

The action plan for Rejuvenation of Katni river
Katni (M.P.)

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1. H. National Green Tribunal central Zonal Bench New Delhi.
NGT Case No. 673/2018 : Hon'ble National Green Tribunal Central Zonal 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. The para 48, 49 and 50.3 of this order 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 (i, ii, iii) Hon'ble National Green Tribunal has issued following directions:-

2. 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.
3. 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.
4. 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. Katni River & Pollution Status .

Under the Jurisdiction of R.O. Katni river originated from a Hill near village Bhitargarh tehsil Bahoriband and flow to Slemanabad , Bilehri, Katni City, Khamtara, Pilingi, Dewara meet to chhoti Mahanadi river near Rohaniya village. Its travelling distance from village Bhitargarh to Mahanadi river near Rohaniya village is 40K.M. Approx. in down stream of Katni River City Nallah near Sagar pul, Gater ghat and Mohan ghat are major tributary to this river which joints the River katni in mid city the katni River joints to chhoti Mahanadi river near Rohaniya Village. Nagar Nigam Katni intake well situated at up stream of katni River near katyaghat. (23.836674, 80.402173). This is a Sampling Point of NWMP .

2. Various River /Nallas Joining into River Katni.

Katni river are flowing in the city area & others 10 no. are tributary Nallas Mixed into Katni river. The details of these Rivers / Nallas are as fallows

1. Katni River Katni :- It originates from Hill near Bhitrigarh Tehsil Bahoriband and flows to Sleemanabad, Bilehri, Katni City Finally joint to Chhoti Mahanadi Near Rohaniya Village. Total length of Katni River is about 3.5 K.M. within Katni city . Down stream of Katni river mostly carry sewage of the katni city.
2. Simrar River Katni :- It originates from tharka tank in finally joints into Katni river. Total length of the river is Approx.20 KM. while it is only about 2.5 K.M.is the Katni city. The Simrar river Down stream does not has its original water NKJ Nalla & Rahul Bagh nalla mixed in to this River .
3. Sagar Pul nalla, Gater Ghat nalla, Mohan Ghat Nalla Masorha Ghat Nalla , Chaighara basti , Dharmlok Hospital nalla and Juhla Bypass Nalla joins to Katni river without any treatment .

Map showing location River & Nallas:

1. Nalla .
2. River.

Water quality goal:

It is an important aspect for revival of river katni in context of its utility as it is Non- perennial river. Also the industrial/sewage effluents generated from the catchment of katni river which ultimately joining and contributing to the pollution load into river katni should be treated to meet the effluent discharge standards stipulated under schedule – of the Environment (protection) rules 1986 and to reuse

the treated waste water for cooling / horticulture and other uses and maintain zero discharge at outlet.

Comparative suggested criteria for bathing in river katni is given is the following table.

Table 1 Suggested criteria for outdoor bathing.

S. no.	Parameter	Class 'B' Water Quality Criteria for bathing (To be achieved)	Class E water Quality criteria for irrigation
1.	pH	6.5 to 5.5	6.0 to 8.5
2.	Dissolved Oxygen (DO)	5.0 mg/liter	-
3.	BOD	<3.0 mg/Liter	-
4.	Total conform organism MPN/100	<500	-

3.The Basis of proposed action plan for Rejuvenation of River katni:-

River Katni being intermittent River .The action plan for monitoring water quality will be different from that of the perennial river. Presently the River Katni and its tributary Simrar river are carrying mostly domestic waste water generated in the municipal limit of katni . Also various Nallah (10 Nos) which carry the sewage meet to River Katni at different location .Therefore the action plan for prevention and control of pollution of river Katni has been drafted based on the direction given by this Hon`ble National green Tribunal.

3. Field Survey

The field recon survey is carried out to see the pollution level and current status of River katni. The physical survey is conducted from katni city up to the confluence of Katni river and Simrar river at down stream of katni city . During the field survey the following observation were made .

1. The length of Katni river from its origin near Bhitari gharh to confluence of Simarar river near Rahul Bag is about 25 Km.
2. The following important Nallah/Rives are meeting with the Katni river within Katni municipal corporation limits.

Table 2. Out falls meeting Katni river within Katni Nagar Nigam. limits .

Sr./River /Nallah /Wards covered out falls:-

S.No.	River /Nallas	Wards Covered	Out falls
1	Sagar pul Nallah.	35,34	05
2	Gaterghat Nallah.	06	03
3	Mohan Ghat Nallah.	10,06	03
4	Mashorha ghat Nallah	07	01
5	Chaihhara Basti Nallah.	05,06	02
6	Dharmlok Hospital Nallah.	10	03
7	Juhla by pass.	17	03

3. There are in total- Main 20 Various sewer out falls meeting into katni River directly or through other channels in from of River or Nallah which discharge the sewage into the River katni.
4. There are several stop/check Dams at various locations along the katni River Namely Katayghat,Gatarghat,Mohanghat,Babaghat etc. to store the water for the drinking and irrigation purpose and to facilitate the downstream village for drinking water sources .
5. Govt. scheme w.r. to curtailment of pollution load of River.

At present in Katni there are 3 STPs are proposed and under construction stage (In Amrit Yojana) of local self body to avoid the mixing of polluted water of Nallah/Sewage water into these two River.

