

# **ACTION PLAN**

*For*

## **REJUVENATION OF PARVATI RIVER**



**PREPARED BY**

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

# ACTION PLAN FOR REJUVENATION OF RIVER PARVATI

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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 BOUNDRY	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”

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

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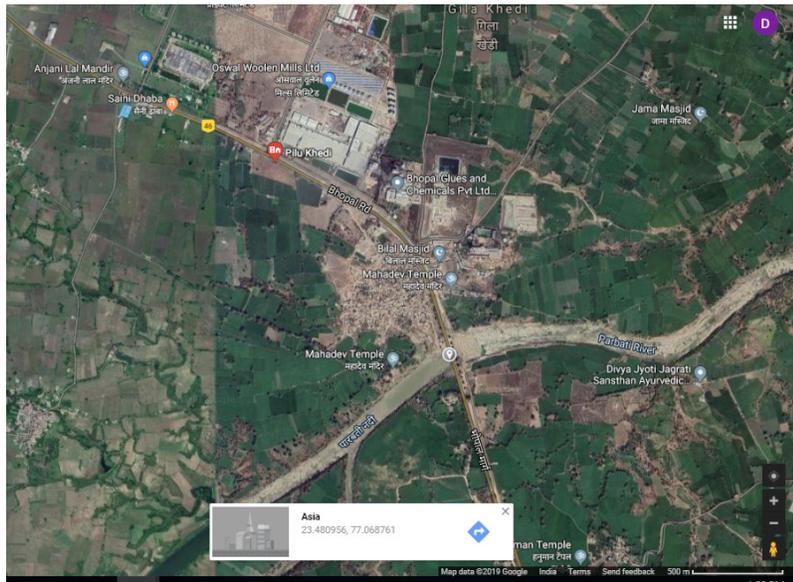
*least for bathing purposes (i.e BOD < 3 mg/L and FC < 500 MPN /100 ml) within six months from the date of finalization of the action plans.*

- 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 RIRVER PARVATI

The Parvati river is a river in Madhya Pradesh which is the tributary of river Chambal. The river rises at a height of 610 m in the Vindhya Range and length is 436 km. Water Resource Department has made a stop water dam near road bridge on Parvati river. River water supply for drinking purpose to local body & industrial use in Pilukhedi industrial area. Under national water monitoring program water quality monitoring carry out on water supply intake point & 100 meter down stream. Coordinates of NWMP sampling point is 23.480956N, 77.068761

E. River is non perennial. During rainy season rain water is flowing (4-5 months). Rest of months it

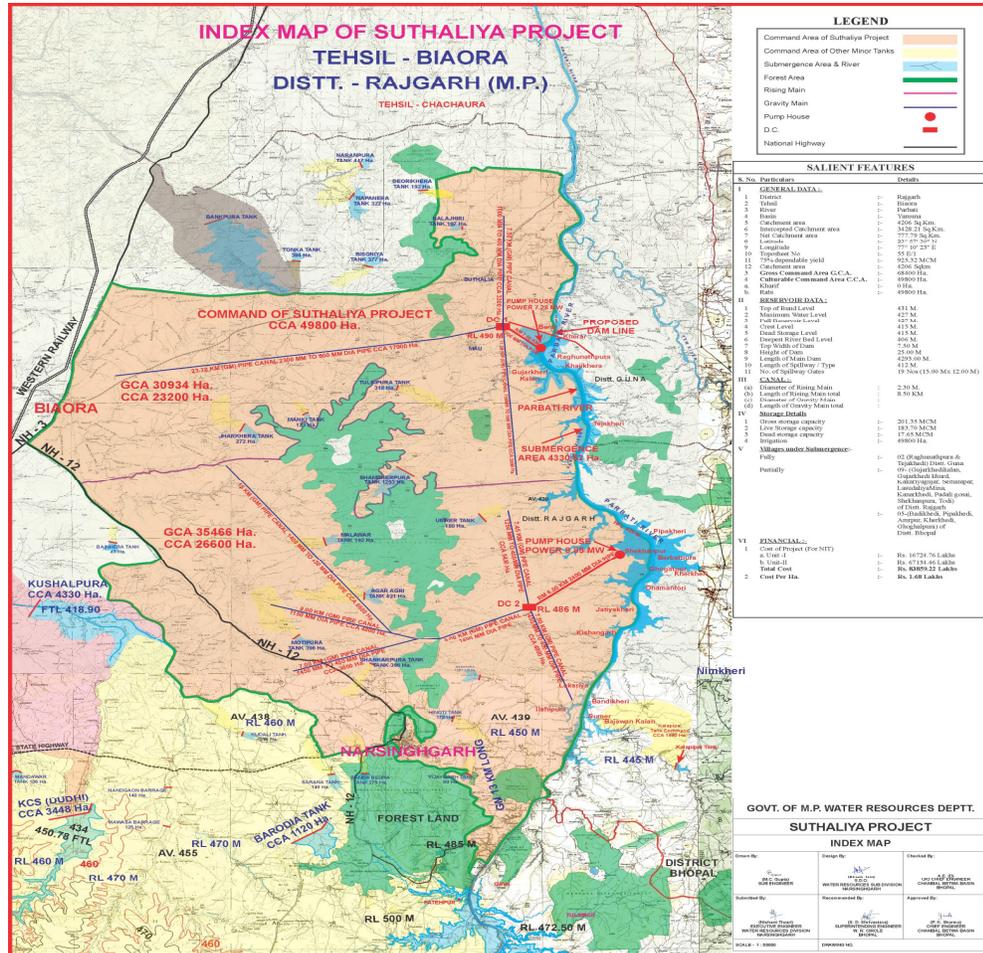


remain dry. Water quality of river is B category of IS : 2296.

