

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

(By Video Conferencing)

Original Application No. 360/2015
(With report dated 30.01.2020)

National Green Tribunal Bar Association Applicant(s)

Versus

Virender Singh (State of Gujarat) Respondent(s)

AND

Original Application No. 366/2015

National Green Tribunal Bar Association Applicant(s)

Versus

Dr. Sarvabhoom Bagali (State of Karnataka) Respondent(s)

AND

Original Application No. 368/2015

National Green Tribunal Bar Association Applicant(s)

Versus

Dr. Sarvabhoom Bagali (State of Karnataka) Respondent(s)

AND

Original Application No. 173/2018
(Earlier O.A. No. 89/2017 (EZ))

Sudarsan Das Applicant(s)

Versus

State of West Bengal & Ors. Respondent(s)

AND

Original Application No. 874/2018

News item published in "The Tribune " Authored by Arun Sharma
Titled
"Mounds of sand on Sutlej banks, mining mafia digs in"

AND

Original Application No. 44/2016

Mushtakeem Applicant(s)
Versus

MoEF & CC & Ors. Respondent(s)

AND

Original Application No. 517/2015

Sandeep Kumar Applicant(s)
Versus

Ministry of Environment, Forests and
Climate Change & Ors. Respondent(s)

AND

Original Application No. 550/2015

Virender Kumar Applicant(s)
Versus

Ministry of Environment, Forests and
Climate Change & Ors. Respondent(s)

AND

Original Application No. 530/2016

Sandeep Kumar Applicant(s)
Versus

Ministry of Environment, Forests and
Climate Change & Ors. Respondent(s)

AND

Original Application No. 272/2016

M/s Ganga Yamuna Mining Co. Applicant(s)
Versus

State of Haryana & Ors. Respondent(s)

AND

Original Application No. 481/2016

Joginder Singh Applicant(s)
Versus

Ministry of Environment & Forest & Ors. Respondent(s)

AND

Original Application No. 540/2015

Ved Pal Singh Applicant(s)

Versus

Ministry of Environment and Forests & Ors. Respondent(s)

AND

Original Application No. 90/2016

Chander Mohan Uppal Applicant(s)

Versus

State of U.P. & Ors. Respondent(s)

AND

Execution Application No. 40/2017

IN

O.A. No. 517/2015

Sandeep Kumar Applicant(s)

Versus

Ministry of Environment and Forests & Ors. Respondent(s)

AND

Original Application No. 671/2017

(Earlier O.A.No.123/2014)

Himmat Singh Shekhawat Applicant(s)

Versus

State of Rajasthan & Ors. Respondent(s)

Date of hearing: 17.08.2020

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S. P. WANGDI, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

Applicant(s): Mr. Sravan Kumar, Advocate in OA173/2018
Amicus: Mr. Raj Panjwani, Senior Advocate with Mr. Aagney Sail, Advocate in OA 366/2015
Respondent(s): Mr. Divya Prakash Pandey, Advocate for CPCB
Mr. Attin Shankar Rastogi, Advocate and Mr. Balendu Shekhar, Advocate for MoEF&CC
Mr. Ankit Verma, Advocate for State of UP
Mr. Parath H. Bhatt, Advocate for State of Gujarat

ORDER

1. The issue for consideration in this group of matters relates to updation of enforcement and monitoring mechanism to control and regulate illegal sand mining. The Ministry of Environment, Forest and Climate Change (MoEF&CC) issued 'Sustainable Sand Mining and Management Guidelines, 2016' under the provisions of the Environment (Protection) Act, 1986 (EP Act, 1986) on 15.01.2016. This Tribunal constituted a High-Powered Committee headed by the Secretary, MoEF&CC which gave its report in September 2016, suggesting further safeguards. Vide order dated 04.09.2018 in *OA 173/2018, Mushtakeem v. MoEF & Ors.*, the Tribunal directed revision of the guidelines in the light of the said report with further suggestions.¹

2. Further, vide order dated 13.09.2018 in *O.A. No. 186/2016, Satyender Pandey Vs. MoEF*, further direction was issued to strictly

¹ Para 25 of the said order is as follows:

