

WORK SHOP
ON
‘RESTORATION OF WATER BODIES’
at Gulmohar Hall, India Habitat Centre on 30.01.2020

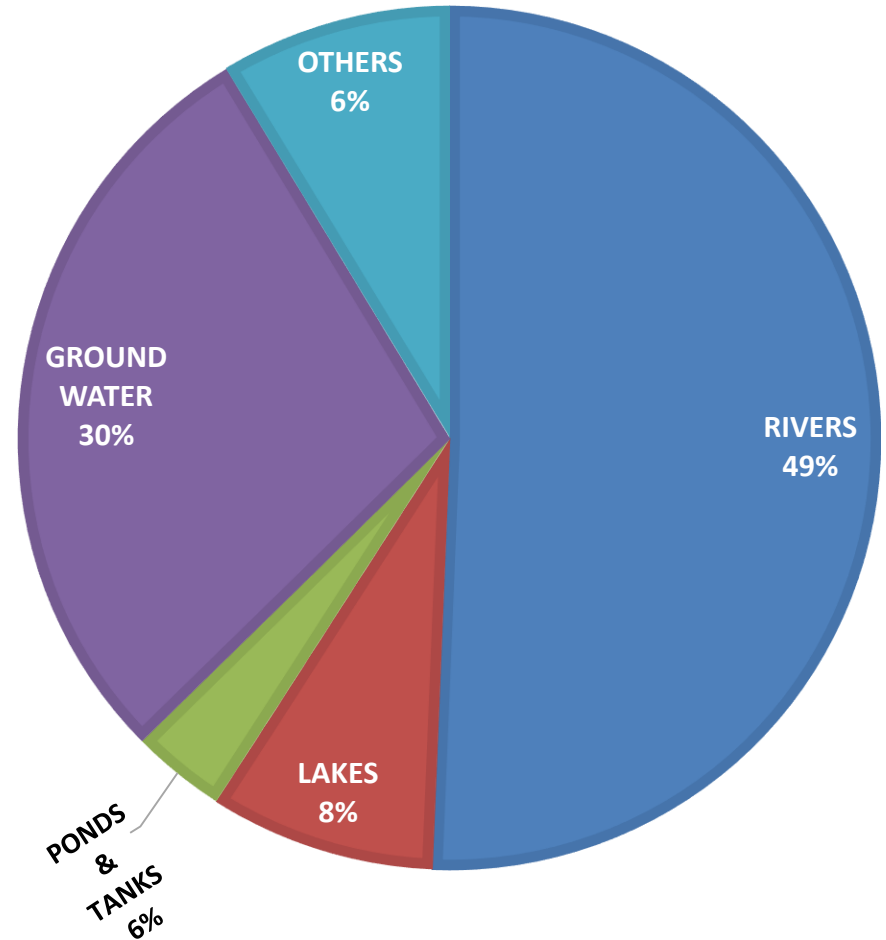
**OVER VIEW OF HON’BLE NGT DIRECTIONS FOR
REJUVENATION OR RESTORATION OF WATER BODIES**



Central Pollution Control Board
(Ministry of Environment, Forest & Climate Change, Govt. of India)
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National Water Quality Monitoring Programme

- Water (Prevention & Control of Pollution) Act, 1974
- State Pollution Control Boards & Pollution Control Committees
- Water Quality Monitoring Network: 4111 (As on January 2020)
- 62 Parameters Monitored:
 - 7 – Field Parameters
 - 9 – Core Parameters
 - 19 - General Parameters
 - 9 - Trace metals
 - 15 - Pesticides and Biomonitoring
- Frequency - Monthly/ Quarterly/ Half Yearly/ Yearly



Water Quality Monitoring Network under NWMP:

TYPE OF WATER BODY	NO OF MONITORING LOCATIONS (January 2020)
RIVER	2021
LAKE	341
POND	129
TANK	138
CREEK/ MARINE/ SEA/ COASTAL	63
CANAL	65
DRAIN	60
GROUND WATER	1233
STP	56
WATER TREATMENT PLANT (RAW WATER)	5
Total	4111

Outcome of NWMP

- Compendium of Water Quality Statistics
- Identification of Polluted River Stretches
- Identification & Control of Pollution Sources
- Dissemination of Water Quality Data to Public
- Reply to Parliament Questions, VIP references, Parliamentary Committees of Various Ministries/ Deptts.