## 1.3 PARVATI RIVER & POLLUTION STATUS

The river Parvati a tributary of the river Chambal, rises from Vindhya range and finally meet in Chambal at coordinates of confluence point is 25.84444N, 76.56333E. The Parvati river is non perennial in nature and flows during monsoon.

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In up-stream of stop water dam there are no nallah adjoining in Parvati. Pilukhedi industrial area is the catchment of river.

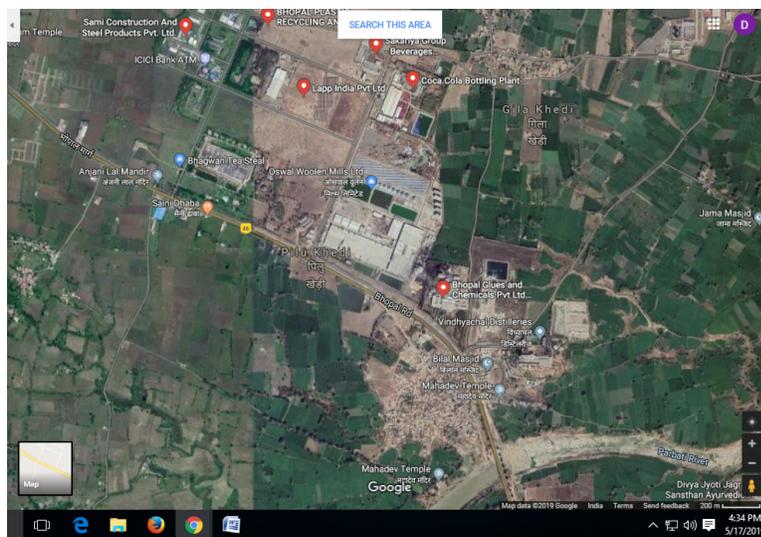
Earlier Vindhya chaly distillery & Bhopal Glue & Chemical industries in Pilukhedi, where using treated water on land for disposal, which were leading to river during rains as run off from the area. Presently with direction of CPCB and MPPCB these industries have installed R.O., MEE and dryer to maintained zero discharge condition from the plants. Now, therefore the waste of these industries are not being discharged on land neither in river. In the catchment there are one 17 type & 04 red category of water polluting industries are in operation. Status of industries as per given below :

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Sr. No.	Name of Industry	W.C. (KLD)	W.W.G. (KLD)	Installed Treatment Facility	Remark
<b>A</b>	<b>17 Type Industry</b>				
1	Vindhyachal Distilleries Private Limited	535	210	RO, MEE, ATFD, STP	ZLD
<b>B</b>	<b>Red Category Industry</b>				
1	Hind Syntex Limited (Spinning Unit)	350	50	STP	ZLD
2	Bhopal Glues And Chemicals P Ltd.	1630	1140	ETP x 2, RO, MEE, ATFD	ZLD
3	Hindustan Coca-Cola Beverages Pvt. Ltd.	820	740	ETP, RO, Sludge Decanter	ZLD
4	Oswal Woollen Mills Ltd (Oswal Denims Unit II)	1100	855	ETP, RO, MEE	ZLD

In addition the above Hindustan Coca-Cola Industry, Oswal Denim and Hind syntax are the other water polluting industries in the area. These industries have

also installed ETPs for treatment of waste water to recycle and reuse in the plant to achieve zero discharge condition from the

