

ACTION PLAN

For

REJUVENATION OF CHOPAN RIVER



PREPARED BY

**REGIONAL OFFICE,
M. P. POLLUTION CONTROL BOARD, VIJAIPUR, GUNA**

ACTION PLAN FOR REJUVENATION OF CHOPAN RIVER

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1.0 BACKGROUND

1.1 NGT Case No. 673/2018

Hon'ble National Green Tribunal Principal Bench, New Delhi, in the matter of original application no. 673/2018 (*News Item Published in the Hindu authored by Shri Jacob Koshy*) titled "More river stretches are now critically polluted: CPCB" passed an order on 20/09/2018. In para 47 Hon'ble Green Tribunal has directed the polluted river stretches haven been divided in five priority categories i.e., I, II, III, IV, V depending upon the level of BOD. Following are the parameters for assessing the criteria :

I. Criteria for Priority I

- (a) Monitoring locations exceeding BOD concentration 30 mg/L has been considered as it is the standard of sewage treatment plant and in river it appears without dilution.(River locations having water quality exceeding discharge standards for BOD to fresh water sources)
- (b) All monitoring locations exceeding BOD concentration 6 mg/L on all occasions.
- (c) Monitoring locations exceeding 3 mg/L BOD are not meeting desired water quality criteria but does not affect to Dissolved Oxygen level in water bodies. If BOD exceeds 6mg/L in water body, the Dissolved Oxygen is reduced below desired levels.
- (d) The raw water having BOD levels upto 5 mg/L are does not form complex chemicals on chlorination for municipal water supplies. Hence the water bodies having BOD more than 6 mg/L are considered as polluted and identified for remedial action.

II. Criteria for Priority II

- (a) Monitoring locations having BOD between 20-30 mg/L.
- (b) All monitoring locations exceeding BOD concentration 6 mg/L on all occasions.

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III. Criteria for Priority III

- (a) Monitoring locations having BOD between 10-20 mg/L.
- (b) All monitoring locations exceeding BOD concentration 6 mg/L on all occasions.

IV. Criteria for Priority IV

- (a) Monitoring locations having BOD between 6-10 mg/L.

V. Criteria for Priority V

- (a) Monitoring locations having BOD between 3-6 mg/l.
- (b) The locations exceeding desired water quality of 3mg/l BOD.

MADHYA PRADESH	SONE	ALONG AMLAI	12.4	III
	GOHAD	GOHAD DAM TO GORMI	6.3	IV
	KOLAR	SURAJNAGAR TO SHIRDIPURAM	7.5	IV
	TAPI	NEPANAGAR TO BURHANPUR	4.6 - 8	IV
	BICHIA	SILPARI TO GADHAWA	3.5	V
	CHAMLA	ALONG BADNAGAR, UJJAIN	4.0	V
	CHOUPAN	ALONG VIJAIPUR	3.4	V
	KALISOT	MANDIDEEP TO SAMARDHA VILLAGE	4.1	V
	KANHAN	KANHAN IN CHINDWARA DISTRICT BOUNDARY	3.2	V
	KATNI	ALONG KATNI	3.5	V
	KUNDA	KHARGONE TO KHEDI KHURD	4.0	V
	MALEI	JAORA TO BARAUDA	3.5	V
	MANDAKINI (MP)	ALONG CHITRAKUT	5.8	V
	NEWAJ	ALONG SHUJALPUR	4.0	V
	PARVATI	BATAWADA TO PILUKHEDI	3.2	V
	SIMRAR	ALONG KATNI	3.9	V
	TONS	CHAKGHAT TO CHAPPAR	3.5	V
	WAINGANGA	CHINDWARA TO BALAGHAT	3.2	V

The para of order 48, 49 and 50.3 are relevant to comply. The para 48 states that “it is absolutely necessary that Action Plans are prepared to restore the polluted river stretches to the prescribed standards”. Para 49 states that “Model Action Plan for Hindon River, already provided by CPCB, may also be taken into account”

