

GREEN VERDICTS-2021

A report on key judgements by NGT in 2021



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FOREWORD



Environmental pollution is increasing at an alarming pace due to rapidly growing population, industrialization, energy needs, waste and crop residue burning, mining, modern agricultural practices, etc. Environmental degradation negatively impacts our ecosystem, public health and the global climate. A clean environment is a foremost requirement to sustain a healthy planet and human lives. Thus, it is a need of the hour to monitor compliances appropriately to meet the environmental challenges in the fast-developing

world and act on time to minimize the death and disease and conserve natural resources and biodiversity.

We have seen how the COVID-19 pandemic has emerged as a global health concern, which seems to be linked with the over-exploitation of earth ecosystems. This requires us to focus on the green-recovery in the post-pandemic era. Further, regulatory bodies and policymakers should ensure the strict compliance of environmental standards to ensure sustainability. Hence, it is of utmost importance to preserve our environment, which further improves public health, climate and sustainability.

I commend the efforts of Dr. Suman Mor, Department of Environmental Studies, Panjab University, Chandigarh and Dr. Ravindra Khaiwal, Department of Community Medicine and School of Public Health, Postgraduate Institute of Medical Science & Research, Chandigarh, for coming with this report on a 'Key 2021 Judgements by National Green Tribunal' to show the way how to address various environmental challenges.

I am sure that the Green Verdict 2021 pictorial booklet will be helpful to create awareness and strengthen the action for a sustainable future for all, including the future generation.

(Justice Adarsh Kumar Goel)
Chairperson NGT

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Disclaimer: This document is based on the major NGT judgments passed in 2020 and presented some facts and figures for current relevance to protect and preserve the environment.

Authorized to visit NGT website for detailed judgments.

Preamble

The Year 2021 can be considered as 'Revival' in view of entire World suffered with epidemic. Still, countries including India, are regaining the momentum to strengthen the Economy and Development. India witnessed tough time where not only health of the citizens is to be protected against the epidemic but, also enhancing speed of Development. Thus, it was an essential aspect that environmental protection and development has to go together. The National Green Tribunal (NGT) during 2021 continued its pace to settle grievances expeditiously. The Tribunal having dealt many Pan India issues during 2019 and 2020 has set principles based on which governing bodies have to act in accordance with the law. The Tribunal kept hardships of the Departments both in Centre and the States in consideration and the delays observed on account of non-availability of working forces and other associated issues during the Covid 19 period. The Tribunal mainly held the precautionary and polluter pays principle. The defaulters had to pay environmental compensation (EC) with built-in deterrence and allowing to utilize EC for restoration of environment.



The Tribunal was also very emphatic on allowing operation of industrial clusters particularly, Stone crushers and Brick kilns in already polluted areas and linked their operation with carrying capacity.

Tribunal while dealing several applications on day-to-day basis, educated Law applies to make their applications very focused and avoid multiple causes. In cases of encroachments, the Tribunal held on limitations and clarity on encroachers.

Issues of 2021

By and large, the environmental issues are well known. The issues broadly covered; Municipal Solid Waste, disposal of domestic Sewage, pollution of rivers and water bodies, encroachment of public places and forest lands, air pollution, road construction with tree cuttings, Bio medical waste, industrial pollution, construction of Housing complexes and others. Importantly, the Principal Bench adjudicated on industrial accidents caused fatalities. In such matters, compensation to the deceased and EC for restoration of environment were settled.

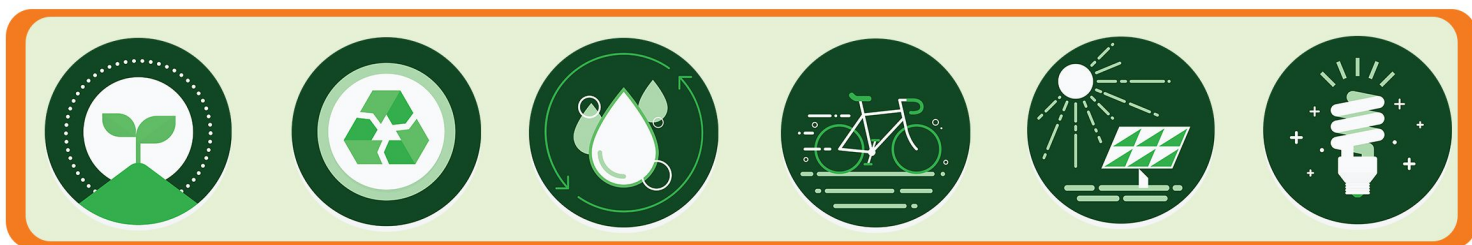
Environmental Status

Environmental status observed during 2021 based on the reports filed by different Agencies in respective matters is summarized as follows; Availability of Water as resource and its deterioration in quality has been critical. Rivers are still being dumped with sewage and other filthy material. Based on water quality data, Central Pollution Control Board (CPCB) identified 351 polluted river stretches and rejuvenation plans have been prepared as per the directions and the target is to bring water quality of these rivers to at least bathing level. Besides water quality issue, the river flood plain zones are encroached and still, there are many rivers not falling in the list of polluted river stretches and such rivers are ignored. There has been rampant sand mining which is not in accordance with mining plans and replenishment studies.

The Wetlands and other water bodies having ecological importance are also threatened and being encroached. The ground water resources are depleting and not being replenished. There are 124 non-attainment cities which are not meeting the ambient air quality standards. The Tribunal directed to enforce Air Act which inter alia focusses on controlling dust emissions, prohibition on burning of waste and unapproved fuel, securing industrial emissions to comply with the norms and regulating activities as per Graded Response Action Plan (GRAP) and the National Clean Air Program (NCAP).

Enabling Orders

It has been an important aspect to find that, many orders of the Tribunal very well complement and supplement the Pan India programs of Government of India like 'Swachh Bharat', 'Namami Gange', National Clean Air Program and others. The orders of the Tribunal in respective matters are to the effect of enforcement of Water, Air and Environment Protection Act and the rules framed thereunder. Further, the Tribunal's orders facilitate and give way forward to the Government to build domestic infrastructure and create employment opportunities.



Industrial Accidents

The Tribunal remarkably took suo moto matters relating to industrial accidents which have resulted in fatalities and injuries. In fact, during first phase of lockdown the Tribunal undertook first matter in 2020 and continued in 2021. In compliance with the directions in various matters, deceased and injured were compensated for which judicial system gave a way forward for such settlement & Tribunal took the directives of the Hon'ble Supreme Court for moving forward. Pan India directions have been issued in various matters ensuring prevention of industrial accidents, putting on-site and off-site disaster management plan in place, assessing environmental compensation & formulation of restoration of plan.

Tribunal that governance issues are not getting well addressed at micro level. Significant time has been passed after promulgation of Water and Air Acts as well as EP act and Rules framed thereunder but, still many issues are unresolved.

The glaring examples are related to sewage and solid waste disposal. Smaller cities do not have technical and financial assistance to undertake and execute the projects. There is no assistance providing mechanism available at State or district level to assist local bodies to formulate the plans for sewage and solid waste management and execute them in a time bound manner. This lack of system has created a gap between waste generation, its treatment, utilisation and disposal. Further, such a gap may not complement the efforts being made under Swachh Bharat program.

Gaps in Action & Governance

It is observed while reading the Orders of the

National Green Tribunal (NGT) – 2021

The Green Court, National Green Tribunal (NGT) during the year 2021 disposed of 2288 matters and received 2083 Applications. The Tribunal followed Virtual hearings at its all Benches. The Tribunal on its own undertook matters relating to industrial accidents caused fatalities & directed for compensation.

01 NGT 2021

There are large number of orders & the directions & different types of matters & each Judgment and the Order is important. But, for the sake of drawing overall conclusion & for articulating present environmental status, linkages of the Orders with the Government Policies and the Way Forward, some of the Orders are selected & referred.

02 ON WATER QUALITY

There are concerns on maintaining sanctity of the rivers, the Wetlands and other Water resources under constant threat getting encroached and used for dumping sewage and solid waste.

The Rivers

(Orders for reference: OA 593/17 & OA 673/18 dated 22.2.2021, OA 200/14 dated 23.11.2021).