"25. In view of above discussion, we are of the view that since the subject of mining is also required to be regulated for protection of environment and it is to take care of this requirement, MoEF&CC has issued directions from time to time under Section 3 and 5 of the Environment (Protection) Act, 1986. The MoEF&CC needs to revise its directions keeping in mind the following:

- i. Mining Surveillance System discussed in para 23 above be finalized in consultation with ISRO Hyderabad.
- ii. Safeguards suggested in Sustainable Sand Mining Guidelines published by the MoEF&CC in the year 2016.
- iii. Suggestions in the High Power Committee Report.
- iv. Requirement of demarcation of boundaries being published in respect of different leases in public domain.
- v. Need to issue SOP laying down mechanism to evaluate loss to the ecology and to recover the cost of restoration of such damage from the legal or illegal miners. Such evaluation must include cost of mining material as well as cost of ecological restoration and net present value of future eco system services forgone.
- vi. Need to set up a dedicated institutional mechanism for effective monitoring of sand and gravel mining which may also take care of mining done without any Environmental Clearance as well as mining done in violation of Environmental Clearance conditions.
- vii. The Mining Department may make a provision for keeping apart atleast 25% of the value of mined material for restoration of the area affected by the mining and also for compensating the inhabitants affected by the mining.
- viii. One of the conditions of every lease of mine or minerals would be that there will be independent environmental audit atleast once in a year by reputed third party entity and report of such audit be placed in public domain.
- ix. In the course of such environmental audit, a three-member committee of the local inhabitants will also be associated. Composition of three members committee may preferably include ex-servicemen, former teacher and former civil servant. The Committee will be nominated by the District Magistrate."

enforce the judgment of the Hon'ble Supreme Court in *Deepak Kumar Vs. State of Haryana & Ors.: (2012) 4 SCC 629* as it was found that the said judgment was being diluted by dispensing with the requirement of public hearing.

3. On reviewing the compliance of the above directions in above batch of matters on 05.04.2019, following issues were framed for consideration and further directions were issued with reference to the above issues:

- “(a) *Revision of Sustainable Sand Mining Guidelines, 2016 by the MoEF&CC in the light of directions of this Tribunal vide order dated 04.09.2018 in Sudarsan Das (supra).*
- (b) *Compliance of Sustainable Sand Mining Guidelines, 2016 as may be revised by MoEF&CC as above.*
- (c) *Effective monitoring mechanism for preventive and remedial measures as directed in orders of this Tribunal, including surveillance system and recovery of compensation.*
- (d) *Directions in individual cases listed today.*
- (e) *Scale of compensation.”*

4. Thereafter, the matter was considered on 26.07.2019 and it was found that the MoEF&CC had not complied with the directions of this Tribunal without any justification only on the ground that the MoEF&CC was approaching the Hon'ble Supreme Court. What was required to be done was to incorporate the safeguards suggested by the High-Powered Committee and to remedy non-compliance of the order of the Hon'ble Supreme Court in *Deepak Kumar (supra)*, apart from considering certain further suggestions to strengthen the monitoring mechanism. The Tribunal also noted that CPCB was required to give report about scale of environmental compensation and States were required to give report of the steps taken to enforce the sustainable sand mining norms.

5. The matter was thereafter considered on 08.01.2020 and the matter was deferred. On later date, it was brought to our notice that *Civil Appeal No(s). 3799-3800/2019* has been filed by the MoEF&CC which

came up for hearing on 31.01.2020. The Hon'ble Supreme Court observed that the Tribunal may adjourn proceedings against officials of MoEF&CC. Keeping in mind the observations of the Hon'ble Supreme Court, the matter was deferred and has been taken up for consideration today without going into the matter for earlier non compliance by the officers of the MoEF&CC.

6. We have considered the compliance report filed by the MoEF&CC on 28.01.2020 to the effect that all necessary suggestions have been included in "Enforcement and Monitoring Guidelines for Sand Mining, 2020". The new guidelines have been uploaded on the website of the Ministry on 27.01.2020. The guidelines have been communicated to all the States.

7. We have also perused the report of the CPCB dated 30.01.2020 prepared by the following:

1. Dr Purnamita Dasgupta, Professor, IEG, Delhi
2. Dr K.S. Kavi Kumar, Professor, MSE, Chennai
3. Dr. Yogesh Dubey, Associate Professor, IIFM, Bhopal
4. Shri Sundeep, Director, MoEF&CC, Delhi
5. Shri A. Sudhakar, Additional Director, CPCB, Delhi

8. The Committee considered two approaches:

(I) Approach 1: Direct Compensation based on the market value of extraction, adjusted for ecological damages.