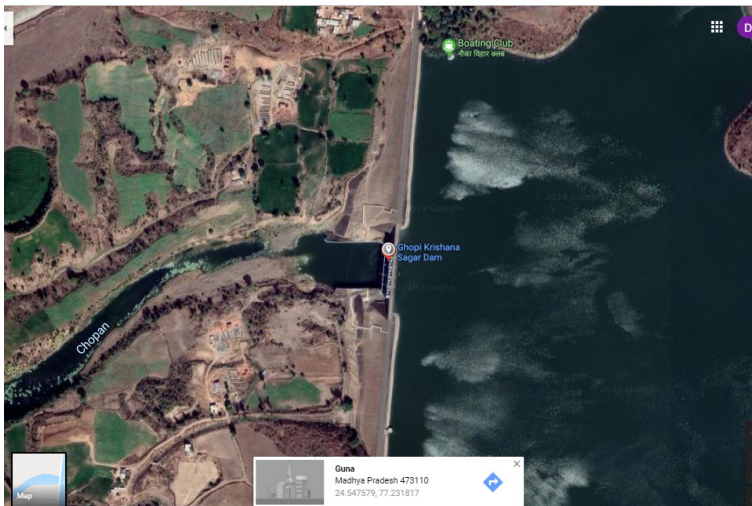
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In para 50 Hon'ble National Green Tribunal has issued following directions:-

- i. *All States and Union Territories are directed to prepare action plans within two months for bringing all the polluted river stretches to be fit at least for bathing purposes (i.e BOD < 3 mg/L and FC < 500 MPN /100 ml) within six months from the date of finalization of the action plans.*
- ii. *The action plans may be prepared by four-member Committee comprising, Director, and Environment. Director, Urban Development. Director, Industries. Member Secretary, State Pollution Control Board of concerned state. This Committee will also be the monitoring Committee for execution of the action plan. The Committee may be called "River Rejuvenation Committee" (RRC). The RRC will function under the overall supervision and coordination of Principal Secretary, Environment of the concerned State/Union Territory.*
- iii. *The action plan will include components like identification of polluting sources including functioning/ status of STPs/ETPs/CETP and solid waste management and processing facilities, quantification and characterization of solid waste, trade and sewage generated in the catchment area of polluted river stretch. The action plan will address issues relating to; ground water extraction, adopting good irrigation practices, protection and management of Flood Plain Zones (FPZ), rain water harvesting, ground water charging maintaining minimum environmental flow of river and plantation on both sides of the river. Setting up of biodiversity parks on flood plains by removing encroachment shall also be considered as an important component for river rejuvenation. The action plan should focus on proper interception and diversion of sewage carrying drains to the Sewage Treatment Plant (STP) and emphasis should be on utilization of treated sewage so as to minimize extraction of ground or surface water. The action plan should have speedy, definite or specific timelines for execution of steps. Provision may be made to pool the resources, utilizing funds from State budgets, local bodies, State Pollution Control Board/ Committee and out of Central Schemes.*

1.2 POLLUTED STRETCH OF RIVER CHOPAN

The Chopan river is originated at Gopikrishna Sagar Dam. Their coordinates at origin 24.547579N, 77.231817E. Total aerial length of river is 16.35 Km. This river finally meet in river Parvati. Their coordinates at confluence point is 24.561255N, 77.070987E. This river is passing Ruthiyai town at the distance of about 1.5 km. and M/s NFL Vijaipur at the distance of 500 meters. Water Resource Department has made a dam on Chopan river for industrial as well as drinking water supply to NFL and GAIL, Vijaipur, Guna. Near by agriculture farmers utilize river water in their agriculture use.



Present water quality of river is B category of IS : 2296. In past 03 years no pollution stretch observed.

1.3 CHOPAN RIVER & POLLUTION STATUS

The river Chopan a tributary of the river Parvati, arise from Gopi Krishna Sagar dam, which finally meet at river Parvati. Distance of Chopan river is 16.35 km. Where local rural nallah & storm water drain of NFL & Gail, Vijaipur meet.

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This river is flowing east to west direction. Seepage water of dam flowing through out year, which finally meet in river Parvati at the distance of approx. 7 km. in west direction. Local farmers used their water in agriculture purpose. In past 03 years study it observed that river water is of B category of IS : 2296.



