.
- (3) Various categories of automobiles in Tenth Plan period crossed the 10 million mark in 2006-07 (ref. Vol III pare 7.1.129)
- (4) The Eleventh Plan has a target of doubling this production.
- (5) Production of various categories

	06-07	011-12
Commercial Vehicles	520	604
Passenger Vehicles	1238	1850
Multi Unutility Vehicles	306	321
Two Wheeler	8494	18934
Three Wheeler	556	903
Total	11,065	22,612

Imagine the effect of pollution, so will be created in cities by increase of such a production. In Delhi alone 1 lakh vehicles are being registered every year. The similar picture exist for Jaipur.

5.5 Measures Advised

1. The use of lead in gasoline should be immediately banned. Similarly, many other carcinogenic chemicals that are being added by Petroleum Companies for enhancing the power of fuel should be made an offence subject to prosecution.
2. There should be uniform fuel quality and emission standard across India. Auto Fuel Policy must be accelerated and tightened to cover all cities to implement Euro IV standard.
3. Total stoppage/ban should be imposed on private vehicles using diesel as fuel. Rather manufacturing of cars on diesel should be banned.
4. Government may encourage use of clean fuels like CNG, LPG and Hydrogen in automobiles. Specially all buses and trucks in cities should be run of CNG.
5. A National task force should be established to develop the use of hydrogen gas as an alternative fuel for cars. The task force may suggest alternative methods.

6. Industrial Pollution

- 6.1 As many as 76 cities/towns are found to exceed acceptable limits of parameters measured in terms of ambient air quality in residential, industrial and sensitive areas for sulphur dioxide, oxide of nitrogen, suspended particular matters, ammonia, carbon-mono-oxide. New Delhi, Mumbai, Kolkata have failed to meet WHO standards as far as RSPM is concerned.
- 6.2 Private industries all over India violate the norms laid down under the Act and regulated by State Pollution Central Board. Only public sector undertakings try to adhere to the laid norms. Poor governance by SPCB is responsible for not stopping total pollution. Private sector is able to create influence over violations. Supreme Court had to intervene. On its advice 16 cities have been identified and CPCB and SPCB have been asked to evolve a proper action plan.

CPCB monitor 308 stations covering 115 cities/towns in 28 states and 4 UTS in the country to:

- (i) determine status and trend of air quality
- (ii) asses health hazards and damage to material
- (iii) develop preventive and corrective measures
- (iv) understand the natural cleaning process

7. Poor Sanitary Conditions

- 7.1 Sanitary conditions in the urban areas are not upto mark while rural areas badly lack in total toilet facilities. Responsibility lies over ULB (Urban Local Bodies) to maintain city health.
Water and sanitation diseases are responsible for 60 percent environment health burden. Major cause affecting children in majority below the age of 5 years is the diarrhoea. Break of epidemic like cholera, hepatitis, chickengunia are due to lack of proper sanitary conditions in urban and rural areas.

- 7.2 Direct relationship exists between water, sanitation, health, clean drinking water, access to food and knowledge about hygiene.

- 7.3 Every year due to bad hygiene cases occur as under:

Diarrhea	Typhoid	Viral Hepatitis
10 million	7.2 lakh	1.5 lakh

- 7.3 Every year due to bad hygiene cases occur as under:

- 7.3.1. Cases of death due to water borne diseases are:

Disease	Cases	Death
Diarrhea	1,00,79,263	3134

Hepatitis	1,46,433	673
Typhoid	7,26,484	651
Malaria	18,16,342	963
T.B.	7,89,135	7073
ARI (Auto Res. Inf.)	2,58,07,722	3467

Note : Death figures are those which have been recorded in hospitals. They are disputable. Incidents may be double since those who died in homes have not been recorded.

Solid Waster Management

7.4 Environmental pollution is also created by municipal solid waste. It is estimated that about 1,15,000 MT solid waste is generated in the country. Per Capita waste generation in city varies from 0.2 kg to 0.6 kg per day. This is increasing by 1.3% per year.

The growth of urban population is growing by 3 to 3.5% per annum. The collection efficiency ranges between 70 to 90% in major towns where in smaller towns it is below 50%. It is estimated that Urban Local Bodies (ULB) spent about Rs. 500/- to 1500/- per ton on solid waste collection and disposal.

