

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

(By Video Conferencing)

Original Application No. 307/2022

(With report dated 11.10.2022)

In re: News item published in The Hindu dated 26.04.2022 titled **“Flow of industrial effluents into Phalguni results in fish kill”**

WITH

Original Application No. 572/2022

Anil Kumar Sastry

Applicant

Versus

State of Karnataka

Respondent

Date of hearing: 21.11.2022

**CORAM: HON’BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON’BLE MR. JUSTICE ARUN KUMAR TYAGI, JUDICIAL MEMBER
HON’BLE PROF. A. SENTHIL VEL, EXPERT MEMBER
HON’BLE DR. AFROZ AHMAD, EXPERT MEMBER**

Respondent: Mr. Mukesh Kumar, Advocate for KSPCB

ORDER

1. The matter has been put up in the light of captioned media report to the effect that hundreds of fish were found dead and floating in Phalguni (Gurupura) river, downstream the Malavoor vented dam, following flow of industrial and domestic effluent into the river. The administration has remained mute to the happening. The photographs in the media report suggest that color of the river has turned black due to

the effluents released by the industries in Baikampady industrial area in Mangalore, Dakshina Kannada, Karnataka.

2. Vide order dated 29.04.2022, the Tribunal constituted a five-member joint Committee comprising of Regional Officers of MoEF&CC and CPCB, Bengaluru, State PCB, Director, Fisheries, Karnataka and District Magistrate, Dakshina Kannada District to undertake site visit, ascertain factual position and furnish a report to this Tribunal. It was further directed that identified polluters may be put to notice of these proceedings so that they can file their response, if any.

3. The operative part of the order is reproduced below:-

“2. We have considered the matter. Prima facie, it appears that untreated effluents are being discharged in the river in question by the industries in the area, without any regulation by the concerned statutory authorities in violation of the Water (Prevention and Control of Pollution) Act, 1974.

3. Accordingly, it appears to be necessary to ascertain facts and ensure remedial action for enforcement of Rule of Law, protection of environment and bio-diversity. The stretch of Phalguniriver may be treated as polluted river stretch for formulation and execution of restoration plan, defining timelines and budgetary backup. Field survey be conducted to identify sewage and industrial effluent entering into the said river. Target for restoration of water quality is required to be at level of Class B of Primary Water Quality Criteria.

*4. We constitute a five-member joint Committee comprising of the Regional Officers of MoEF&CC and CPCB Bengaluru, State PCB, Director, Fisheries, Karnataka and District Magistrate, Dakshina Kannada District. The State PCB will be the nodal agency for coordination and compliance. The Committee may meet within two weeks and undertake visit to the site. It will be open to members of the Committee to participate online except for site visit. The Committee may interact with the stakeholders, ascertain the cause of the incident and suggest remedial measures. **If polluters are identified, they may be put to notice so that they can file their response, if any, before this Tribunal.** Based on the observations during the proceedings of the Committee, **the statutory regulators may take remedial action, following due process of law.** A factual and action taken report may be filed within two months by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF with a copy to the identified polluters for their response.”*

4. In pursuance of above, the joint Committee has filed its report on 11.10.2022 after undertaking visit to the site, collecting water samples and getting them analyzed finding that pollution is caused by the industries and the Municipal Corporation. However, the identified polluters do not appear to have been notified about these proceedings nor adequate remedial action taken.

5. Relevant extracts from the report are:-

“3.1: Observations of the Committee:

3.1.1: General Observations:

- ✚ *Residential/commercial developments on either side of the river and, no UGD in certain areas. Even in sewered areas, there is missing links/gaps.*
- ✚ *Major and minor storm water drains were observed to be joining the river and **plenty of Organic load was observed at Kudroli, SulthanBatteri, Dambel, Kulur Church and ELF Gas. Map showing storm water drains joining Gurupurariver at different locations** is enclosed as Annexure-11.*
- ✚ ***Solid waste was found floating in the storm water drains which joined the river.***
- ✚ ***Dumping/disposal of sewage collected from Hotels and selected industries and from other residential areas through Cess Pool at selected places along the banks of river back water, which needs a proper investigation.***
- ✚ *Upstream of the Gurupurariver about 6 K.M. from Baikampady industrial area is built a vented dam which is the drinking water source for MaravooruGramapanchayath limit. The dam was built in the year 2016-17. Since the construction of the dam, the river doesn't get minimum flow and **during summer seasons fish kill incidents are happening in the river during summer seasons due to build-up of organic load as a result of inadequate flushing.** It's only during the rainy season that the dam overflow reaches the river.*