2.0 VARIOUS NALLAS JOINING RIVER CHOPAN

It is to be mentioned here that there is 01 drainage of NFL Vijaipur which meet into river Chopan.

During monsoon season storm water drain of rural area also meet in river Chopan. There is no other man made nallah except natural drainage of rural areas, which

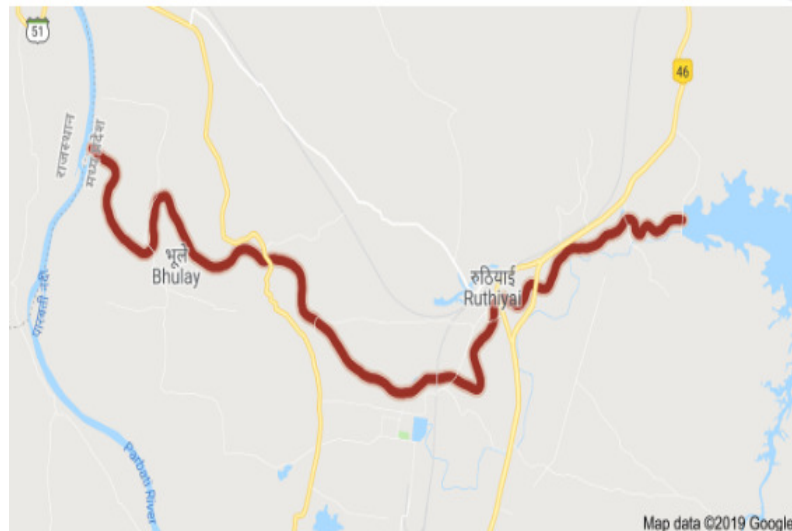


adjoining the river Chopan. In other season these rural nallah remain dry. M/s NFL Vijaipur is of one fertilizer plant established near to river Chopan. Total W.C. of this plant is 8000 KLD using for DM water, cooling tower, amm-I and Urea-I, Cooling tower amm-II & Urea-II, Service water, fire water & sanitary. Industry has provided 380 Cubic Meter/Hr. capacity of steam stripping process based ETP and 110.5 Cubic Meter/Hr. capacity activated sludge process based STP for treatment of generated waste. Industry utilized their treated water for horticulture purpose.

3.0 WATER QUALITY OF RIVER CHOPAN

It is an important aspect for revival of river Chopan in context of its utility as source of water supply for agriculture use. The ultimate goal for beneficial use of river will

determine the level of actions to be taken for maintaining the water quality. In the above



application OA no. 673/2018, Hon'ble National Green Tribunal passed the order that "All States and Union Territories are directed to prepare action plans within two months for bringing all the polluted river stretches to be fit at least for bathing purposes (i.e $BOD < 3 \text{ mg/L}$ and $FC < 500 \text{ MPN /100 ml}$) within six months from the date of finalization of the action plans." In compliance of above direction Board has carried out water quality monitoring under national water monitoring program at two locations in river Chopan. Monitoring station has fixed in up stream & 100 meter down stream of confluence point. The water quality monitoring of river Chopan at up & down stream of past 03 years are given below :

Up-stream

Sl. No.	Parameters	2016-2017	2017-2018	2018-2019
1	pH	7.41 to 7.67	7.5 to 7.8	7.27 to 8.43
2	Dissolved Oxygen (DO)	6.95 to 8.25	6.5 to 9.0	5.8 to 8.0
3	Bio Chemical Oxygen Demand	1.35 to 1.95	1.6 to 2.5	7.27 to 8.43
4	Total Coliforms Organism MPN/100 ml	-	17 to 34	22 to 63

Down-stream

Sl. No.	Parameters	2016-2017	2017-2018	2018-2019
1	pH	7.35 to 7.64	7.6 to 8.1	7.85 to 9.2
2	Dissolved Oxygen (DO)	6.78 to 8.18	6.2 to 8.2	5.0 to 7.2
3	Bio Chemical Oxygen Demand	1.7 to 3.45	1.9 to 2.8	1.7 to 2.6
4	Total Coliforms Organism MPN/100 ml	-	26 to 40	26 to 110

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Comparative suggested criteria for bathing in Chopan river is given in the following :

