

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

**ORIGINAL APPLICATION NO. 351/2023
(I.A. No. 519/2023)**

IN THE MATTER OF:

RAJA MUZAFFAR BHAT

Son of Bashir Ahmed Bhat,
Resident of 64, Alamdar Colony,
Gopalpura, District Budgam,
Jammu & Kashmir- 191193

...Applicant(s)

Versus

- 1. Union Territory of Jammu & Kashmir,**
Through its Chief Secretary,
R. No. 2/7, 2nd Floor Main Building,
Civil Secretariat,
Jammu-180001
- 2. Jammu & Kashmir Environment Impact Assessment Authority**
Through its Member Secretary,
Paryavaran Bhawan, Transport Nagar, Gladni,
Jammu-180006
- 3. Jammu & Kashmir State Pollution Control Board**
Through its Member Secretary,
Parivesh Bhawan, Forest Complex, Gladni, Narwal,
Transport Nagar, Jammu,
Jammu and Kashmir-180004
- 4. Geology and Mining Department, Jammu & Kashmir**
Through its Director,
J.L. Nehru Udyog Bhawan, 4th Floor, Rail Head Complex,
Jammu-180012
- 5. Danish Yousuf,**
S/o Mohd. Yousuf Mir,
Dounghana Kakapora, District Pulwama,
Jammu & Kashmir

6. Rouf Ahmad,
S/o Gh. Qadir Dar,
R/o Dangerpora, Awantipora,
District Pulwama, Jammu & Kashmir-192301

...Respondent(s)

COUNSELS FOR APPLICANT(S):

Mr. Rahul Choudhary and Ms. Itisha Awasthi, Advocates

COUNSELS FOR RESPONDENT(S):

Mr. Lokendra Singh Kachhawa and Mr. Rohit Kumar Tuteja, Advocates for R - 5

Mr. Dharamvir Sharma and Mr. Om S Shrivastava, Advocates for R - 6
(Through VC)

CORAM:

HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER

RESERVED ON: DECEMBER 18, 2023
PRONOUNCED ON: MARCH 15, 2024

JUDGMENT

BY HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER

1. This Original Application (hereinafter referred to as '**OA**') has been filed by Raja Muzaffar Bhat, resident of 64, Alamdar Colony, Gopalpura, District Budgam, Union Territory of Jammu & Kashmir, alleging that respondent 5 i.e., Danish Yousuf and respondent 6 i.e., Rauf Ahmad are carrying on mining activities in district Budgam in violations of the conditions of Environmental Clearance (hereinafter referred to as '**EC**') and, therefore, respondent statutory authorities namely, Jammu and Kashmir Environment Impact Assessment Authority (hereinafter referred to as '**JK EIAA**'), Jammu and Kashmir Pollution Control Committee

(hereinafter referred to as '**JKPCC**') and Geology and Mining Department, J&K be directed to restrain respondents 5 and 6 from carrying out mining activities; JK EIAA should take decision regarding revocation of EC for violation of its conditions and due environmental compensation be imposed upon respondents 5 and 6.

2. We may mention at this stage that initially OA was filed making allegations of illegal mining in respect of 05 private respondents which included Danish Yousuf, Khursheed Ahmad Mir, Umesh Kumar Sharma, Rouf Ahmad and Abdul Hamid Wagay impleaded as respondents 5 to 9. The record shows that Danish Yousuf and Rouf Ahmad were undergoing mining activities in District Budgam while Khursheed Ahmad Mir and Umesh Kumar Sharma were carrying on mining activities in District Pulwama and Abdul Hamid Wagay had his mining activities in District Shopian. Since the activities in different districts were included in OA and noticing that different facts are required to be examined for different districts particularly, District Survey Reports etc., Learned Counsel appearing for applicant, when the matter was taken up on 29.05.2023, requested Tribunal to allow him to pursue present OA only in respect of mining activities illegally being carried out in District Budgam and respondents who had their mining activities in Districts Pulwam and Shopian may be allowed to be deleted. In view thereof, from the array of the parties Khursheed Ahmad Mir, Umesh Kumar Sharma and Abdul Hamid Wagay who were initially impleaded as respondents 6, 7 and 9 were allowed to be deleted and Rouf Ahmad was permitted to be re-numbered as respondent 6 and that is how, the matter is now confined to two private respondents-Danish Yousuf and Rouf Ahmad i.e., respondents 5 and 6.