(II) Approach 2: Computing a Simplified NPV for ecological damages.

9. In the first approach, the criteria adopted is:

- Exceedance Factor (EF).
- Risk Factor (RF).
- Deterrence Factor (DF).

10. Approach 1 is demonstrated by Table 1 as follows:

“

Table No. 01: Approach 1

Permitted Quantity (in MT or m³)	Total Extraction (in MT or m³)	Excess Extraction (in MT or m³)	Exceedance in Extraction:	Compensation Charge (in Rs.)
X	Y	Z = Y-X	Z/ X	$D * (1+RF + DF)$ Where D = Z x Market Value-of- DF = 0.3 if Z/X = 0.11 to 0.40 DF = 0.6 if Z/X = 0.41 to 0.70 DF = 1 if Z/X >= 0.71 RF = 0.25, 0.50, 0.75, 1.00 (as per table 2)

11. Approach 2 is demonstrated by following formula:

“Total Benefits (B) = Market Value of illegal extraction: D (refer Table 1)

*Total Ecological Costs (C) = Market Value adjusted for risk factor: D * RF (refer Table 1).”*

12. Final recommendation is as follows:

*“Thus, it is recommended that the annual net present value (NPV) of the amount arrived at after taking the difference between the costs and the benefits through the use of the above approach, maybe calculated for a period of 5 years at a discount rate of 5% for mining which is in a severe ecological damage risk zone. The rationale for levying this NPV is based on expert opinion that reversal and/or restoration of the ecological damages is usually not possible within a short period of time and rarely is it feasible to achieve 100% restoration, even if the sand deposition in the river basin is restored through flooding in subsequent years. The negative externalities of the mining activity are therefore to be accounted for in this manner. Ideally, the worth of all such damages, including costs of those which can be restored should be charged. **However, till data on site-specific assessments becomes available, this approach may be adopted in the interim.** In situations where the risk categorization charged. However, till data on site-specific assessments becomes available, this approach may be adopted in the interim. In situations where the risk categorisation is unavailable or pending calculation, the following Discount Rates may be considered:*

Severity	<i>Mild</i>	<i>Moderate</i>	<i>Significant</i>	<i>Severe</i>
Risk Level	1	2	3	4
Risk Factor	<i>0.25</i>	<i>0.50</i>	<i>0.75</i>	<i>1.0</i>
Discount	<i>8%</i>	<i>7%</i>	<i>6%</i>	<i>5%</i>

13. We have heard learned Senior Counsel Shri Panjwani for the applicants and learned Counsel for the MoEF&CC and CPCB. Learned Amicus has submitted that the method for determining compensation suggested is complex and misses the present ecological value. Choice of discount rates has further complexity. Direct compensation approach method is preferable but needs to be modified as follows:

- a. *The market value (MV) is based on scheduled market rates.*
- b. *Risk of Loss to Ecology Factor (RLEF) - it is proposed that there be just two levels of risk factors (Loss to Ecology) - medium and high.*
- c. *Restitution of Ecology Cost Factor (RCF) – this factor is proposed to provide for resources for restoration of the ecology that is lost due to the mining.*
- d. *Deterrence factor - It is proposed the deterrence factors are dropped, for simplification of calculations.*
- e. *Therefore, the calculation would now be as follows:*
 - i. *EQ – extent of illegally mined quantity of sand*
 - ii. *MP – Scheduled market price*
 - iii. *Risk of loss to ecology factor (RLEF) – medium - 0.4 and high – 0.7*
 - iv. *Restitution cost factor (RCF) – 0.3*
- f. *Therefore, the calculation would therefore be Ecological Damage (ED) = EQ x MP x (Risk of Ecological Loss Factor + Restitution Cost factor)*
- g. *In case the market price is not available or is artificially low, then it may be prudent to use the Royalty rates as the base value, instead of market rates. In such a scenario, the Risk Factor's and Restitution cost factors would need to be increased accordingly.*
- h. *The report rightly assumes that the compensation for ecological damage would be in addition to the loss of the illegally mined material due to confiscation, and additional penalties as per the applicable state level regulations. It is also submitted that the seizure of vehicles and equipment and compounding fees charged for the same must be continued as they provide a direct deterrence to the operators involved in the same.*
- i. *The application of this modified method would require a simple identification of the medium and high risk zones for mining. This would be done by the state and district administration led by the state pollution control board officials in consultation with the mining, forest, fishery, irrigation and public works department officials and experts. Till this identification is undertaken, in adherence to the precautionary principle, all areas should be treated as high risk zones.*
- j. *For example, if 1000 cubic metres of sand **is seized** from a **high risk zone** (with RLEF =0.7) , and the market price of the seized sand is Rs*