The Tribunal dealt many issues relating to water quality of rivers which included Ganga, Yamuna, Ghaggar, Hindon, Satluj and others. The Tribunal specifically, emphasised on rejuvenation of river Ganga and this matter was transferred by the Hon'ble Supreme Court.

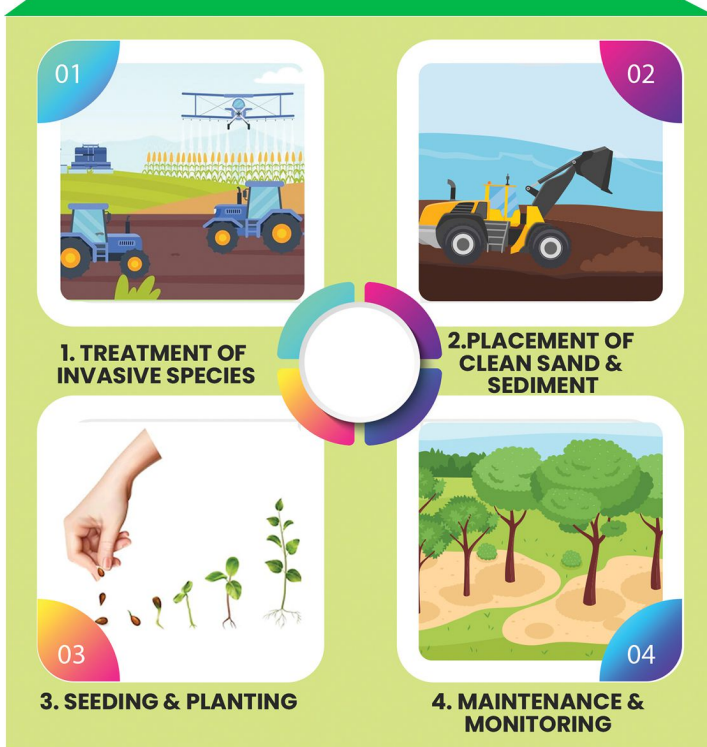


The issues on river cleaning are comprehensively dealt in OA 673/18 which relates to restoration of water quality of 351 polluted river stretches. The Tribunal got river action plans prepared and approved by CPCB. The action plans are to be executed through concerned State Governments and their monitoring by the State River Rejuvenation Committee and overall coordination by the Ministry of Jal Shakti. The Tribunal set the mechanism to be carried forward. The river action plans cover sewage and solid waste management, in-situ remediation of drains, maintaining River flows (E-flow) and maintaining flood plain zones. Tribunal stressed on levying environmental compensation on polluters based on polluter pays principle and taking stern action against erring officials.

Wetlands and Water Bodies (OA 351/19, 25.11.21)

The Tribunal comprehensively dealt the wetland conservation in the Union territory of Srinagar. Action plans have been prepared and monitoring mechanism set up being supervised at the level of Chief Secretary. The scope of protection of wetlands have been extended at the country level in light of observation of the Hon'ble Supreme Court that 2,01,503 wetlands have been mapped by Union of India which needs to be protected on the same principles as formulated in Rule 4 of Wetland (Conservation and Management) Rules, 2010. (Hon'ble Supreme Court orders dated 3.4.2017 and 4.10.2017 in M. K. Balkrishnan vs Uoi). The conservation of wetland needs to include; Reclamation, setting up of industries, regulating construction, not to discharge sewage and solid waste and protection of ecosystem.

WETLAND RESTORATION



The Tribunal directed to cover wetland protection in district plans, undertake water

quality monitoring, prevent siltation, demarcation, removal of encroachment and maintaining water quality.

It is important to mention that the Tribunal had earlier directed at pan India basis to protect water bodies in OA 325/17 and to be supervised by Ministry of Jal Shakti and the National Wetland Committee realising how important is protection of these water bodies for maintaining ground water table and river flow.

Water Resources (Ground Water)

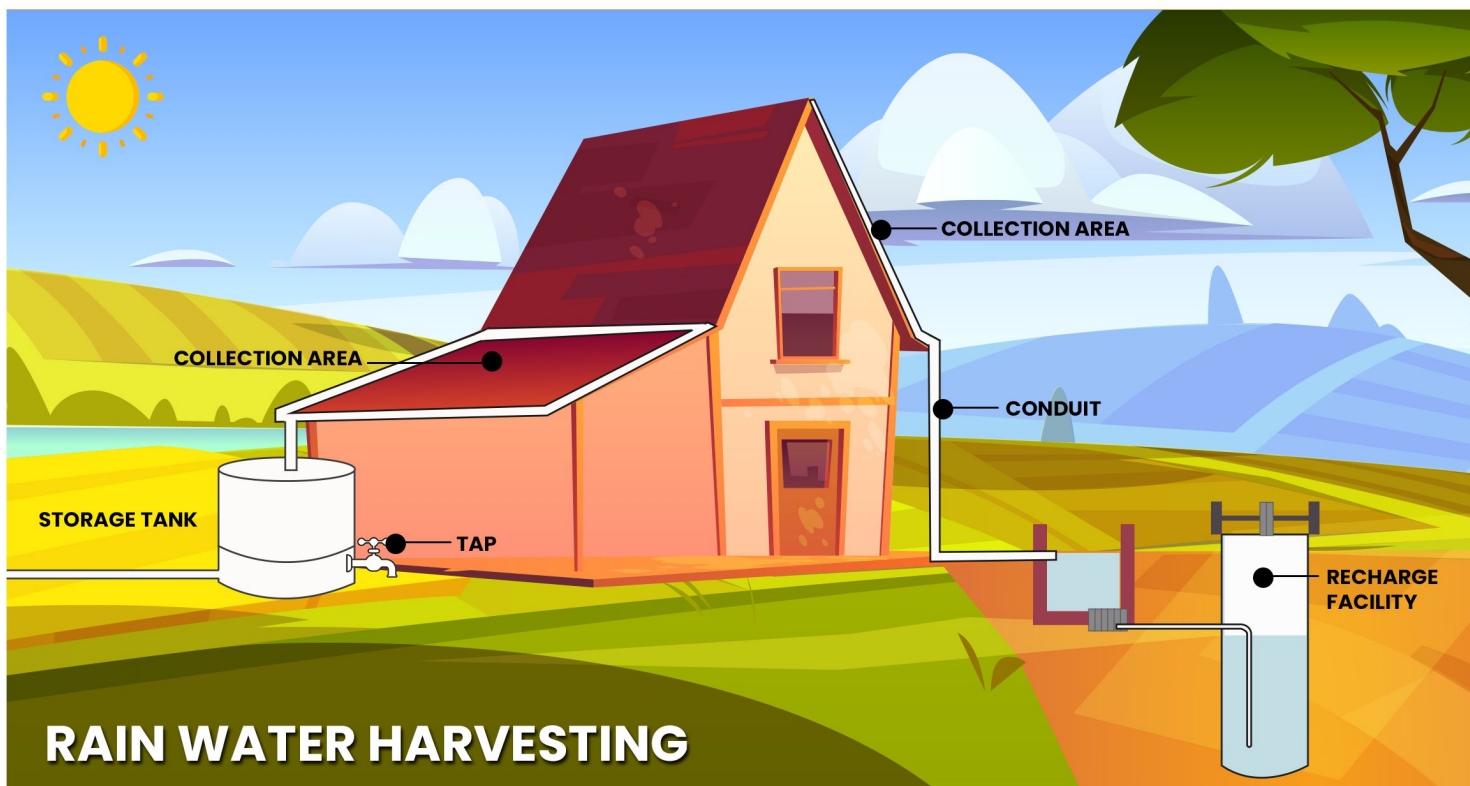
Ground water is not only a resource but future life of the citizens is depending on it. Tribunal observed from the national scenario and the matters before it, that ground water is depleting, there is no replenishment, quality is deteriorating and Ground Water authorities are not well prepared to deal with the situation. At many locations, citizens are compelled to use contaminated ground water due to geo-genic sources.

GROUNDWATER CONTAMINATION



The Tribunal has laid down way forward in OA 134/15 order dated 1.12.2021 with focus on water mapping, replenishment, block wise data grid and strict regulations on drawl of ground water in over exploited and Critical Zones.