3. Coming back to the allegations made in OA, the case of applicant is that respondent 5 i.e., Danish Yousuf was granted EC dated 06.07.2021 for Minor Mineral Block No. 11, Chadoora Old Bridge to Hanjigund Downstream Nallah, village-Hillar, Tehsil and District Budgam, for area 2.74 hectares. Similarly, respondent 6 i.e., Rouf Ahmad has been issued EC dated 06.07.2021 for Minor Mineral Block No. 12, Chadoora Foot Bridge to Sogan Bridge Upstream Dhoodh Ganga Nallah, village Chadoora to Sogam, District Budgam on an area of 3.20 hectares, by JK EIAA.

4. ECs contained standard conditions as also specific conditions subject to which ECs were granted. Applicant has relied on specific conditions no. 53, 55 and 56 which are common in both ECs and read as under:

*“53. Mining shall be done manually minimally supported by semi-mechanized methods. **Heavy machinery like JCBs, L&T hydraulic excavators etc. should not be allowed.** Emphasis should be given to employment of locally available labour force to address the socio-economic concerns of the locals.*

*55. The reasonable concerns expressed by the local population during public hearing or otherwise shall be addressed by the Project Proponent. **No blasting operations shall be allowed.***

*56. **No mining activity shall be carried out in flowing water channel area within the mining block** and adequate measures shall be taken to safeguard water quality and aquatic life including fisheries if available in the same.”*

5. Applicant states that ECs were granted for undertaking mining of boulders, gravel, sand and other minor mineral (river bed material) but despite prohibition of use of heavy machines, the same are being used by respondents 5 and 6, mining activities are being carried out in flowing water channel area which is prohibited and they are also changing water course of the river which is also prohibited. Respondents 5 and 6 are using

JCBs, excavators, earth-movers and other heavy machineries to undertake river bed mining; flowing water channel area mining is causing adverse effect upon river hydrology and aquatic life thereby violating specific conditions of ECs. In support of the submissions that heavy machineries are being used, certain photographs have been filed as annexure A-2 at page 135 and annexure A-3 at page 136. Use of heavy machinery for mining activities not only is prohibited by virtue of specific conditions of ECs but mining with heavy machineries has been held illegal by this Tribunal vide order dated 25.08.2021 passed in **Execution Application No. 24/2020 in OA 401/2018, Praveen & Another vs. Ministry of Environment, Forest and Climate Change**. Mining activities within active water channel is also a violation of the provisions of Sustainable Sand Mining Management Guidelines, 2016 (hereinafter referred to as '**SSMMG-2016**') and Enforcement & Monitoring Guidelines for Sand Mining, 2020 (hereinafter referred to as '**EMGSM-2020**'). It is further stated that ECs have been granted without taking replenishment study which is a condition precedent, and, therefore, it is in violation of the provisions of SSMMG-2016 read with EMGSM-2020. Further, mining activities have been carried out by respondents outside the permissible area i.e., mining lease area and, therefore, also respondents 5 and 6 are indulged in illegal mining activities. It is said that complaints were sent by applicant to various authorities but no action has been taken. One of the representations dated 12.04.2023 sent to respondents 1 to 4 has been placed on record as annexure A-11.

6. **Tribunal's order dated 29.05.2023:** Tribunal considered the grievance on 29.05.2023 and being satisfied *prima-facie* that a substantial question relating to environment due to implementation of Scheduled

enactments under National Green Tribunal Act, 2010 (hereinafter referred to as '**NGT Act 2010**') has arisen, it found appropriate to obtain a factual Report for which a Joint Committee was constituted comprising JKPCC, SEIAA J&K, Director, Geology and Mining Department and District Magistrate, Budgam.