The details of these 03 S.T.P are as follows .

Sr. no	S.T.P. details (Under construction by Nagar Nigam Katni)	Capacity
1.	Madhav Nagar Katni(N.N. Katni)	7.5 M.L.D.

2.	Katayghat ((N.N. Katni)	6.0 M.L.D.
3.	Kuthalaghat ((N.N. Katni)	11.0 M.L.D.

Pollution load in Katni River other than sewage waste water :-

In the jurisdiction of RO Katni the no. of air polluting unit are more as compare to no. of water pollution units .Only very few units are water polluting and they have well established functional ETP/STP and have zero discharge condition laid down in water consent issued in MPPCB for them.It means there is no effluent of any unit mixing with the water of Katni River.

6. At present the local farmers along the Katni River downstream are using the water from the Katni river for farming since it has high nutrient value it is good for irrigation /farming but on the other side it carries millions of e-coli bacteria with it and hence it is not safe for drinking and irrigation purpose .

3.2 Water characteristic of River katni and various Nallah.

Table :- Water Quality of River Katni .(March 2019)

Sr No.	River /Nallah	River in which drain join	ph.	BOD	COD	TDS
1.	Katni River	Katni River	7.32	13.0	18	340
2.	City Nalla near Gaterghat Katni	Katni river	7.39	30.6	162	340.3
3.	City Nalla near Mohanghat(Adarsh Colony)	Katni River	7.03	28.5	175	590.5

Proposed Short Term and Long Term Action Plan for Rejuvenation of River Katni

SI No.	Action plan for rejuvenation of river Katni	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 Katni 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	Regional Office M.P.Pollution Control Board Katni	Nil	There is no industries in the catchment area of River Katni
	(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.	Regional Office M.P.Pollution Control Board Katni	Nil	Nil
	(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.	Regional Office M.P.Pollution Control Board Katni	Nil	All are complying
	(d) Action against the red category industries for installation of OCEMS and not transferring data in CPCB and MPPCB	Regional Office M.P.Pollution Control Board Katni	Nil	M/s A.C.C Ltd. Kymore Katni complying this
	(e) Small scale/tiny and service providing units located in	Regional Office	Nil	Nil

	urban or semi-urban limits like Dairies. Auto Service Stations to have a minimum provision of O & G traps.	M.P.Pollution Control Board Katni		
	(f) Prohibition of Burning of any kind of waste including agro-residues	Regional Office M.P.Pollution Control Board Katni	Nil	Nil
II	Sewage Treatment & Disposal Plan			
1.	Protection of water quality of Katni River and Simrar River			
	(a) Laying of sewerage network in the colonies at upstream of Katni River	Municipal Corporation Katni	18 months	Work in progress
	(b) Trapping of sewage source of Katni River	Municipal Corporation Katni	18 months	
	(c) Construction of STP –each of 7.50MLD, 6.00 MLD, and 11.0 MLD, near madhav nagar, Katay Ghat and Kuthla	Municipal Corporation Katni	18 months	
	(d) Plantation in the area	Forest Dept.Katni	18 months	Project work is under process
2.	Completion of Conveyance System for City Sewage			
	(a) For Primary Sewerage: The work related to primary sewer line is under process.	Municipal Corporation Katni	18 months	Scheme is under implementation
	(b) For Secondary Sewerage : The work related to Secondary sewer line is under process.	Municipal Corporation Katni	18 months	
	(c) Sewerage Network to Connect Secondary Sewer Lines falling in Katni River to Primary Sewerage System	Municipal Corporation Katni	18 months	
3	Interception & Diversion of Sewage with STP in river Katni			
	(a) Laying of Sewer lines in the area (Zone I: 45 m. width and 85 m.	Municipal Corporation Katni	18 months	

	<p>long)</p> <p>(b) Laying of Sewer lines in the area (Zone II: 40 m. width and 150 m. long)</p> <p>(c) Laying of Sewer lines in the area (Zone III: 45 m. width and 60 m. long)</p>			
	<p>(a) STP near Madhav Nagar Zone I- 7.5 MLD</p> <p>(b) STP near Katay Ghat Zone II- 6.0 MLD</p> <p>(c) STP near Kuthla Zone III- 11 MLD</p>	<p>Municipal Corporation Katni</p>	18 months	
III.	Ground water quality			
	(a) Sealing of contaminated hand pumps and found to be unfit for drinking purpose by the public	Municipal Corporation /Local Bodies/Collector/PHE Department	Within 6 months	
	(b) Supply of potable water to the affected communities in the identified critical blocks	Municipal Corporation /Local Bodies/Collector/PHE Department	Within 6 months	
	(c) Carrying assessment of ground water survey for quality and to identify over exploited and critical blocks.	M.P Ground Water Department	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 M.P. Ground Water Department	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/CGWA and M.P. Ground Water Department	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	CGWB/M. P. Ground Water Department/T&CP/Municipality/Local Bodies	Within 6 months	
IV	E-Flow and Irrigation Practices			
	(a) Measurement of flow of Katni River	M.P. Irrigation Dept./Nagar Nigam/Local Bodies	Regularly	
	(b) To conserve water and good irrigation practices to be adopted by the farmers by organizing mass awareness programmes and through media in vernacular language	M.P. State Irrigation and Agriculture Department	Regularly	