Suggested criteria for outdoor bathing

Sl. No.	Parameters	Class 'B' Water Quality Criteria – for Bathing (to be achieved)	Class 'B' Water Quality Criteria – for Bathing (Present Quality)
1	pH	6.5 to 8.5	6.5 to 8.5
2	Dissolved Oxygen (DO)	≥ 5.0 mg/l	≥ 5.0 mg/l
3	Bio Chemical Oxygen Demand	< 3 mg/l	< 3 mg/l
4	Total Coli forms Organism MPN/100 ml	< 500	< 500

4.0 THE ACTION PLAN FOR REJUVENATION OF RIVER CHOPAN

Water quality of river Chopan is of B category as per IS : 2296. Board shall remain maintained B category water quality of river Chopan as per above given table. Presently there is no need for preparation of action plan for rejuvenation of river.

SCHEDULE OF MONITORING OF RIVER CHOPAN

Sr. No.	Monitoring Place	Schedule of Monitoring Frequency					
		April	June	Aug.	Oct.	Dec.	Feb.
1	Chopan river up stream	M	M	M	M	M	M
2	Chopan river at 100 meter down stream of confluence point	M	M	M	M	M	M

Note : M - Monitoring

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***Proposed Short Term & Long Term Action Plan for
Rejuvenation of River Chopan***

SI No.	Action plan for rejuvenation of river Chopan	Organization/Agency Responsible for Execution of the Action Plan	Time Target (For Preparation of Scheme)	Present Status
I.	Industrial Pollution Control			
	(a) Inventorisation of the industries in the catchment area of River Chopan covering assessment on aspects relating to Status of Consents under Water & Air Acts and Authorization Effluent Generation. ETP capacities and final mode of effluent discharges	R.O., M.P.P.C.B., Vijaipur, Guna	Nil	Mainly NFL & Gail Vijaipur Guna
	(b) Actions against the Identified industries in operation without Consents under Water & Air Acts/Authorisation under the H & OW (M & TM) Rules 2016 as amended.	R.O., M.P.P.C.B., Vijaipur, Guna	6 months	-
	(c) Action against the industries not installed ETPs or ETPs exist but not operating or ETP outlet or treated effluent is not complying to the effluent discharge standards or norms.	R.O., M.P.P.C.B., Vijaipur, Guna	6 months	-
	(d) Action against the red category industries for installation of OCEMS and not transferring data in CPCB and MPPCB	R.O., M.P.P.C.B., Vijaipur, Guna	Not applicable	Not applicable

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	(e) Small scale/micro and service providing units located in urban or semi-urban limits like Dairies. Auto Service Stations to have a minimum provision of O & G traps.	R.O., M.P.P.C.B., Vijaipur, Guna	Not applicable	Not applicable
	(f) Prohibition of Burning of any kind of waste including agro-residues	R.O., M.P.P.C.B., Vijaipur, Guna	06 months	-
II	Domestic Sewerage : Source Nil			
III	Ground water quality			
	(a) Sealing of contaminated hand pumps and found to be unfit for drinking purpose by the public	Local Bodies/MPPCB/PHE	Within 6 months	-
	(b) Supply of potable water to the affected communities in the identified critical blocks	Local Bodies/PHE	Within 6 months	-
	(c) Carrying assessment of ground water survey for quality and to identify over exploited and critical blocks.	CGWB/Local body	Within 6 months	-
	(d) To Conduct periodic surprise inspection of the industry to rule out any forceful injection of industrial effluents into groundwater resources	MPPCB	Within 6 months	-
	(e) All the industry should be directed to obtain NOC from the CGWB and action against the units in Operation without obtaining of NOC from CGWA	CGWB/MPPCB	Within 6 months	-
	(f) To ensure rain water harvesting by the industrial commercial and other institutions and groundwater recharging with only clean water be encouraged by CGWB/CGWA	Local Body/MPPCB	Within 6 months	-

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IV	E-Flow and Irrigation : Chopan river water is the perennial river, where seepage of Gopikrishna sagar flowing in the river. There is no water supply for drinking and industrial use. Local farmers utilize their water in agriculture purpose.
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