Joint Committee's Report dated 08.08.2023:

7. Joint Committee submitted Report dated 08.08.2023 through Member Secretary, J&K PCC giving its observations as under:

- “1) No mining was taking place in the blocks at the time of inspection of the joint committee.*
- 2) The Project Proponent (PP) has not gone beyond the demarcated area of the e-auctioned block.*
- 3) Heavy machinery was not being used for extraction / loading of minerals at present, **though at the start of the operation of these blocks, JCB loaders were used for loading of heavy boulders which was permitted as per the approved Mining plan. However, this was in violation of the EC conditions granted for the Blocks by JKEIAA (J&K Environmental Impact Assessment Authority) vide its approval dt. 11-10-2020.***
- 4) That Doodhganga Nallah has no scope for keeping the mining patches outside stream because of less width of the Nallah. As such the **mining activities go parallel to the running waters of the stream by diverting the water.**”*

8. The Report shows that inspection of the site was made by Joint Committee comprising Regional Director, JKPCC, Kashmir, Sub-Divisional Magistrate, Chadoora, Budgam, District Mineral Officer, Geology and Mining Department, J&K, Budgam. No member representing JK EIAA could participate in Joint Committee's inspection since the term of JK EIAA had expired on 04.07.2023.

9. The said Report came up before Tribunal on 22.09.2023 and finding observations regarding violation on the part of proponents, Tribunal issued notices to respondent 5 and 6. Pursuant where to, both have filed their responses.

Reply dated 14.12.2023 filed by respondents 5 i.e. Danish Yousuf:

10. A preliminary objection has been raised that applicant has not approached Tribunal with clean hands, manipulated facts are stated and applicant has discriminated among various proponents by withdrawing OA in respect of some proponents but continued proceedings against respondent 5. In respect of the allegations made in OA regarding violation of the conditions of EC, there is bare denial in reply. It is said that Google images relate to other proponents against whom OA has been withdrawn and, on that basis, respondent 5 cannot be implicated and held guilty. With regard to usage of heavy machines, respondent 5 has stated in para 20 that as per mining plan, heavy boulders weighing in tonnes were initially removed with the help of JCB, as it was impossible for human to manually remove such heavy boulders. Further, making of haulage road into river bed could have been possible only with the help of JCB. Thereafter, manual extraction with the help of hand showels, pie aces, crow bars, jumpers has been resorted to. Respondent 5 has denied to have used excavators, heavy earth moving machines for carrying out mining. It is also denied that any mining has been carried out beyond the allotted lease area. Reference is also made to District Mineral Officer, Budgam's letter dated 27.12.2022 sent to District Officer, JKPCC, Budgam stating that proponent has not been found involved in illegal mining within or outside the peripheries of their respective blocks. However, fine has been realized from time to time from tractor/tipper/machine owners found

indulged in illegal extraction/transportation of minerals from Doodhganga nallah. Seized vehicles/machineries are not recorded in the name of lease holder of the block concerned i.e., proponent. Google image annexed at page 137 has been denied on the ground that GPS co-ordinates have not been disclosed. Various other averments of OA have been denied in general but nothing has been said with regard to replenishment study. However, while replying to para 44 of OA that replenishment study is mandatory, a pre-requisite to issuance of EC to all mining operations, in para 41 of the reply, respondent 5 has not disputed the said statement. Further, the averments made by applicant that no replenishment study has been conducted while granting ECs to respondents 5 and 6, in para 40 of OA, the respondent 5 in para 41 of reply has not disputed the same.

Reply dated 14.12.2023 filed by respondents 6 i.e., Rauf Ahmad:

11. Reply of respondent 6 is virtually same as that of respondent 5. Respondent 6 has stated that applicant has not approached Tribunal with clean hands, manipulated facts have been given, and, has discriminated among various proponents by withdrawing OA in respect of some other proponents but continued proceedings against respondent 6. In respect of the allegations made in OA regarding violation of the conditions of EC, there is bare denial in reply. It is said that Google images relate to other proponents against whom OA has been withdrawn and, on that basis, respondent 6 cannot be implicated and held guilty. With regard to usage of heavy machines, respondent 6 has stated in para 20 that as per mining plan, heavy boulders weighing in tonnes were initially removed with the help of JCB, as it was impossible for human to manually remove such heavy boulders. Further, making of haulage road into river bed could have been possible only with the help of JCB. Thereafter, manual extraction