Primary Water Quality Criteria for Bathing Reaches of Rivers

CRITERIA	RATIONALE
<p>Faecal Coliform : 500 (desirable) MPN/100ml 2500 (Max. Permissible)</p> <p>Faecal Streptococci : 100 (desirable) MPN/100ml 500 (Max. Permissible)</p>	<p>To ensure low sewage contamination. Faecal coliform and faecal streptococci are considered as they reflect the bacterial pathogenicity.</p> <p>The desirable and permissible limits are suggested to allow for fluctuation in environmental conditions such as seasonal changes, changes in flow conditions etc.</p>
<p>pH : Between 6.5-8.5</p>	<p>The range provides protection of the skin and delicate organs like eyes, nose, ears etc. which are directly exposed during outdoor bathing.</p>
<p>Dissolved Oxygen : 5 mg/l or more</p>	<p>The minimum dissolved oxygen concentration of 5 mg/l ensures reasonable freedom from oxygen consuming organic pollution immediately U/s which is necessary for preventing production of anaerobic gases (obnoxious gases) from sediments</p>
<p>Biochemical Oxygen Demand 3 day, 27°C : 3 mg/l or less</p>	<p>The Biochemical Oxygen Demand of 3 mg/l or less of the water ensures reasonable freedom from oxygen demanding pollutants and prevent production of obnoxious gases.</p>

USE BASED CLASSIFICATION OF SURFACE WATERS IN INDIA

Designated-Best-Use	Class of Water	Criteria Parameters
Drinking Water Source without conventional treatment but after disinfection	A	<ol style="list-style-type: none"> 1. Total Coliforms Organism MPN/100ml shall be 50 or less 2. pH between 6.5 and 8.5 3. Dissolved Oxygen 6mg/l or more 4. Biochemical Oxygen Demand 5 days 20oC 2mg/l or less
Outdoor Bathing (Organised)	B	<ol style="list-style-type: none"> 1. Total Coliform Organism MPN/100ml shall be 500 or less 2. pH between 6.5 and 8.5 3. Dissolved Oxygen 5mg/l or more 4. Biochemical Oxygen Demand 5 days 20oC 3mg/l or less
Drinking water source after conventional treatment and disinfection	C	<ol style="list-style-type: none"> 1. Total Coliforms Organism MPN/100ml shall be 5000 or less 2. pH between 6 to 9 3. Dissolved Oxygen 4mg/l or more 4. Biochemical Oxygen Demand 5 days 20oC 3mg/l or less
Propagation of Wild life and Fisheries	D	<ol style="list-style-type: none"> 1. pH between 6.5 to 8.5 2. Dissolved Oxygen 4mg/l or more 3. Free Ammonia (as N) 1.2 mg/l or less
Irrigation, Industrial Cooling, Controlled Waste disposal	E	<ol style="list-style-type: none"> 1. pH between 6.0 to 8.5 2. Electrical Conductivity at 25oC micro mhos/cm Max.2250 3. Sodium absorption Ratio Max. 26 4. Boron Max. 2mg/l

Sources of Pollution in Water Bodies

Point Sources

- Municipal/Domestic Sewage
- Effluent from Industries
- Municipal Solid Waste
- Hazardous, Bio-medical and E-Waste
- Plastic Waste, C & D Waste

Non-Point Sources

- Discharges from un-sewered areas
- Agricultural Run off

Major Causes of Pollution in Rivers

- Absence of fresh water- irregular monsoons/ impounding water
- Encroachments– Flood Plains/ River Beds
- Discharge of untreated/ partially treated sewage & industrial effluent
- Disposal of waste (s) due to inadequate infrastructure
- Over Exploitation of Ground Water Extraction
- Deforestation
- Construction of Dams on upstream of river bodies restricting no flow on downstream.
- Mining in River Beds/ Flood Plain

IDENTIFICATION OF RIVER STRETCHES FOR RESTORATION

- **2002-2008 Assessment (2010)**
 - **150** river stretches for restoration of **121** Rivers
(criteria pollutant: BOD)
- **2009-2012 Assessment (2015)**
 - **302** river stretches for restoration of **275** Rivers
(criteria pollutant: BOD)
- **2015 Assessment (2017)**
 - **317** river stretches for restoration of **293** Rivers
(criteria pollutant: BOD & FC)
- **2016-2017 Assessment (2018)**
 - **351** river stretches for restoration of **323** Rivers
(criteria pollutant: BOD)

“More River Stretches are now Critically Polluted : CPCB” (O.A. No. 673/2018)

HON'BLE NGT Orders:19.12.2018, 20.09.2018, 08.04.2018 & 06.12.2019

- Prepare action plans: 351 identified polluted river stretches
- Target : To fit at least for bathing purposes by 31.03.2021
- Constituted River Rejuvenation Committees (RRCs)
Directors -- Environment, Urban Development, Industries, SPCB
- RRC to prepare and monitor action plans and function under over all supervision of Principal Secretary (Environment), State Government/UT Administration
- States/ UTs to submit Performance Guarantee to CPCB

S.No	No. of Identified Polluted River Stretches	Performance Guarantee in Rs
1	>10	15 Crore
2	5 to 10	10 Crore
3	<5	5 Crore

- Central Monitoring Committee (CMC) to prepare National Plan & ensure State Action Plans are implemented

Hon'ble NGT Directions for Rejuvenation of PRS contd..