During the year, Tribunal directed to act judicially on ground water usages. In this context a few matters can be referred like; OA 147/21, order dated 10.12.2021, OA 496/16, order dated 22.1.2021 and OA 94/2021, order dated 15.4.2021.



The Tribunal held that rain water harvesting (RWH) need to be insisted across the country for which awareness be created and technically guided. Instances have been noted on alleging RWH system causing ground water contamination when not properly designed. Tribunal directed for developing model for augmenting supply of drinking water by linking water collected through RWH system to the water supply system on the pattern of schemes for connecting solar energy generated in individual houses with grid with requisite incentives to motivate concern individual/organization.

In another matter, Tribunal directed Ministry of Jal Shakti to coordinate with Ministry of

Youth and Sports to find out alternative to usage of ground water for spraying on play grounds and this context came for adjudication while Tribunal dealt the issue on ground water used for cricket grounds. The Tribunal directed to use treated sewage water after ensuring that there is no Pathogenicity and safe for players.

It is to mention that the Tribunal in many matters observed that industries abstract ground water without having permissions from ground water authorities. Industries apply for NPCs which remains in pending. Environment compensation regime has been laid down and regulatory authorities need to impose EC on defaulters.

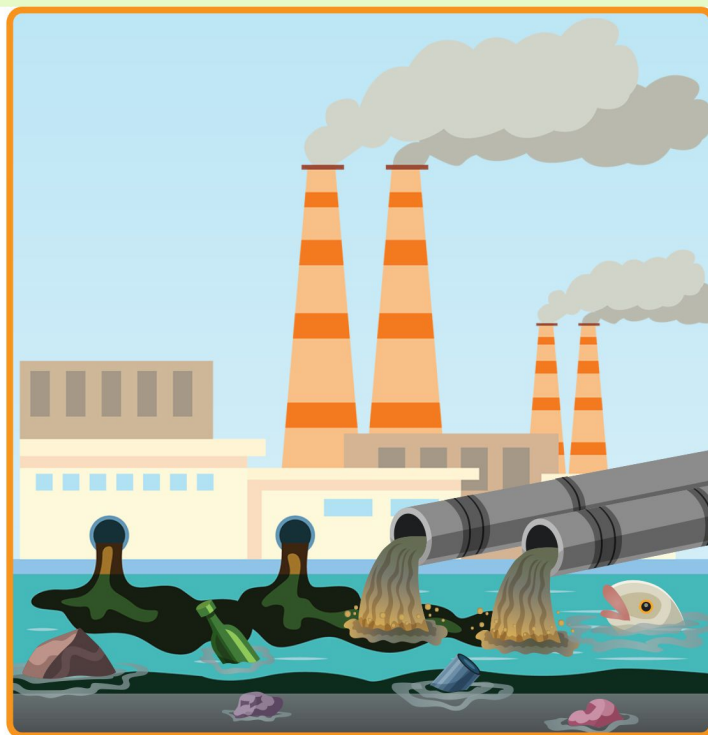
The Tribunal came down heavily after having no proper response from the authorities on application of Reverse Osmosis (RO) plants OA 134/15, order dated 1.12.2021 which are significant cause for wastage of water and their usages where it is not required. The notification brought out was not considered and Tribunal directed CPCB to issue directions to all Manufacturers to prohibit usage RO where TDS value is less than 500 mg/l, cut down water wastage and proper management cartridges and other material.

In OA 384/19, order dated 1.12.2021 which was on geo-genic contamination in the district of Gorakhpur in Uttar Pradesh due to arsenic and fluoride, the Tribunal got its directions executed in terms of dismantling of contaminated hand pump, creating awareness, installation of arsenic/fluoride removal plants and other measures. The subject matter was further extended to the other similarly affected States with the directions and to be coordinated by MoJS.

Water Pollution Caused By Sewage

The major cause of water pollution of rivers, wetlands, lakes, streams, ponds, coast, estuaries and ground water is on account of discharge of untreated or partially treated sewage. Due to lack or partial sewerage and sewage treatment facilities, whether big, medium or small and town, are discharging waste water into recipient environment. This results in eutrophication, depletion of dissolved oxygen, causing fish mortality and pathogenic due to fecal coliform.

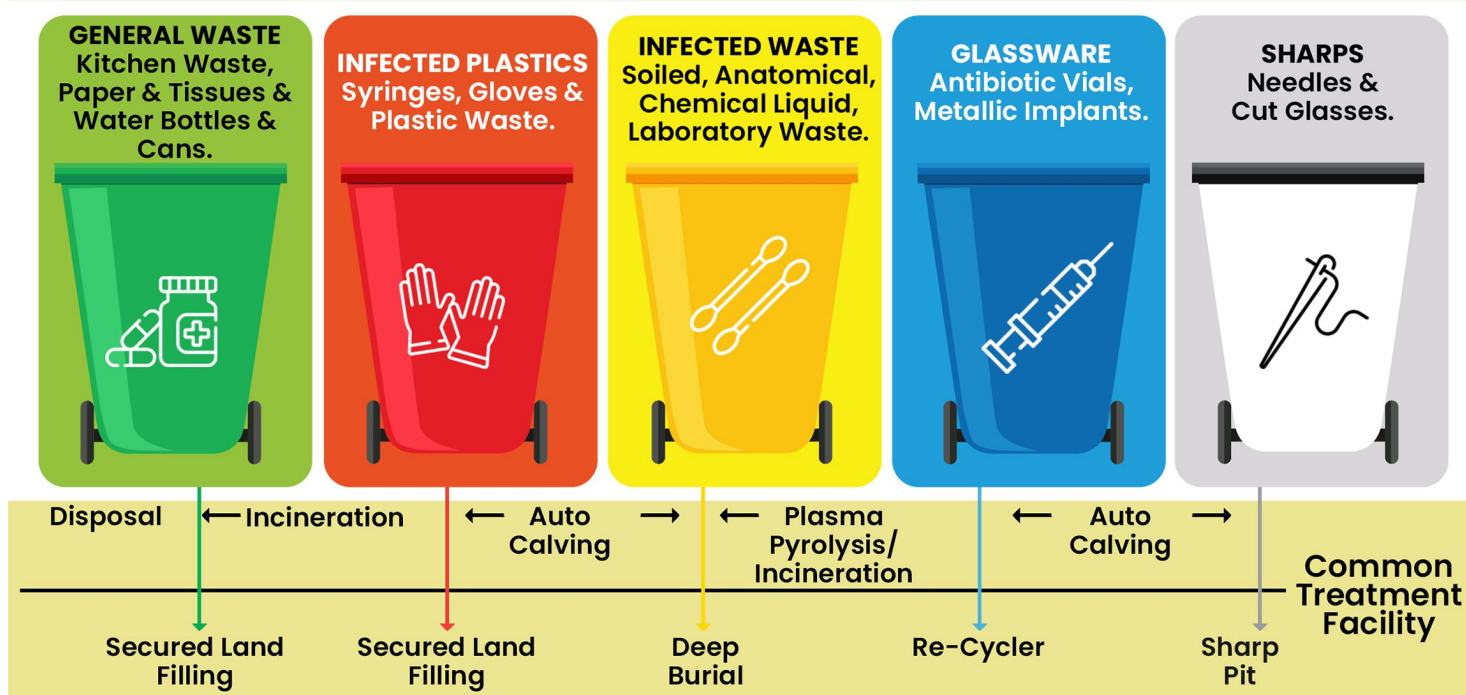
Tribunal observed sewage management status in OA 593/17, Paryaavaran Suraksha Samiti & Anr. vs Union of India dealt with order dated 22.2.2021 that 48,004 MLD of sewage (from urban settlements) is being generated and 30,001 MLD capacity of STPs (1249 nos.) is existing which approximates to about 62% of sewage generation. Against the existing capacity, only 56% of the capacity is being utilised for treatment of municipal sewage. This leaves a gap of 17,027 MLD in treatment capacity.