7.5 The collection efficiency for solid waste ranges between 70 to 90 % in major metro cities where in smaller towns it is below 50%. Hardly any attention is given to scientific and safe disposal of waste. Land fill sites have exhausted in most of the municipalities. Respective local bodies have no funds to acquire new land.

7.5.1 Solid waste management (SWM) falls under state list. Hence obligation for disposal of SWM lies on ULB. 74th constitutional amendment gives constitutional authority for local self government institutions specifying powers and responsibilities

7.5.2 Very few ULB have evolved a long term SWM effective system for their respective cities. Ministry of Environment and Forest, Govt. of India has notified Municipal Solid Waste Rules, 2000 to tackle this vital problem.

7.5.3 Community awareness is lacking, no efforts have been made in past.

7.5.4 In most of our cities unauthorized housing colonies have crept up-devoid of sewerage facilities and waste disposal service.

7.5.5 Storm water draining system is inadequate causing flooding of cities like Mumbai, Kolkata, Jaipur, Delhi etc.

7.5.6 Thus soil pollution is created by poor solid waste management, industrial waste harmful for human and animal bodies, poor sewerage system. Contaminating areas around cities where vegetable and food items are grown.

7.6 Most of the Vegetable grown around cities are health hazards specially all green vegetables.

8. Suggestions tendered

8.1 Strict measures should be adopted to arrest soil pollution and disposal of solid waste. All the local bodies should be asked to imposed health tax over the house tax or urban property tax to meet the on growing demand for disposal of solid waste.

8.1.1 All the urban local bodies must evolve immediately scientific method for disposal of solid waste to arrest pollution.

8.1.2 Strict measures should be adopted to control harmful industrial waste and penal punishment should be prescribed over defaulters.

8.2 All to urban local bodies should install total sewerage treatment plants. It should be made obligatory upon all ULB's. They may be asked to levy suitable tax from the capable citizens or flats and building owners.

8.3 Pollution of rivers should be stopped with iron hands as relates to the health of masses of the nation. Results of Ganga Action Plan or Yamuna Action Plan are there.

- 8.4 Pollution by automobiles
- (1) Registration for 10 years should be made for all heavy vehicles, then put off road.
 - (2) In city bus service – all vehicles should run of CNG.
 - (3) Manufacturing of car's run on diesel should be banned.
 - (4) All the petroleum companies should be bound to sell lead free petrol and ban to be imposed to mix harmful chemical.
 - (5) Private car's and light vehicles may be permitted as policy to run of CNG. Rather manufacturing of cars or light vehicles based on CNG should be encouraged.
- 8.5 ONLY ADOPTION OF STRICT MEASURES CAN STOP POLLUTION. VIOLATION MAY BE MADE A PENAL OFFENCE.
- 8.6 Automatic air quality monitory system should be opened over all cities with more than 2 million population.
- 8.7 Mandatory provision should be made binding all the major town local bodies to establish total treatment of sewerage. Violation should be made a penal offence over Chairman and Executive Officer. 2 years period may be given for implementation.
- 8.8 Monitoring by CPCB should be extended over all cities with population of above 5 lacs to check industrial pollution.
- 8.9 Automotive industry should be controlled to work under licensed capacity to arrest drain on foreign exchange plus pollution too.

CREATING AWARENES

- 8.10 Awareness creating machinery should be evolved to create awareness amongst masses warning them against the ill effect of sanitation, water pollution, and soil pollution. Doordarshan is a good media. Nukkar nataks through schools may be encouraged.
- It has been observed that nukkar nataks in past have created a lasting effect. Some fund allocation in the eleventh plan may be made.

Example.

We have about 6000 sub tehsil areas. So you will need about 3000 teams playing dramas all over block areas for about a month. Costing @ Rs. 10000/- per team per show. Thus total one show will cost about Rs. 3.00 crores. Such shows are to be carried for 30 days. Thus costing Rs. 90 crores. Even spending of Rs. 200 crores for 60 shows per team on this project will be worth while. IPTA is polularly known for holding such dramas and created deep lasting affect through ammatuare drama players. Activity can be routed through The National School of Drama, Delhi. This will also provide impetus to ammatuare drama artists.

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