➤ States/UTs

- Liable to pay compensation in terms of order dated 19.12.2018
 - for delay in submission of action plans within a month- Assam, Manipur and UP.
 - Compensation payable at the scale of 50% as States failed to submit complete action plans- Delhi/ Meghalaya /Nagaland /TN/UP/Uttarakhand.
- To upload approved action plans on their respective websites giving clear timelines for execution, implementing agencies, Budget Estimates and Pooling of resources from State Budget.
- To submit action plans for P-III, P-IV and P-V river stretches to CPCB by **30.06.2019.**

Hon'ble NGT Directions for Rejuvenation of Polluted River Stretches:08.04.2019

➤ SPCBs/ PCCs

- To display water quality of polluted river stretches along with action taken on their respective websites **within one month**, which may be revised **every three months**.
- To launch programme relating to **Biodiversity** monitoring and indexing of rivers.
- To assess efficacy of river cleaning programme apart from carrying out regular hygienic survey of the rivers w. r. t Fecal Coliform and Fecal Streptococci as indicated in primary water quality criteria for bathing waters.

Hon'ble NGT Directions in OA No. 673/2018: 06.12.2019

- Timeline for implementation of all action plans including completion of setting up STPs and their commissioning is 31.03.2021.
- NMCG to review action plan on monthly basis and submit quarterly report to the NGT w.e.from April 2020.
- States/UTs: To furnish monthly progress report to Secretary, Ministry of Jal Shakti with a copy to CPCB.
- CPCB to review action plans pertaining to P-III and P-IV on or before 31.03.2020.
- Action Plan for river Yamuna (Delhi) be revised in line with NGT order dated 11.09.2019 passed in O.A. No. 06/2012 by Delhi State.
- A survey to be conducted by CPCB involving SPCB/PCCs within three months taking parameters like pH, COD, DO and Toxic Pollutants.
- SPCBs/PCCs:-Monitoring gaps be identified and upgraded so to cover upstream and downstream locations of major discharges to the river.

State-wise Action Plans Approved by CPCB Task Team

Task Team Meeting	Date of Task Team Meeting	Approved Action Plans for Rejuvenation of Polluted River Stretches	
		STATE/UT	No of Action Plans
3 rd	11 - 12.02.2019	GUJARAT	6
		HARYANA	2
		HIMACHAL PRADESH	2
		KERALA	1
		MADHYA PRADESH	2
		PUNJAB	2
		TELANGANA	3
		WEST BENGAL	2
4 th	28.03.2019	DD, DNH	1
		JAMMU & KASHMIR	1
		MADHYA PRADESH	2
		MAHARASHTRA	15
		ODISHA	1
5 th	24.04.2019	TAMIL NADU	4
6 th	31.05.2019	UTTAR PRADESH	4
7 th	16.07.2019	UTTARAKHAND	4
8 th	06.09.2019	ASSAM	4
		MANIPUR	1
		MEGHALAYA	2
		NAGALAND	1

State-wise No of locations (Ponds, Lakes & Tanks) – Compliance Status- Complying and Non- Complying to the Primary Water Quality Criteria (Based on Water Quality - 2018)

State/UT	No of Locations Monitored	No of Complying Locations	No of Non-Complying Locations
Andhra Pradesh	2	1	1
Assam	30	1	29
Bihar	5	-	5
Chandigarh	1	-	1
Chhattisgarh	2	1	1
Delhi	4	-	4
Goa	8	1	7
Gujarat	23	8	15
Haryana	3	-	3
Himachal Pradesh	5	3	2
Jammu & Kashmir	28	3	25
Jharkhand	4	3	1
Karnataka	109	4	105
Kerala	18	7	11

[Contd....](#)

State-wise No of locations (Ponds, Lakes & Tanks) – Compliance Status-Contd...

State/UT	No of locations monitored (Ponds, Lakes & Tanks)	No of Complying locations (Ponds, Lakes & Tanks)	No of Non-Complying locations (Ponds, Lakes & Tanks)
Lakshadweep	1	1	-
Madhya Pradesh	31	14	17
Manipur	18	-	18
Meghalaya	7	2	5
Nagaland	2	-	2
Odisha	15	-	15
Puducherry	2	2	-
Punjab	3	1	2
Rajasthan	16	5	11
Tamil Nadu	8	-	8
Telangana	59	3	56
Tripura	15	14	1
Uttar Pradesh	4	-	4
Uttarakhand	2	2	-
West Bengal	10	2	8
Total	435	78	357

O.A. No. 325/2015 - NGT ORDER: 10.05.2019
“PREPARATION AND SUBMISSION OF ACTION PLANS
FOR RESTORATION OF ALL WATER BODIES”

➤ **All the States and UTs to :**

Review the Existing Framework of Restoration of all the Water Bodies in the respective State/UT	Within 3 months
Preparation of Action Plans and a Report furnished to CPCB by the States/UTs	

➤ **CPCB to:**

Prepare and place on its website guidelines- for restoration of water bodies	Within a month
Examine all such action plans and furnish its comments to the Tribunal	Within 2 months

THANK YOU