(OA 170/21, order dated 29.10.2021, OA 596/19, order dated 29.10.2021, EA 6/21, order dated 22.11.2021, OA 429/19, order dated 12.11. 2021 and OA 1092/18 order dated 23.12.2021)

The Tribunal dealt various individual matters on sewage treatment, its utilisation and disposal and observed the following;

- ▶ STPs are under utilized with respect to their treatment capacity.
- ▶ STPs do not comply with Fecal coliform norms and treated sewage either discharged back to a drain getting mixed with untreated and no utilisation plans.
- ▶ Projects of sewage are delayed on account of finances and repeated tendering.
- ▶ Small towns in particular do not have technical and financial assistance as a result, they remain non-compliant.
- ▶ Storm water drains and Irrigation channels/canals are used to dispose sewage without having due Consents under the Water Act and from the owners of the drains/canals.
- ▶ Waste/digested material from Septic tanks is disposed in unauthorised manner.



The Tribunal directed and provided way forward to tackle the situation on pan India by way of creating technical solutions and simplifying procedures already known to the concerned authorities. In fact, Tribunal lead from the front by way of pushing the Standards for STPs and directing CPCB to frame Standards for Storm water drains and irrigation canals which are covered under the definition of "Streams" under the Water Act. However, it is important to observe that, Hon'ble Supreme Court has given time for

compliance for sewage treatment is over and accordingly, attract contempt proceedings. Under the prevailing situation when water sources are not getting adequate charging and replenishment, it is a crime under the law of land in the same way as homicide and assault. Emergent and stringent measures are therefore necessary for discharge of constitutional duties by the States otherwise it is tolerating and ignoring lawlessness.

Solid Waste - National Issue

The issue of Municipal Solid waste (MSW) management is a transferred matter from Hon'ble Supreme Court. The Tribunal dealt the subject adjudicated and dealt in a comprehensive manner on technical fronts. This matter along with transferred matter on Ganga, Yamuna (OA 6/12) and Paryavaran Suraksha Samiti brought many issues upfront where Institutions on directions of the Tribunal came forward with many unpredictable approaches.



The cities and towns have been filthy and still, legacy waste is piled up creating hillocks. At the same time, the Government of India with the States came up with Swachh Bharat Program as a National Mission. The Orders of the Tribunal have been enabling and making way forward to achieve the goals. During the course, States got sensitization and good models created and Municipal authorities have been energised.

The Tribunal observed that total waste generated is 1, 50,558.951 TPD of which 94,435.318 TPD is processed, which is 62.6% of the total waste generated and the gap is 45,071 TPD.

Finding the gap and having gone into depth, the Tribunal in OA 606/18 in order dated 30.11.2021 moved with;

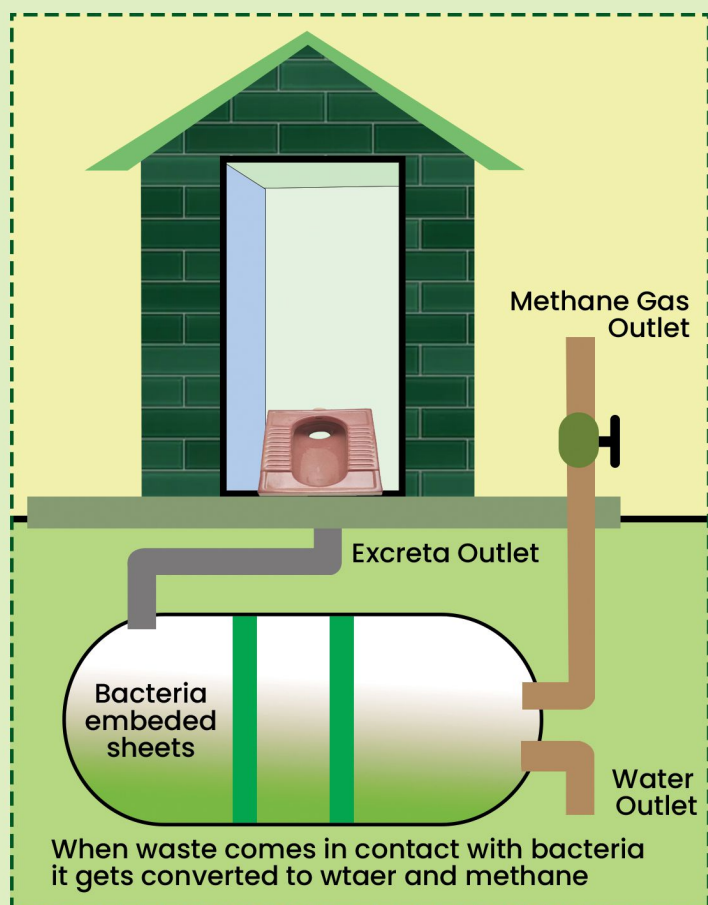
- Inviting Chief Secretaries of States for third time to appear on Video presenting updated action taken reports on MSW and Sewage.
- Getting action plans implemented for waste management including bio-mining of legacy waste.

It is important to mention that Tribunal got environmental damages assessed in monetary terms and the methods of calculating environmental compensation which to be recovered from the authorities and utilising for restoration. Tribunal further requested through NALSA to take up further by SLISA and DLISA for creating awareness program involving citizens. During 2021, Tribunal dealt individual matters relating to MSW and found that required assistance still not reaching at District and smaller town level. The local bodies are entangled into tendering business. Meanwhile, some good initiatives have been noticed like Indore being ranked as cleanest city consecutively and others.



Order of the Tribunal dated 24.5.2021 in OA 451/19 and order dated 18.11.2021 in OA 141/14 dealt issues relating to scientific management of waste from; (i) establishment of Armed Forces and (ii) issue on of Plastic Waste Management rules at Railway Compartments, Stations, tracks, removal of encroachment and other environmental aspects.

The Tribunal considered the status filed by the Ministry on environmental issues, Siachen glaciers ecological aspects and Cantonments and Military Stations. The Ministry has setup an Apex Committee and the Monitoring mechanism at all levels to deal with environmental issues as well as coordination with concerned Ministries and CPCB.



In case of Railway matter, Tribunal observed that out of 720 stations, 258 stations were assessed and 30% have obtained Consents, 80% have made adequate arrangements for solid waste and sewage management and 97% have banned usage of plastic bags. Tribunal while disposing the matter, directed for developing model design for adoption and replication, having own facilities for sewage and solid waste management or

having tie up with the local body duly consented by Pollution Control Board, proper evacuation of Bio-toilets, locomotive maintenance area to have proper hazardous waste management facilities, stations to have Vigilance Cell, utilisation of Technical assistance of RITES and railway tracks free from sewage and solid waste, clearing encroachment.

Make in India & Employment

It is important to see that in sewage and solid waste management, large number of Indian Companies can participate and creating huge employment opportunities for skilled and unskilled population. Simplified and standardised Tendering models with indicative costs will certainly speed up the process. What is required is day to day waste processing is done and no legacy waste is left and we achieve Swachh Bharat.

District Environment Plans

The Tribunal in OA 360/18, order dated 5.7.2021 has been monitoring the preparation and execution of District Plans. With the directions, State and District level Committees have been formed. There may be some satisfaction that District plans are prepared and hopefully, the awareness will reach in citizens when some noticeable changes will come.

PREVENTION

REUSE

RECYCLING

RECOVERY

DISPOSAL

Prevention of Health Hazards from Wastes

The health hazards are well known from disposal of Biomedical, Hazardous & Electronic and Electrical Wastes. The Tribunal dealt these issues in the following matters;

Bio-Medical Wastes

OA 710/17 & OA 72/20 order dated 18.1.2021.

To prevent health hazards especially due to disposal of waste arising out of treatment of Covid- 19 centres, Tribunal got Guidelines prepared by CPCB on 17.7.2020. Directions have been issued to Chief Secretaries to get the guidelines properly implemented and monitored.



The Tribunal also further issued detailed directions for BMW management in light of observation that 615 TPD waste is generated and 541 TPD is treated. For collective treatment, there are 202 Common Bio-medical Waste Treatment Facilities (CBMWTF) in operation and 36 are upcoming. Directions issued covers ensuring proper functioning of facilities, proper EC and siting of facilities, preventing pilferages of waste and overall compliance with BMW rules.

Hazardous Wastes

In OA 804/17, vide order dated 29.1.2021, the Tribunal reviewed implementation of Hazardous and Other Waste Management Rules. The Tribunal observed that waste generating industries need to be inventoried and quantity of waste generation and their characterization to be ascertained. Accordingly, CPCB provided the updated status inter alia mentioning about hazardous waste dump sites which needs to be remediated. Besides, there are checks required on import of hazardous waste which further is processed. For recycling of waste as per Schedule of HoWM rules, CPCB has developed SoPs for environmentally sound methods for recycling/ reuse.