100 per cubic meter, i.e. with a market value of Rs 100,000, then the RLEF + RCF would be $0.7 + 0.3 = 1.0$ and the calculation would be as follows.

i. Ecological Damage (ED) = EQ x MP x (Risk of Ecological Loss Factor + Restitution Cost factor)

$$\begin{aligned} ED &= 1000 \text{ m}^3 \quad \times \quad \text{Rs } 100 / \text{m}^3 \times (0.7 + 0.3) \\ &= 1000 \quad \times (1.0) \\ &= \text{Rs } 100,000 \end{aligned}$$

ii. If the sand **seized** is from a **low risk zone**, then the RLEF would be 0.4 and the RCF would be 0.3, with an additive total factor value of 0.7, and the total compensation amount would be as follows:

$$\begin{aligned} ED &= 1000 \text{ m}^3 \quad \times \quad \text{Rs } 100 / \text{m}^3 \times (0.4 + 0.3) \\ &= 1000 \quad \times (0.7) \\ &= \text{Rs } 70,000 \end{aligned}$$

iii. In a scenario where the sand is **not seized**, but there is evidence of illegal sand mining on the ground, then an additional factor of 1.0 should be added to the ED formula, as follows:

Ecological Damage (ED) = EQ x MP x (No seizure factor of **1.0** + Risk of Ecological Loss Factor + Restitution Cost factor)

iv. Therefore, as in the previous example if there is evidence of illegal mining (**but no seizure**) of 1000 cubic metres from a high risk zone (with RLEF = 0.7), and the market price of the sand is Rs 100 per cubic meter, i.e. with a market value of Rs 100,000, then the total additive factor would be $1.0 + RLEF + RCF = 2.0$ and the calculation would be as follows.

Ecological Damage (ED) = EQ x MP x (No seizure factor of 1.0 + Risk of Ecological Loss Factor + Restitution Cost factor)

$$\begin{aligned} ED &= 1000 \text{ m}^3 \quad \times \quad \text{Rs } 100 / \text{m}^3 \times (1 + 0.7 + 0.3) \\ &= 100,000 \quad \times \quad (2.0) \\ &= \text{Rs } 200,000 \end{aligned}$$

v. If there is evidence of illegal mining (**but no seizure**) in a **low risk zone**, then the RLEF would be 0.4, the RCF would remain at 0.3, and an additional no seizure factor of 1.0 would be added with a total additive value of 1.7, and the total compensation amount would be as follows:

$$\begin{aligned} ED &= 1000 \text{ m}^3 \quad \times \quad \text{Rs } 100 / \text{m}^3 \times (1.0 + 0.4 + 0.3) \\ &= 1000 \quad \times \quad (1.7) \\ &= \text{Rs } 1,70,000 \end{aligned}$$

14. We are of the view that the suggestion of Shri Panjwani needs to be looked into by the same Committee and thereafter the scale of compensation finalized. The Committee may also undertake scenario

analysis in the same manner as for per approach 1 and 2. Shri Panjwani is at liberty to interact with the Member Secretary, CPCB.

15. Let the report of the said Committee be furnished by the CPCB within one month 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.

16. Shri Panjwani seeks time to respond to the revised guidelines issued by the MoEF&CC. We accordingly grant time and defer consideration thereof.

List for further consideration on 14.10.2020.

Adarsh Kumar Goel, CP

S. P. Wangdi, JM

Dr. Nagin Nanda, EM

August 17, 2020
Original Application No. 360/2015
and other connected matters
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