3.1.2: Observations near Baikampady Industrial Area

:Major water intensive industries in the Baikampady industrial area have provided inhouse ETP and some of them have Zero liquid discharge (ZLD).

- ✚ ***Few small industries generating less waste water are yet to install ETP and STP.***

- ✚ **Sullage/sewage is being discharged to Storm water drain from many Godowns, commercial establishments, hotels and some small industries, Labourquarter's/shed. Etc.**
- ✚ **No proper collection mechanism for Municipal and other Solid Waste in Baikampady industrial area. Solid waste heaps dumped along road sides were observed. Photos enclosed as Annexure-12.**
- ✚ **Construction debris and solid waste is being disposed at ODC Road to Jokatte at the bank of the back water of Gurupura River.**
- ✚ **The Back water /Creek at the Baikampady Industrial area is blocked and the water is stagnated, there is no easy flushing.**
- ✚ **During random inspection of industries in the Baikampady industrial area by KSPCB officials, it is observed that the following industries are discharging untreated effluents to the storm water drain, some of them in spite of having ETP facilities.**

Table 2: Details of Industries in Baikampady Industrial Area discharging untreated effluents along with action taken:

Sl No.	Name and address of the industries	Activity	Action initiated by the KSPCB
1	M/s Ocean Proteins, Plot No. 281/282, Baikampady Industrial Area, Mangaluru, D K District-575 011.	Fish processing(Surimi)	Personal hearing held and action being initiated to close down the industry and to file criminal case
2	M/s R.K. Industries, Plot No.191-A Baikampady Industrial Area, Mangalore, D K District-575 011.	Vehicular Servicestation	Notice of proposed directions to close down the industry is issued.
3.	M/s Shree Gurudev ServiceStation, Plot No. 102, Near Canara Steel Industry, Industrial Area,Baikampady, Mangaluru,Dakshina Kannada	Tanker washing /vehicular Servicestation	
4	M/s Stems and Leaves International, Plot No.162-C, Baikampady Industrial Area, Mangalore, D.K District-575011	Granite cutting and polishing	Notice of proposed directions (NPD) to close down the industry is issued
5	M/s Viceroy Exports India Pvt. Ltd., Plot No.55, Baikampady Industrial Area, Mangalore, D.K District-575011.	Fish Processing (Freezing andExport)	
6	M/s Sunrise Mats, Plot No. 6-16, Baikampady Industrial Estate Area, Mangalore, D.K., District-575011	Plastic wastereprocessing and mat making	Restraining order and NPD issued

7	M/s Marine Food Packers, Industrial Area, Baikampady, Mangaluru, Karnataka 575011	Fish Processing (Freezing and Export)	Show cause notice is issued
8	M/s A. K. Veneers Pvt. Ltd., Plot No. 449, Industrial Area, Baikampady, Mangaluru, D. K. District	Plywood and Veneers manufacturing	Show cause notice is issued

Subsequent to the issue of show cause notices/ Notice of proposed directions/restraining orders, **some industries have rectified the problems and initiated action for providing STP/ETP. Industries who have continued the violations even after issue of Notice of proposed directions, KSPCB is in the process of initiating further course of action as per Law.**

4.0 Based on Literature: Literature review from various researchers reveals that the incidence of river blackening and fish kill at times is not a very uncommon phenomenon and this bio-geochemical phenomenon has been most of the times co-related to presence of high organic load and inadequate tidal flushing especially in summers. High organic load quickly depletes the dissolved oxygen leading to anaerobic conditions. The anaerobic microbes degrade the dissolved organics which may further react with minerals in water and sediment forming black precipitates. A copy of one of the research review paper published by Zhiwei Leianget.al., 2018 on subject matter is enclosed for kind reference as **Annexure-13**.