Tribunal directed for enforcement of the said rules, proper management of Treatment Storage and Disposal Facilities (TSDFs), carryout safety audits and cross-checking inventory of industries. The Tribunal also cautioned on prevention of accidents from handling of hazardous waste at captive and collective facilities.

E-Waste

The growing dependency on electrical and electronic equipment/gadgets has raised concern over discarded waste material. It has come into knowledge of the Tribunal that, at many places, electronic waste is dismantled and processed in a crude and unscientific manner resulting in water, air and soil pollution. Precious metals are recovered from such waste by way of burning and acid treatment. It is also essential that bulk producers and the brand owners (Manufacturers and Producers) are set with responsibility to take back their sold products. The Tribunal gone into the scientific aspects of the entire issue and passed comprehensive directions inter alia to the effect of fixing responsibility on Producers, environmental management in dismantling and recycling centres, reduction of hazardous substances (ROHS) and other environmental safeguards.

OA 621/18 order dated 15.1.2021)

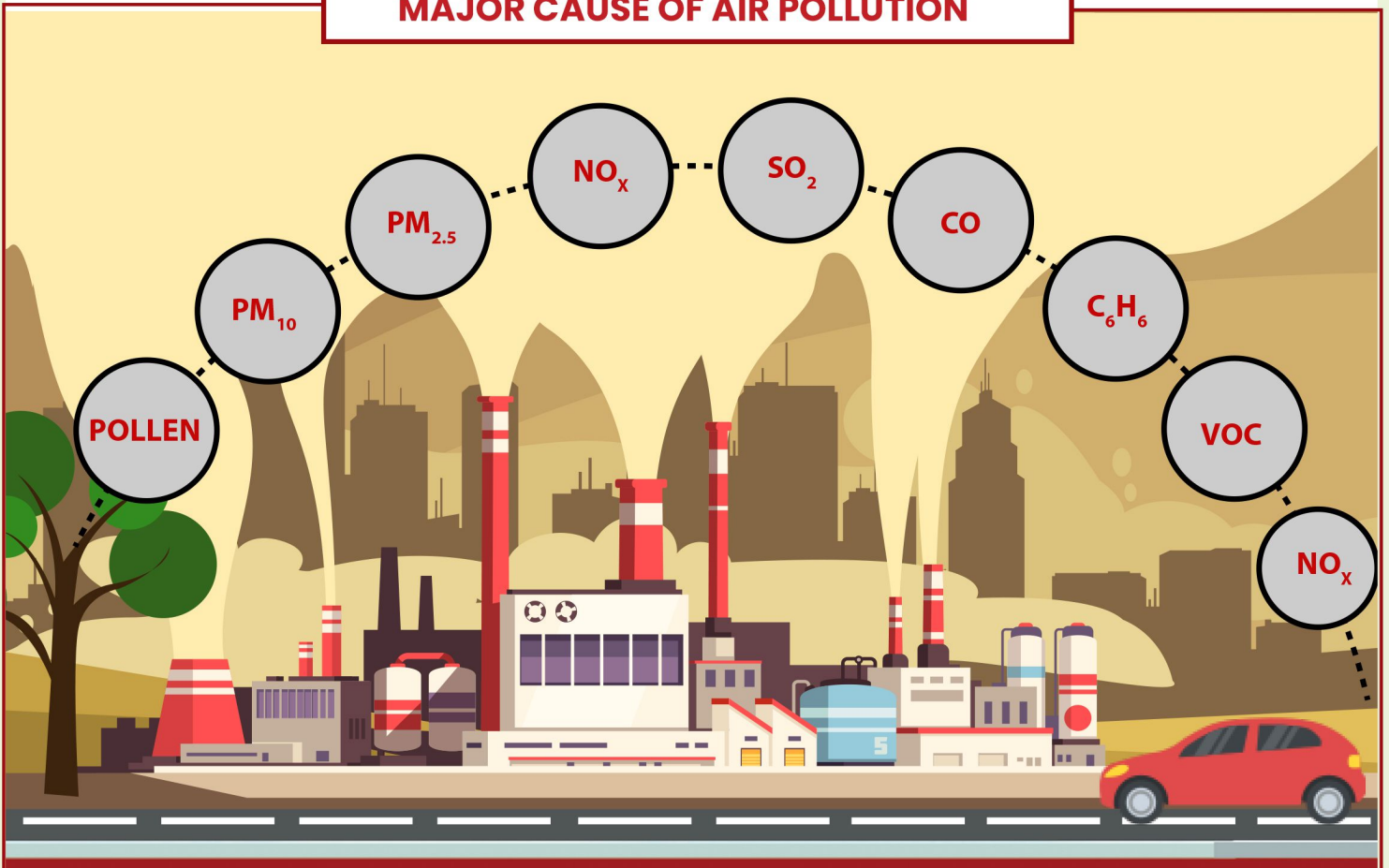
E-waste recycling process flowchart



Air pollution Control & Carrying Capacity (OA 681/18, order dated 8.4.2021)

The country's one of the matters of concern is the Good air quality requirement for breathing. It has been an old saying that city dwellers or who normally do not feel well are advised to go to open areas or hills where they feel change in environment and that mainly refers to good air.

MAJOR CAUSE OF AIR POLLUTION



It has been experienced that, generation of dusty and noxious emissions have changed the ambient air quality of cities and towns. Quite often, we refer many national and international reports ranking Indian cities, amongst the polluted cities of the world. CPCB on daily basis has been releasing daily Air Quality Bulletin indicating Air Quality Index (AQI) for more than 100 cities. The Tribunal based on the CPCB data on air quality, observed that there are 124 non-attainment cities exceeding ambient air quality norms. Tribunal has reviewed the collated data on the status and directed accordingly. It also reviewed different sources and their apportion in causing deterioration in air quality. It has been a fact that Central and North India has high background dust compared to other parts of the country.

Tribunal thus relied on Constitution of National Task Force, Air Quality Monitoring Committees at State level, setting up of air quality monitoring at each district level, carrying out Source Apportionment Studies, Carrying Capacity studies, developing district, State and National Data Grid and emphasising on suppression of dust to control Particulate Matter. Covering all these aspects, Tribunal got Action Plans prepared for the cities and approved by CPCB.

Tribunal and NCAP

In fact, the Tribunal pave the way forward for the Government to move on its Order under the National Clean Air Program for which good amount has been allocated to the cities. The action plans with base work have already been done by CPCB and the NCAP has to be steered on the lines according to the directions of NGT.



Tribunal also dealt matter on firecrackers **(OA 249/2020, order dated 01.12.2020)** and directed to regulate manufacture and sale of firecrackers as per the directions of the Hon'ble Supreme Court. The Tribunal linked bursting of crackers with prevailing ambient air quality and violators to be imposed with EC and victims to be compensated.

It is very important to note that, air quality management would attract Indian Manufacturers for supplying monitoring equipment rather than importing foreign equipment. In fact, in entire environmental monitoring system, be it water or air, we need to rely on domestic system. May be, initially, precision may not be necessary and quick diagnostic approach may help.

AQI	Associated Health Impacts
Good (0-50)	Minimal Impact
Satisfactory (51-100)	May cause minor breathing discomfort to sensitive people
Moderate (101-200)	May cause breathing discomfort to the people with lung disease such as asthma and discomfort to people with heart disease, children and older adults
Poor (201-300)	May cause breathing discomfort to people on prolonged exposure and discomfort to people with heart disease with short exposure
Very Poor (301-400)	May cause respiratory illness to the people on prolonged exposure. Effect may be more pronounced in people with lung and heart disease
Severe (401-500)	May cause respiratory effects even on healthy people and serious health impacts on people with lung/heart diseases. The health impacts may be experienced even during light physical activity

Carrying Capacity

Tribunal has been very particular on operation & allowing air polluting activities only subject to availability of carrying capacity of the given area. What it refers in simpler term that, where air quality is already exceeding ambient air quality norms, no further pollution causing activity can be permitted. On this concept, Tribunal me down heavily on authorities to act as per CC studies and permit accordingly.