with the help of hand shovels, pie aces, crow bars, jumpers has been resorted to. Respondent 6 has denied to have used excavators, heavy earth moving machines for carrying out mining. It is also denied that any mining is being carried out beyond the allotted lease area. Reference is also made to District Mineral Officer, Budgam's letter dated 27.12.2022 sent to District Officer, JKPC, Budgam stating that proponent has not been found involved in illegal mining within or outside the peripheries of their respective blocks. However, fine has been realized from time to time from tractor/tipper/machine owners found indulged in illegal extraction/transportation of minerals from Doodhganga nallah. Seized vehicles/machineries are not recorded in the name of lease holder of the block concerned i.e., proponent. Google image annexed at page 137 has been denied on the ground that GPS co-ordinates has not been disclosed. Various other averments of OA have been denied in general but nothing has been said with regard to replenishment study. However, while replying to para 44 of OA that replenishment study is mandatory, a pre-requisite to issuance of EC to all mining operations, in para 41 of the reply, respondent 6 has not disputed the said statement. Further, the averments that no replenishment study has been conducted while granting ECs to respondents 5 and 6, as stated in para 40 of OA, in para 41 of reply, this averment has not been disputed by respondent 6.

Rejoinder dated 16.12.2023 filed by applicant to replies dated 14.12.2023 of respondents 5 and 6:

12. It is said that Joint Committee has found violations of the specific conditions 53, 56 and 65 of EC on the part of respondents 5 and 6 and permission if any, granted in the mining plan, will be subservient to the conditions of ECs which is referable to Environment Impact Assessment Notification dated 14.09.2006 (hereinafter referred to as '**EIA 2006**')

issued under the provisions of Environment (Protection) Act, 1986 (hereinafter referred to as '**EP Act 1986**') and by virtue of Section 24 thereof would have over-riding effect over any other law. It is also said that in mining plan, para (e)(1) also clearly says that proponent shall adhere to the working parameters as per the changes recommended in the specific conditions of EC, and therefore, EC conditions have to be observed and complied. With regard to Google earth image at page 135 and 137, applicant in para 24 of the rejoinder has said as under:

*“24. That photographs of illegal mining by using heavy machinery by Respondent No. 5 are annexed at Page 135 and Google Earth image showing presence of heavy machinery is at Page 137 and mining outside the prescribed lease area at Page 149. It is clarified that the **Google Earth images annexed with the Original Application are the KML files that were uploaded by the project proponents themselves along with the Application for grant of Environmental Clearance.**”*

13. It is said that question of giving GPS co-ordinates on the part of applicant does not arise in as much as KML files are uploaded by respondents' proponents along with their applications for grant of EC and, therefrom, Google images have been taken. Mining Officer's letter dated 27.12.2022 would not help respondents 5 and 6 since it shows that there was illegal mining and transportation and question of transportation would not arise if there would not have been illegal extraction of mineral at the site in question.

ARGUMENTS:

14. Learned Counsel appearing for applicant has contended that EC conditions have been violated by respondents 5 and 6 in carrying out mining activities and for such violation of EC conditions, it was incumbent upon JK EIAA to revoke ECs; JKPCC was also obliged to revoke its consent to operate but both the statutory authorities/regulators have failed in

discharge of their statutory obligations and have permitted illegal mining on the part of respondents 5 and 6. With regard to conditions of ECs which have been violated by respondents 5 and 6, grounds taken in OA are reiterated and it is said that the specific conditions 53, 56 and 65 of ECs have been violated. It is further submitted that since replenishment study has not been conducted and this is evident from the fact that it has also been mentioned in ECs, no mining activities could have been allowed since it would have been in violation of Guidelines contained in SSMMG-2016 and EMGSM-2020 and, therefore, respondents 5 and 6 cannot be allowed to undertake mining activities pursuant to the ECs granted to them in violation of the above Guidelines.

15. Per contra, Learned Counsel appearing for respondents 5 and 6 have contended that they have not violated any condition, general or specific, of ECs in as much as heavy machineries have not been used in mining activities, no mining activity has been carried out in flowing water channel and water course has also not been diverted or changed; and, there is no illegality in the mining activities carried out by them. With regard to replenishment studies, it has been said that Directorate of Geology and Mining Department has carried out requisite study and submitted Report under the title “Geological Report on Minor Mineral Resource Estimation, Hydrology, Hydrogeology and Replenishment Studies of Nalla Doodhganga and Shaliganga, District Budgam, J&K UT” and the said Report was submitted before this Tribunal in another matter. Therefore, it is not correct that replenishment studies have not been carried out vitiating mining activities and there is no violation of SSMMG-2016 and EMGSM-2020 Guidelines.