5.0 Conclusions and Recommendations:

1. The Committee from the Monitoring results and from other available data is of the opinion that the present fish kill is an isolated, very small one possibly by the Organic/Sewage load dumped in this particular location leading to oxygen stress during summer season.
2. There was no fish kill in the main Gurupura river, fish kill has happened in the stagnant pockets of the storm water drain leading to the river. Measured Dissolved oxygen levels at locations of fish death (along the two stagnant pockets of storm water drain) were 0.8mg/l and 0.9 mg/l, whereas, at the point where storm water joined the river, DO level was 4 mg/l, which shows that the fish death must have occurred due to inadequate tidal flushing in the creek/storm water drain resulting in low D.O levels.
3. The Committee has also observed that there is no traces of any discharge of industrial effluent in that Storm Water Drain in which fish kill has occurred.
4. Committee has observed entry of domestic sewage all along the river through Storm Water Drains; this needs an urgent attention by Mangaluru City Corporation (MCC).
5. There is no Underground drainage (UGD) facility with terminal Sewage Treatment Plant (STP) in Baikampady industrial area to take care of sewage/sullage discharge from Godown,

commercial establishments, hotels and some small industries, Labour quarter's/sheds. etc. Responsible organisations like KIADB and Mangaluru City Corporation (MCC) are required to initiate action to construct a proper UGD system with terminal sewage treatment plant.

- 6. Mangaluru City Corporation also has to initiate action for treatment and disposal of sewage generated from the area around the Baggundi lake such as, MSEZ RR colony, Angaragundi, Kudumbur Villages so as to prevent joining of untreated sewage into Baggundilake thereby to Gurupura river.*
- 7. Action plan for Sl No.4,5 and 6 along with cost estimate and timelines shall be prepared by MCC and KIADB and necessary funds have to be released by Urban Development Department, Government of Karnataka and CEO, KIADB respectively for undertaking the above work.*
- 8. Town Panchayath, Bajpe and GramaPanchayath, Jokatte are unsewered area along the catchment of the river Gurupura. Chief Officer, Bajpe has to take action for treatment and disposal of sewage generated in the area near airport and Bajpe village to avoid entering of sewage into the storm water drain ultimately joining the Gurupurariver and PDO, Grama Panchayat, Jokatte has to take action for treatment and disposal of Sewage generated from Jokatte areas. Directions have to be issued to DMA and CEO, ZP to release necessary funds required for undertaking the STP work.*
- 9. There is no proper Solid waste collection mechanism in the Baikampady industrial Area. Construction debris (C and D waste) and solid waste including plastic waste are being dumped everywhere across the industrial area including the bank of the back water of Gurupura River. KIADB and Mangaluru City Corporation (MCC) being responsible agencies are required to initiate action to bring in a proper collection mechanism of Municipal solid waste/C and D /plastic and other types of waste and create awareness too in co-ordination with Industrial Associations.*
- 10. There were lot of complaints in Media and by Industries Association that cess pool operators are discharging sewage through tankers and dumping/discharging indirectly in to rivers. Committee suggests that KIADB, MCC, ZP, PRED, Industrial Association and Police shall have to install CCTV Camera at Strategic locations in their respective jurisdiction to prevent any unauthorized/illegal dumping of waste water/sewage/solid waste in to the river.*
- 11. The Committee suggests that the Minor Irrigation department who is in charge of protecting the river boundaries shall initiate steps to conduct a comprehensive survey on river encroachment along with other line departments such as, Revenue, CRZ, MCC and corresponding Town/Grama Panchayats and take appropriate action on the encroachers.*

12. *Upstream of the Gurupura river a vented dam is built, which is the drinking water source for Maravooru Grama Panchayat and 14 other villages. Since the construction of the dam, the river doesn't get minimum flow and during summer seasons fish kill incidents are happening in the river during summer seasons due to build-up of organic load as a result of inadequate flushing. Zilla Panchayat, PRED, Mangalore Officials will have to submit compliance to conditions imposed during clearance of vented dam.*
13. *KSPCB to ensure Zero Liquid Discharge in all the industries and establishment of ETP in all small-scale industries irrespective of effluent quantity.*
14. *KSPCB has listed out few non-complying industries which are habituated to discharge into storm water drains in spite of some of them having the ETP units. Continuous monitoring of such non-complying industries followed by action as per law shall be initiated by KSPCB on priority.*
15. *KSPCB to take up strengthening of its laboratory at Mangaluru, adequate manpower to be deployed and upgrade the laboratory with advanced equipments."*