The Tribunal dealt issues of operation of Stone crushers, hot mix plants and Brick kilns in accordance with Carrying Capacity (CC) in;

Order dated 26.11.2021, OA 607/18 order dated 25.10.2021, OA 667/18 order dated 15.11.2021, OA 262/20 order dated 10.11.2021 and OA 19/21 order dated 9.9.2021.



In the said matters, Tribunal directed to close down the operating industries which

are not in violation of standards, not sited properly, operating beyond carrying capacity. In order to rationalize the development and considering geographic climatic pattern with background levels, Tribunal directed CPCB to study the associated issues and come out with suggestions. However, it may be a need to study CC in context of collective activities, source appointment, background levels, etc.

Development with Environment protection. Forest Conservation & Wildlife Protection

(EA 32/16 order dated 29.10.2021, Appeal 29/21 order dated 13.12.2021, OA 142/21 order dated 8.7.2021 and OA 11/21 order dated 4.10.2021)

The Tribunal following the principle of Sustainable Development, adjudicated on developmental projects particularly, Highways/ road construction/ road widening. Such projects quite often get stuck up in Forest and Wildlife clearances and at the time of construction, they violate norms.



which are not in violation of standards, not sited properly, operating beyond carrying capacity. In order to rationalize the development and considering geographic climatic pattern with background levels, Tribunal directed CPCB to study the associated issues and come out with suggestions. However, it may be a need to study CC in context of collective activities, source appointment, background levels, etc.

For protection of wildlife, there has to be elevated road, underpasses, road cordoning, noise and light absorbance and other measures. Similarly, Tribunal for prevention of train killing of wildlife particularly elephant, MoEF with Railway authorities to work together following Gajah Report.



The Tribunal directed and involved Secretary and Chairman NHAI for laying down protocol and SoP for undertaking such projects in environment friendly manner.

In the matter of concerning protection of Forest and wildlife, the Tribunal directed for closing down restaurant and non-forest activities in forest of Nahargarh fort, Rajasthan. Further, Tribunal directed to stop sound and light program.

Environmental Governance

Tribunal dealt various matters on Environmental Clearances granted by MoEF and the State Authorities. There have been violations of environmental conditions and no action taken. Tribunal directed MoEF to review EC granting mechanism as well as for devising mechanism where Industries not obtained EC and follow up as per law. SEIAAs are to function properly as per proper SoPs. In OA 95/18 order dated 5.2.2021, Tribunal directed for strengthening of Pollution Control Boards.

Industrial Accidents

During the year 2021, Tribunal dealt with the matters pertaining to industrial accidents causing fatalities. In all such cases, Tribunal constituted joint committees and investigation reports sought. It was broadly inferred that, accidents were mainly on account of lack of proper training to the workers, poor maintenance schedule, mishandling of chemicals not practicing on and off-site crisis management plan.

The Tribunal affirmed compensation to the deceased and injured following the directions laid down by Hon'ble Supreme Court. Further, industries, were directed to pay EC to be used for restitution of environment damaged. For reference, the matters dealt with are as follows.



IMPORTANT DATES	IMPORTANT DAYS	IMPORTANT DATES	IMPORTANT DAYS
05 JANUARY	NATIONAL BIRD DAY	21 JUNE	INTERNATIONAL CLIMATE CHANGE DAY
24 JANUARY	INTERNATIONAL DAY OF EDUCATION	22 JUNE	WORLD RAINFOREST DAY
30 JANUARY	NATIONAL CLEANLINESS DAY	11 JULY	WORLD POPULATION DAY
02 FEBRUARY	WORLD WETLAND DAY	28 JULY	WORLD NATURE CONSERVATION DAY
27 FEBRUARY	INTERNATIONAL POLAR BEAR DAY	29 JULY	WORLD TIGER DAY
28 FEBRUARY	NATIONAL SCIENCE DAY	10 AUGUST	WORLD LION DAY
03 MARCH	WORLD WILDLIFE DAY	12 AUGUST	INTERNATIONAL YOUTH DAY
14 MARCH	INTERNATIONAL DAY OF ACTION FOR RIVERS	16 SEPTEMBER	WORLD OZONE DAY
15 MARCH	WORLD CONSUMER RIGHT DAY	22 SEPTEMBER	WORLD CAR-FREE DAY
18 MARCH	GLOBAL RECYCLING DAY	28 SEPTEMBER	GREEN CONSUMER DAY
21 MARCH	WORLD FORESTRY DAY	04 OCTOBER	WORLD ANIMAL WELFARE DAY
22 MARCH	WORLD WATER DAY	13 OCTOBER	WORLD HABITAT DAY
23 MARCH	WORLD METEOROLOGICAL DAY	14 OCTOBER	INTERNATIONAL DAY FOR DISASTER REDUCTION
26 MARCH	WORLD RESOURCE DAY	15 OCTOBER	INTERNATIONAL E-WASTE DAY
20 MARCH	EARTH HOUR	16 OCTOBER	GLOBAL HANDWASHING DAY
07 APRIL	WORD SPARROW DAY	24 OCTOBER	WORLD FOOD DAY
18 APRIL	WORLD HEALTH DAY	14 NOVEMBER	INTERNATIONAL DAY OF CLIMATE ACTIONS
22 APRIL	WORLD HERITAGE DAY	18 NOVEMBER	WORLD ENERGY CONSERVATION DAY
03 MAY	EARTH DAY	19 NOVEMBER	WORLD COPD DAY
20 MAY	WORLD ASTHMA DAY	02 DECEMBER	WORLD TOILET DAY
22 MAY	WORLD BEE DAY	05 DECEMBER	NATIONAL POLLUTION CONTROL
31 MAY	INTERNATIONAL DAY FOR BIOLOGICAL DIVERSITY	11 DECEMBER	WORLD SOIL DAY
05 JUNE	ANTI-TOBACCO DAY	14 DECEMBER	INTERNATIONAL MOUNTAIN DAY
08 JUNE	WORLD ENVIRONMENT DAY		NATIONAL ENERGY CONSERVATION DAY
17 JUNE	WORLD OCEAN DAY		
	WORLD DAY TO COMBAT DESERTIFICATION AND DROUGHT		

S.NO.	SUBJECT MATTER	CASE NO.	DATE OF ORDER
1.	Industrial inspection frequency	O.A. 639/18	22.03.2021
2.	CEERI-ETP for laboratories	O.A.1/21(CZ)	17.05.2021
3.	GW- Drinking water bodies U.P.	384/19	01.02.2021
4.	Brick Kiln Ganga Nagar	O.A.267/20	11.02.2021
5.	Brick Kiln U.P., NCR	O.A.1016/19	17.02.2021
6.	Sand Mining- Pan India	O.A.360/15	26.02.2021
7.	EC procedures for review	O.A.837/18	01.02.2021
8.	Stone crushers, Haryana	O.A.607/18	19.04.2021
9.	Strengthening of PCBS	O.A.95/18	19.04.2021
10.	AMR- Baddi, H.P.	O.A.136/20	12.05.2021
11.	Plastic waste, Pen EPR, SUP. 11.1, 11.2, 11.3, 11.4, 11.5, 11.6	PWM E.A.13/19+O.A.997/ 19EPR+O.A.29/20+O.A.851/ 18 + OA 42/20 + OA 15/14	08.01.2021
12.	BMW- Pan India	O.A.710/17	18.01.2021
13.	Covid Waste Management	O.A.72/20	18.01.2021
14.	Gold Testing	O.A. 568/19	19.01.2021
15.	RWH Delhi	O.A.496/16	22.01.2021
16.	HOWM	O.A.804/17	29.01.2021
17.	Yamuna	O.A. 06/12	27.01.2021
18.	RO Plants	O.A.134/15	01.12.2021
19.	Ganga	O.A.200/14	23.11.2021
20.	Waste from Railways	O.A.141/14	18.11.2021