16. The arguments were heard on 18.12.2023 and while reserving judgment, on the request of Learned Counsel for the parties, respondents 5 and 6 were permitted to file written submissions after serving copy upon the applicant and applicant was also allowed time to file his response to written submissions of respondents 5 and 6, if any filed.

17. Pursuant to the above liberty, both respondents 5 and 6 have filed written submissions.

Written Submissions dated 21.12.2023 filed by respondent 5:

18. It is said that mining lease for minor mineral block no. 11, Chadoora Old Bridge to Hanji Gund Downstream Nallah, District Budgam was allotted by State Government through e-auction to respondent 5 and Letter of Intent was issued on 29.07.2020; respondent 5 prepared mining plan covering an area of 3.75 hectares which was approved by Mining Plan Approval Committee, District Budgam vide approval dated 09.11.2020; approval letter was issued on 10.11.2020; however, Expert Appraisal Committee (hereinafter referred to as '**EAC**') of J&K UT level did not approve the said mining plan for 3.75 hectares in its meeting dated 24.05.2021 and recommended for submission of revised mining plan for the reduced area of 2.74 hectares and subject to such submissions and approval of revised mining plan, recommendation was made for grant of EC; JK EIAA on the basis of the recommendation dated 24.05.2021, vide letter dated 06.07.2021, granted EC subject to revision of revised mining plan to JK EIAA; pursuant thereto, respondent 5 submitted revised mining plan which was approved by Mining Plan Approval Committee and approval letter was issued to respondent 5 on 04.04.2022; JK PCC issued Consent to Operate (hereinafter referred to as '**CTO**') to respondent 5 by order dated 31.10.2023 which is valid upto July 2024. Coming to the

alleged violation of specific conditions of EC, it is said that River Bed Mining (hereinafter referred to as '**RBM**') was allowed to proponent which included minor minerals like stones, sand boulders, bajri and clay as per the geography of the region; proponent was allowed to undertake mining activities in the allotted mining lease area i.e., block no. 11 where river bed minerals available for mining included various minor minerals like stones, sand boulders, bajri and clay; mining activities have not been carried out by using any heavy machines like excavators etc.; condition no. 53 permitted proponent to undertake mining activities manually with minimum support of semi-mechanized methods which have not been defined either in EC conditions or in any other Statute. With regard to use of heavy machineries like JCBs, L&T hydraulic excavators etc., it is said that same is only suggestive, condition no. 53 specifically permits manual mining with minimal support of semi-mechanized methods; JCBs were used only initially at the start of operation of the mining lease for the purpose of making feasible conditions to do manual mining since boulders were heavy and could not have been lifted manually or by semi-mechanized method; flowing water channel area has not been exploited/explored for mining activities and there is no change in water course to the river hence no condition of EC has been violated. Reference is also made to an order dated 30.05.2023 passed by this Tribunal in **OA 241/2021, Raja Muzaffar Bhat vs. Union of India & Others**, wherein it was observed that District Mining Officer vide letter dated 27.12.2022 has reported that lease holders of Minor Mineral Block Nos. 11 and 12 were not found indulged in illegal mining within or outside the peripheral area of their respective blocks. With regard to replenishment study, it is said that Directorate of Geology and Mining Department, Jammu has

already carried out such study and the report was submitted by State before Tribunal in another matter.

Written Submission dated 21/22.12.2023 submitted by respondent 6:

19. Respondent 6 has stated that mining lease of minor mineral block no. 12, Chadoora Foot Bridge to Sogan Bridge Upstream Dhooth Ganga Nallah, District Budgam was allotted by State Government through e-auction and Letter of Intent was issued on 14.08.2020; the mining plan was approved by Mining Plan Approval Committee, District Budgam on 09.11.2020 for the area of 4.90 hectares and Approval Letter was issued on 10.11.2020; however, EAC of JK UT level in its meeting dated 24.05.2021 did not approve mining activities for the area of 4.90 hectares but reduced it to 3.2 hectares and required proponent to submit a revised mining plan for reduced area of 3.2 hectares and subject to the above condition, recommendation was made for grant of EC; consequently, EC was granted by JK EIAA vide letter dated 06.07.2021 subject to submission of revised mining plan to JK EIAA; pursuant thereto, proponent submitted revised mining plan for the area of 3.2 hectares in minor mineral block 12 which was approved by mining plan approval committee vide approval letter dated 04.04.2022; JKPCC issued CTO vide order dated 07.11.2023 which is valid upto April 2025. With regard to violation of specific conditions and non-conduct of replenishment studies, the stand taken by respondent 6 is same as that of respondent 5, hence, we are not repeating.