6. From the report, it is self-evident that sources of pollution include dumping of solid waste and discharge of untreated sewage and effluent by the local bodies, hotels and industries. There is no collection mechanism for municipal waste, construction debris and preventing discharge of untreated effluents. In spite of such gross violations which amount to serious offences, the State Pollution Board who act as the custodian of environmental law does not appear to have performed its statutory functions of fixing accountability of the violators by initiating prosecution, stopping polluting activity and fixing liability on polluter pays principle for past violations. Even identified industries have not been suitably dealt with resulting in failure of rule of law. It further appears that at the joining point at backwater of Gurupura river, mangroves have been damaged. Cess pools are operated in the river catchment and discharge through tankers is also not ruled out. Absence of underground drainage and lack of connectivity to the existing STPs/not setting up required STPs appears to be patent. Existing STPs at

Mangaluru appear to be underutilized. We fail to understand reasons for such failure of the statutory regulators. Vide order dated 18.11.2022 in OA No. 383/2022, *In re : News item published in the Newspaper named, DHNS, Mangaluru dated: 15th May, 2022, titled “Officials term disclouring of water in beaches as algal bloom”*, the Tribunal observed:-

“5. We note that as per status report about waste management filed by the State of Karnataka on 12.10.2022 in O.A. No. 606/2018, *In re: Compliance of Municipal Solid Waste Management Rules, 2016 and other environmental issues*, there are four STPs at Mangalore - Pachanady (8.75 MLD), Kavoor (43.50 MLD), Surathkal (16.50 MLD) and Bajal (20 MLD) which are underutilized. The Tribunal has directed Karnataka State to bridge gaps in waste management for which compensation has been levied for restoration measures by ring-fencing an amount of Rs. 2900 crores. The relevant extract from the order is reproduced below:-

“61.....xxx.....xxx.....xxx

(iii) *Admitted gap in generation and scientific handling of waste has resulted in damage to the environment and public health for which the State of Karnataka is liable to pay compensation of Rs. 2900 crores as per details already mentioned above (para 58). The amount of compensation is to be utilized for restoration measures preferably by evolving a suitable centralized single window mechanism by the Chief Secretary, Karnataka in the light of above observations in paras 31 to 34 & 38 to 51 above. The laid down timelines need to be strictly adhered to and monitored.”*

7. Thus, there is immediate need for remedial action for protection of environment. The joint Committee already constituted, with addition of nominee of NCSCM and NIO, Goa, may prepare an action plan in light of its report and above observations within one month. It will be at liberty to co-opt any other Expert/Institution and interact with the stakeholders. The action plan may include immediate stopping of sources of pollution and fixing accountability of the industries, Mangalore Municipal Corporation and KIADB for past violations. The action plan may be executed within one month thereafter.

8. An action taken report may specify the gap in sewage generation in the catchment and its treatment, latest compliance status by the violators and remedial measures taken, if any, as on 31.01.2023. The report may be filed before this Tribunal by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF on or before 15.02.2023. A copy of the action taken report may be placed on the website of the State PCB with intimation to the violators by email that if they wish to respond to the report before this Tribunal, they may do so within two weeks thereafter by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF.

List for further consideration on 14.03.2023.

A copy of this order be forwarded to the Regional Officers of MoEF&CC and CPCB Bengaluru, State PCB, Director, Fisheries, Karnataka, District Magistrate, Dakshina Kannada District, NCSCM and NIO, Goa by email for compliance.

Adarsh Kumar Goel, CP

Arun Kumar Tyagi, JM

Prof. A. Senthil Vel, EM

Dr. Afroz Ahmad, EM

November 21, 2022
Original Application No. 307/2022&
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