21.	NHAI J&K	E.A. 32/2016 IN O.A. 295/16	29.10.2021
22.	CETP- Bhiwadi	E.A. 42/19	29.10.2021
23.	EL Tyre	O.A.400/19	25.10.2021
24.	Fazilka Sewage	O.A. 596/19	29.10.2021
25.	Sewage Lar (Deoria), U.P.	O.A. 170/21	29.10.2021
26.	Hot mix Plant Noida	O.A. 19/21	09.09.2021
27.	Talwandi TPP-Start up	O.A.125/20	07.04.2021
28.	DEMP- District Plans	O.A. 360/18	02.07.2021
29.	Elephant-Train Accident	O.A. 142/21	08.07.2021
30.	BMW- Bareilly –Pan India	O.A.180/21	27.07.2021
31.	Scrapping Policy	O.A. 807/18 +O.A.996/18	03.06.2021
32.	ETP, CETP, STP + Polluted River Stretches	O.A.593/17 + O.A. 673/18	22.02.2021
33.	Compliance of Environmental norms	O.A. 400/17	04.02.2021
34.	Cremation Policy	O.A. 108/21	24.05.2021
35.	Armed Forces- waste	O.A.451/19	24.05.2021
36.	Appellate Authority-SC.	O.A. 868/13(19)	06.04.2021
37.	Dhalao Guidelines	O.A. 267/20	07.04.2021
38.	NAC- Air Pollution	O.A. 681/18	08.04.2021
39.	Spent Catalyst	O.A. 67/20	09.04.2021
40.	WTE Delhi	O.A. 640/18	12.04.2021
41.	Carcass Disposal	O.A.465/19	15.04.2021

42.	Cricket- ground water	O.A. 94/21	15.04.2021
43.	Faizabad Railway Godown	989/18	16.03.2021
44.	Locomotives standards	E.A. 4/20	18.03.2021
45.	CBMWTF	O.A. 110/20	19.03.2021
46.	Dehradun National Highway	App.29/21	13.12.2021
47.	Sewage-MCG Mumbai	E.A. 6/21 (WZ)	22.11.2021
48.	Stone crusher, Mahendergarh	O.A. 667/18	15.11.2021
49.	STP, Kondli-Odor	O.A. 429/19	12.11.2021
50.	Affordable Housing-Bhopal	O.A. 44/20	04.10.2021
51.	Nahargarh Fort	O.A. 11/21	04.10.2021
52.	MSW	O.A. 606/18	30.11.2021
53.	RWH + Pan India.	O.A. 147/21	10.12.2021
54.	Poultry Guidelines	O.A. 320/21	10.12.2021
55.	Formaldehyde EC	O.A. 287/20	03.06.2021
56.	EC Review	App. 34/20, App.32/20(WZ)(WZ)	24.05.2021
57.	MCGM	E.A. 6/21 (WZ)	16.07.2021
58.	Unscientific dumping of waste in wetland	O.A. 351/19	25.11.2021

- The Atomic Energy Act, 1962.
- The Water (Prevention and Control of Pollution) Act, 1974.
- The Forest Conservation Act, 1980.
- The Air Prevention and Control of Pollution, 1981.
- The Environmental (Protection) Act, 1986.
- The Environmental Conservation Act, 1989.
- The National Environmental Tribunal, 1995.
- National Environmental Appellate Authority Act, 1997.
- National Environment Management Act (NEMA), 1998.
- The Public Liability Insurance Act (Rules and Amendment), 1992.
- The Environment (Siting for Industrial Projects) Rules, 1999.
- The Ozone Depleting Substance (Regulation and Control) Rules, 2000.
- The Energy Conservation Act, 2001.
- The Biological Diversity Act, 2002.
- National Green Tribunal Act, 2010.
- Coastal Regulation Zone (CRZ) Notification, 2011.
- Solid Waste Management Rules, 2016.
- E-waste (Management) Rules, 2016.
- Bio-Medical Waste Management Rules, 2016.
- Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
- Construction and Demolition Waste Management Rules, 2016.

Pollutant	Time Weighted Average	Industrial, Residential, Rural & other Areas	Ecologically Sensitive Area (notified by Central Government)
Sulphur dioxide (SO ₂), µg/m ³	Annual	50	20
	24 hours	80	80
Nitrogen dioxide (NO ₂), µg/m ³	Annual	40	30
	24 hours	80	80
Particulate matter (< 10 µm) or PM ₁₀ , µg/m ³	Annual	60	60
	24 hours	100	100
Particulate matter (< 2.5 µm) or PM _{2.5} , µg/m ³	Annual	40	40
	24 hours	60	60
Ozone (O ₃), µg/m ³	8 hours	100	100
	1 hours	180	180
Lead (Pb), µg/m ³	Annual	0.50	0.50
	24 hours	1.0	1.0
Carbon monoxide (CO), mg/m ³	8 hours	02	02
	1 hours	04	04
Ammonia (NH ₃), µg/m ³	Annual	100	100
	24 hours	400	400
Benzene (C ₆ H ₆), µg/m ³	Annual	05	05
Benzo(a) Pyrene (BaP) – particulate phase only, ng/m ³	Annual	01	01
Arsenic (As), ng/m ³	Annual	06	06
Nickel (Ni), ng/m ³	Annual	20	20

Criteria Pollutants	Natural Sources	Emission Sources Anthropogenic Sources	Major Effects	
			Health Effects	Environmental Effects
Sulfur Oxides (SO_x)	Volcanic emissions	Burning of fossil fuels, Metal smelting, Petroleum refining etc. Burning of fossil fuels, Metal smelting, Petroleum refining etc.	Respiratory problems, Heart and lung disorders, Visual impairment	Acid rain
Nitrogen Oxides (NO_x)	Lightning, forest fires etc.	Burning of fossil fuels, biomass and high temperature combustion processes	Pulmonary disorders, increased susceptibility to respiratory infections	Precursor of ozone formation in troposphere, Aerosol formation
Particulate Matter (PM)	Windblown dust, pollen spores, photochemically produced particles	Vehicular emissions, Industrial combustion processes, Commercial and residential combustion, Construction industries	Respiratory problems, liver fibrosis, lung/liver cancer, Heart stroke, Bone problems	Visibility reduction
Carbon Monoxide (CO)	Animal metabolism, forest fires, volcanic activity	Burning of carbonaceous fuels, emission from IC engines	Anoxemia leading to various cardiovascular problems. Infants, pregnant women, and elderly people are at higher risk	
Ozone (O₃)		Hydrocarbons and NO _x upon reacting with sunlight results in O ₃ formation	Respiratory problems, Asthma, bronchitis etc.	O ₃ in upper troposphere causes greenhouse effects, Harmful effects on plants as it interferes in photosynthesis and results in death of plant tissues since it assists in the formation of Peroxyacetyl nitrate (PAN)
Lead (Pb)	Present in stratosphere at 10-50 km height	Metal processing plants, waste incineration, automobile exhausts, lead-acid batteries, industrial effluents etc.	Serious effects on central nervous system since it is absorbed rapidly in blood stream, Anemia, toxic for soft tissues and bones	

Source: Central Pollution Control Board, India

WATER QUALITY STANDARDS

SI No	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source
1	Colour, Hazen units, Max	5	15
2	Odour	Agreeable	Agreeable
3	pH value	6.5-8.5	No relaxation
4	Taste	Agreeable	Agreeable
5	Turbidity, NTU, Max	1	5
6	Total dissolved solids, mg/l	500	2000

GENERAL PARAMETERS CONCERNING SUBSTANCES UNDESIRABLE IN EXCESSIVE AMOUNTS

SI No	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source
1	Aluminum (as Al), mg/l, Max	0.03	0.2
2	Ammonia (as total ammonia-N), mg/l, Max	0.5	No relaxation
3	Anionic detergents (as MBAS), mg/l, Max	0.2	1.0
4	Barium (as Ba), mg/l, Max	0.7	No relaxation
5	Boron (as B), mg/l, Max	0.5	1.0
6	Calcium (as Ca), mg/l, Max	75	200
7	Chloramines (as Cl ₂), mg/l, Max	4.0	No relaxation
8	Chloride (as Cl), mg/l, Max	250	1000
9	Copper (as Cu), mg/l, Max	0.05	1.5
10	Fluoride (as F), mg/l, Max	1.0	1.5
11	Free residual chlorine, mg/l, Min	0.2	1
12	Iron (as Fe), mg/l, Max	0.3	No relaxation
13	Magnesium (as Mg), mg/l, Max	30	100
14	Manganese (as Mn), mg/l, Max	0.1	0.3
15	Mineral oil, mg/l, Max	0.5	No relaxation
16	Nitrate (as NO ₃), mg/l, Max	45	No relaxation
17	Phenolic compounds (as C ₆ H ₅ OH), mg/l, Max	0.001	0.002
18	Selenium (as Se), mg/l, Max	0.01	No relaxation
19	Silver (as Ag), mg/l, Max	0.1	No relaxation
20	Sulphate (as SO ₄), mg/l, Max	200	400
21	Sulphide (as H ₂ S), mg/l, Max	0.05	No relaxation
22	Total alkalinity as calcium carbonate, mg/l, Max	200	600
23	Total hardness (as CaCO ₃), mg/l, Max	200	600