Written Submission dated 23.12.2023 filed by applicant in response to Written Submissions filed by respondents 5 and 6:

20. Applicant has said that once heavy machines like JCBs etc. are prohibited, the same could not have been used for any purposes. It is

contended that when law requires something to be done in a particular manner, it means that it must be done in the said manner and not otherwise as all other modes and manners are prohibited and placed reliance on Supreme Court's judgment in ***Selvi J. Jayalithaa & Ors vs. State of Karnataka & Ors., (2014) 2 SCC 401*** and ***Hussein Ghadially vs. State of Gujarat, (2014) 8 SCC 425***; with regard to the violation of the conditions, applicant has placed reliance on the findings recorded in Joint Committee Report and said that it is evident from the facts mentioned therein that the specific conditions of ECs have been violated. It is also said that mere fact that certain vehicles which are not in the name of respondents 5 and 6, were found transporting illegally mined minerals does not mean that respondents 5 and 6 were not indulged in illegal mining. District Mineral Officer's letter dated 27.12.2022 does not make any comment in respect of compliance of the conditions of ECs. On the issue of replenishment study, applicant has said that no replenishment study was conducted for boulders and even the Report submitted by Directorate of Geology and Mining Department was only for sand and sediments and that too was submitted after grant of ECs. The factum of non-conduct of replenishment study is clearly mentioned in ECs. It is also contended that boulders are an integral part of river ecology and they are not replenishable, therefore, for extinguishable resources which do not have the possibility of replenishment, mining activities cannot be allowed. On the question of impact of removal of boulders from river ecology, applicant has relied on certain documents under the title "Graval and Boulders mining from mountain stream beds" published in the International Scientific Conference on Civil Engineering-Infrastructure- Mining and written by Artur Radecki-Pawlik, Anna Kidova, Milan Lehotsky, Miloss Rusnak, Russell Manson and Bartosz Radecki-

Pawlik; copy whereof is filed as annexure A-1 at page 329 of paper book. Applicant has also relied on another article titled as “Large Boulders help shape huge canyons, researchers find” dated 04.06.2019 published by University of Colorado written by Clay Bonnyman Evans copy whereof has been filed as annexure A-2 at page 340 to the paper book.

ISSUES:

21. The rival submission advanced by the parties orally as well as by means of written submission, in our view, give rise to following questions requiring adjudication by this Tribunal:

- (I) Whether replenishment study before grant of EC or at any subsequent stage has been conducted and if not, what shall be its effect on the rights of respondents 5 and 6 in respect of mining activities in question?
- (II) Whether mining activities in the running stream have been carried out by respondents 5 and 6?
- (III) Whether in the course of mining activities, stream water has been diverted by respondents 5 and 6?
- (IV) Whether river bed running stream mining by removal of boulders, gravel sand has caused any damage to river ecology and environment?
- (V) Whether heavy machines like JCB have been used in mining activities?
- (VI) Whether respondents 5 and 6 have committed breach of the conditions of ECs granted for permitting mining activities?

(VII) Whether remedial, preventive and punitive action is required to be taken by JK EIAA and/or JKPCC or Tribunal against respondents 5 and 6?

(VIII) What order need be passed by this Tribunal which may be necessary for protection of environment and also for remediation of the damage already caused as also a deterrent order for prevention of similar violations, if any, in future?

DISCUSSION ON MERITS:

22. Before answering issues elaborated above, we may notice at this stage that both ECs show that mining has been allowed to respondents 5 and 6 in the river bed and not in active water channel as also buffer. This is evident from a bare perusal of ECs, wherein this fact is mentioned and relevant extract is quoted below:

- **EC dated 06.07.2021 of respondent 5 at page 51/52**

*“The Environment clearance is subject to Revision of mining plan restricting mining to ultimate depth of 1m in aggregate and corresponding revision of maximum targeted **RBM** extraction of 37320 MT [(27400-10% (**buffer**) - 25% (**active water channel**) x 2.1(Bulk density) x 1(mining depth) and its de-novo approval by the competent authority within a period of 3 - months from the date of issuance of Environment clearance.”*