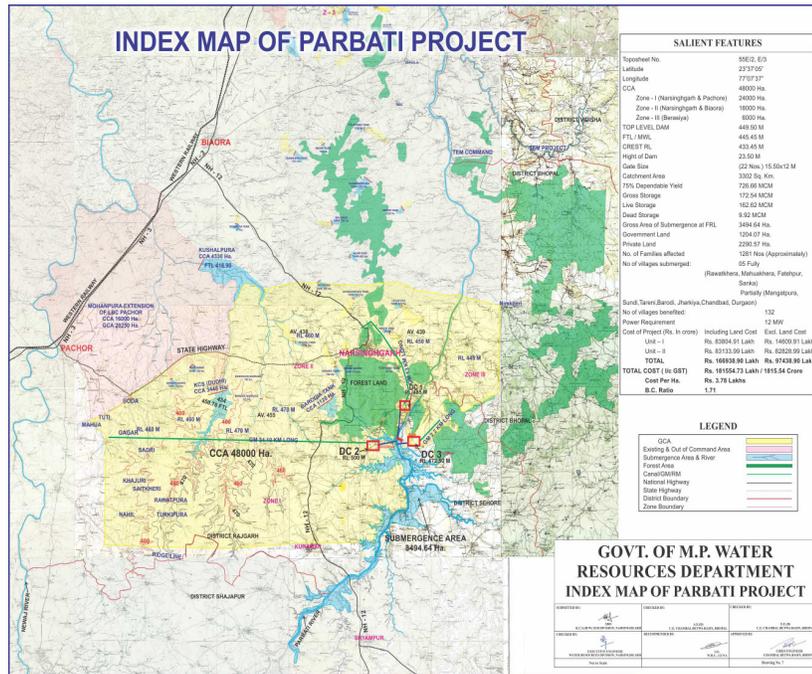


plant premises. Board is in process of directing these industries to for installing ZLD in short time & maintained zero discharge condition.

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### 2.0 VARIOUS NALLAS JOINING RIVER PARVATI

It is to be mentioned here that there is 01 natural nallah, which meet into river Parvati at down stream. In the rainy season



this nallah carries rainy water of Pilu Khedi or near by areas. Except monsoon season this natural nallah remain dry.

### 3.0 WATER QUALITY OF RIVER PARVATI

It is an important aspect for revival of river Parvati in context of its utility as source of water supply of Pilu Khedi town. 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 mg/L and FC < 500 MPN /100 ml) within six months from the date of finalization of the action plans." The water quality monitoring of river Parvati at up & down stream are given below :

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*Up-stream*

Sl. No	Parameters	2017	2018	2019
1	pH	7.12 to 7.65	6.8 to 7.9	7.25 to 8.41
2	Dissolved Oxygen (DO)	6.1 to 8.9	6.5 to 9.5	5.1 to 8.1
3	Bio Chemical Oxygen Demand	1.8 to 2.6	1.8 to 2.9	1.4 to 2.2
4	Total Coliforms Organism MPN/100 ml	-	17 to 17	25 to 70

*Down-stream*

Sl.No	Parameters	2017	2018	2019
1	pH	7.5 to 7.76	7.4 to 7.8	7.69 to 8.35
2	Dissolved Oxygen (DO)	6.0 to 8.7	6.1 to 9.0	5.6 to 7.8
3	Bio Chemical Oxygen Demand	1.9 to 2.8	2.4 to 2.9	1.7 to 2.4
4	Total Coliforms Organism MPN/100 ml	-	25 to 25	32 to 120

Comparative suggested criteria for bathing in Parvati river is given in the following **Table-1**.

*Table 1. 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 BASIS OF PROPOSED ACTION PLAN FOR CONTROL OF POLLUTION IN RIVER PARVATI**

The Parvati river is non perennial in nature. Hence, rejuvenation of river could not be targeted. As per the monitoring of MPPCB water quality of Parvati river is of B class as per IS:2296 since last 03 years and same is being supplied to the industrial area and locals through the impounded water.

To maintain B category water quality of river Parvati as per above given table, the continuous monthly monitoring of the river will be done by M. P. Pollution Control Board.

Presently the action plan for control of pollution in river Parvati is targeted by above proposed monthly monitoring.

**SCHEDULE OF MONITORING OF RIVER PARVATI**

Sr. No.	Monitoring Place	Schedule of Monitoring Frequency					
		April	June	Aug.	Oct.	Dec.	Feb.
1	Parvati river at water supply intake point	M	M	M	M	M	M
2	Parvati river at 100 meter down stream	M	M	M	M	M	M

**Note :** M - Monitoring

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***Proposed Short Term and Long Term Action Plan for  
Rejuvenation of River Parvati***

<b>SI No.</b>	<b>Action plan for rejuvenation of river Parvati</b>	<b>Organization/Agency Responsible for Execution of the Action Plan</b>	<b>Time Target</b> (For Preparation of Scheme)	<b>Present Status</b>
<b>I.</b>	<b>Industrial Pollution Control</b>			
	(a) Inventorisation of the industries in the catchment area of River Parvati 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., Vijaypur, Guna	06 months	Pilukhedi industrial area is in the catchment of river Parvati.
	(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., Vijaypur, Guna	06 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., Vijaypur, Guna	06 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., Vijaypur, Guna	Nil	M/s Vindhychal distillery under 17 type industries has installed OCEMS and connected with MPPCB & CPCB.

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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., Vijaypur, Guna	06 months	-
	(f) Prohibition of Burning of any kind of waste including agro-residues	R.O., M.P.P.C.B., Vijaypur, Guna	Nil	Nil
<b>II</b>	<b>Domestic Sewerage : Source Nil</b>			
<b>III</b>	<b>Ground water quality</b>			
	(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/ MPPCB/ PHE	Within 6 months	-
	(c) Carrying assessment of ground water survey for quality and to identify over exploited and critical blocks.	Local Bodies/ MPPCB/ PHE	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 and CGWB	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	-

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	(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	CGWB/MPPCB	Within 6 months	-
<b>IV</b>	<b>E-Flow and Irrigation :</b> This is a non perennial river and flows during monsoon only. A stop dam has been made by MPAKVN for creating the water storage in Parvati river for water supply at Pilu Khedi industrial area and local body.			

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