Source: Central Pollution Control Board, India

Parameters Concerning Toxic Substances

SI No	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source
1	Cadmium (as Cd), mg/l, Max	0.03	No relaxation
2	Cyanide (as CN), mg/l, Max	0.5	No relaxation
3	Lead (as Pb), mg/l, Max	0.01	No relaxation
4	Mercury (as Hg), mg/l, Max	0.001	No relaxation
5	Molybdenum (as Mo), mg/l, Max	0.07	No relaxation
6	Nickel (as Ni), mg/l, Max	0.02	No relaxation
7	Pesticides, µg/l, Max	In the table below	No relaxation
8	Polychlorinated biphenyls, mg/l, Max	0.0005	No relaxation
9	Polynuclear aromatic hydro-carbons (as PAH), mg/l, Max	0.0001	No relaxation
10	Total arsenic (as As), mg/l, Max	0.01	0.05
11	Total chromium (as Cr), mg/l, Max	0.05	No relaxation
12	Trihalomethanes		
	a) Bromoform, mg/l, Max	0.1	No relaxation
	b) Dibromochloromethane, mg/l, Max	0.1	No relaxation
	c) Bromodichloromethane, mg/l, Max	0.06	No relaxation
	d) Chloroform, mg/l, Max	0.2	No relaxation



Parameters Concerning Radioactive Substances

SI No	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source
1	Radioactive materials:		
	a) Alpha emitters Bq/l, Max	0.1	No relaxation
	b) Beta emitters Bq/l, Max	1.0	No relaxation

Source: Central Pollution Control Board, India

Ambient Air Quality Standards in respect of Noise

Area Code	Category of Area / Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
1	Industrial area	75	70
2	Commercial area	65	55
3	Residential area	55	45
4	Silence Zone	50	40

* Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.

A “decibal” is a unit in which noise is measured.

Source: Central Pollution Control Board, India

These judgements are available on NGT website

<https://greentribunal.gov.in/>



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Schemes Launched by the Government Towards a Greener and Cleaner India



Namami Gange Programme

Launched in 2014, Namami Gange Programme is an Integrated Conservation Mission with a budget outlay of Rs. 20,000 crores. The objectives of the Programme are the abatement of pollution and conservation and rejuvenation of the National River Ganga.

Green Skill Development Programme (GSDP)

Formally launched on May 15, 2018, Green Skill Development Programme (GSDP) aims at training over 5.5 lakh workers in environment & forest sectors pan India. The programme will help in attaining Nationally Determined Contributions (NDCs), Sustainable Development Goals (SDGs), as well as Waste Management Rules (2016).



Swachh Bharat Abhiyan

Launched on October 2, 2014, Swachh Bharat Abhiyan aims to eradicate open defecation and improve solid waste management. In rural areas, the mission was overseen by the Ministry of Drinking Water and Sanitation whereas, in urban areas, it was overseen by the Ministry of Housing and Urban Affairs.

Nagar Van Scheme

Launched on the occasion of World Environment Day 2020, the Nagar Van Scheme aims at developing 200 Urban Forests pan India in the coming five years. It will be built either on the existing forest land or another vacant land in the cities across India offered by the local bodies.



A Green India for all

World's largest renewable energy programme 175 GW till 2022. India now at 4th Global Position for overall installed renewable energy capacity. Renewable energy has a share of 26.53% in the total installed generation capacity in the country. Solar capacity increased in the last 7.5 years from around 2.6 GW to more than 46 GW.

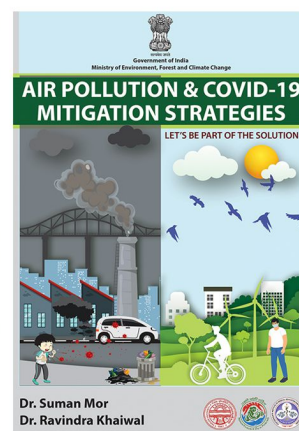
Jal Jeevan Mission

Launched in August 2019, Jal Jeevan Mission envisages a supply of 55 litres of water per person per day to every rural household through Functional Household Tap Connections (FHTC) by 2024. Rs 3,50,000 crore will be spent on 1592 stressed blocks in 256 districts.

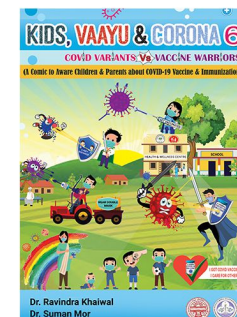
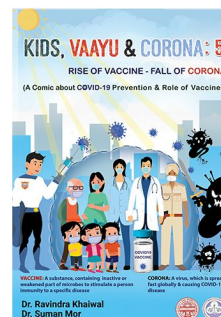
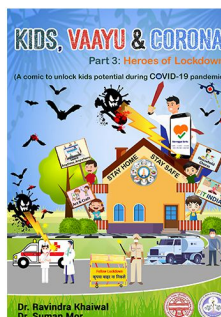
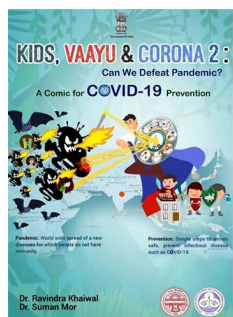
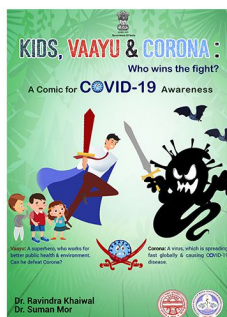
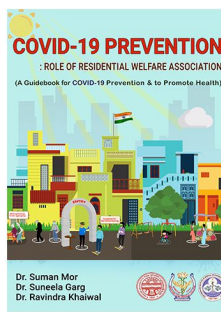
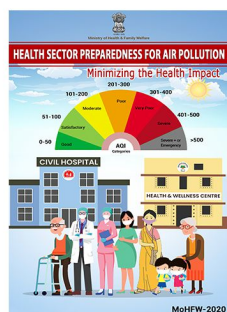
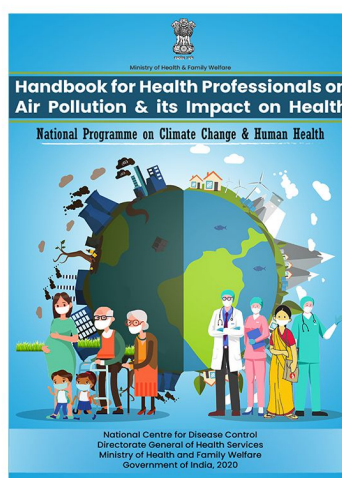
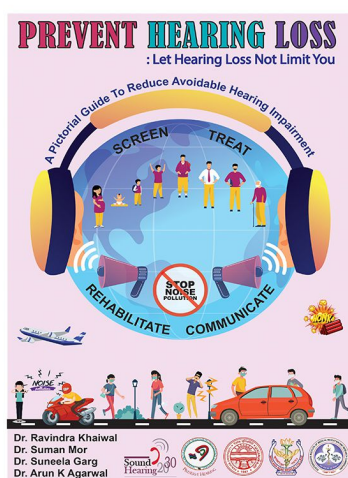


National Clean Air Programme

Launched in January 2019, aims to reduce air pollution by at least 20-30% in the next five years, with 2017 as its base year. The mission aims at reducing the concentration of coarse (PM10) and fine particles (PM2.5) by at least 20% by 2024. However, NGT has directed MoEFCC to reduce the aforementioned timeline and to increase the target of reduction.



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THINK GREEN

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