- **EC dated 06.07.2021 of respondent 6 at page 118/119**

*“The Environment clearance is subject to Revision of mining plan in light of deliberations of the JKEAC Meeting, restricting the mining Depth of 1m **subject to equal replenishment at the end of December each year in view of non-availability of replenishment data in the District Survey Report** formulated by G&M Dept. Maximum targeted **RBM** extraction of 41676 Metric Tons ((33253-10% (**buffer**)-15% (**active water channel**) x 2.1(Bulk density) x 1(mining depth)]. The Revised Mining Plan be submitted to the JKEIAA within a period of three months from the date of issuance of Environment*

clearance with its de-novo approval by the Competent Authority.”

Issues I, II, III and IV:

23. Issues I, II, III and IV can be considered and answered simultaneously.

24. All these questions relate to impact of RBM i.e., removal of sand, gravel and boulders on aquatic or river ecology and also requisite statutory conditions/restrictions if any, wherever RBM is permissible. When we talk of river or aquatic ecology, its essence need be appreciated.

25. Ecology is a word derived from words “oikos” (meaning “house”) and “logia” (meaning “study of”). Ecology is the natural science that explores intricate relationship among living organisms, including humans and their physical environment. In other words, ecology is the scientific study of how organisms interact with each other and with their environment. This includes relationships between the same species, between different species, and between different organisms and their physical and chemical environments. It spans various levels, from the micro-level (such as cells) to the planetary scale (the biosphere). Ecology investigates abundance, biomass and distribution of organisms within their environment. It encompasses life processes, interactions, adaptations, energy flow, and ecosystem development. Practically, ecology informs fields like conservation biology, natural resource management, and urban planning. Understanding human interactions with the environment is crucial for sustainable co-existence. The term “ecology” was coined by German Scientist ‘Ernst Haeckel’ in 1866, and American Botanists in 1890s, who

laid the groundwork for modern ecological theory, emphasizing adaptation and natural selection.

26. An Ecosystem is a community of living organisms and their physical and chemical environment linked by energy and nutrients. Eco-systems function as a discrete ecology unit and can be defined as a variety of scales.

27. Ecosystems, dynamic systems of organisms, communities, and abiotic components, provide essential services like bio-mass production, climate regulation, and water filtration.

28. In summary, ecology is a vital field that informs our understanding of the delicate balance between life and the environment. Aquatic means relating to water; living in or near water or taking place in water; does not include ground water.

29. Aquatic implies an environment in, on or near water where plants and animals live. Wetlands, rivers, lakes and coastal estuaries are all aquatic eco-systems.

30. When we talk of ecological damage, it refers to deterioration of environment due to various human activities. It encompasses several negative impact on natural surrounding including,

(a) Resource depletion: It occurs when essential resources like air, water and soil quality are diminished. Overuse or pollution can lead to their degradation;

(b) Eco-system destruction: Human actions can harm ecosystems, disrupting the delicate balance of life. Deforestation, habitat loss, and pollution contribute to

ecosystem degradation;

(c) Wildlife Extinction: Species face extinction due to habitat destruction, overhunting, and pollution. The loss of biodiversity affects ecosystems and their resilience.

(d) Pollution: Contaminants in air, water, and soil harm living organisms. Air pollution from factories, water pollution from chemicals, and soil contamination impact ecosystems.

(e) Climate Change: Human-induced climate change affects ecosystems globally. Rising temperatures, extreme weather events, and melting ice threaten habitats and species.

31. Aquatic environmental/ecological damage occurs when aquatic channel is disturbed and/or aquatic flora and fauna is disturbed.

32. When mining is allowed in river bed by removal of sand, gravel and/or boulders, it affects ecology of river/aquatic ecology in various ways. River are lifelines, shaping landscapes, providing water, and supporting diverse eco-systems. Human activities, however, often disrupt these delicate systems. The extraction of sand and/or gravel and/or boulders from riverbeds are such activities which have far-reaching consequences on aquatic life and aquatic flora and fauna.

33. RBM has its own adverse ecological consequences. After water, sand is the most consumed natural resource in the world. Ministry of Environment, Forest and Climate Change (hereinafter referred to as '**MoEF&CC**'), recognizing the importance of sand for development activities as also the source for sand which comprise the most important source as river and also adverse consequences it results in RBM which requires its regulation, has issued SSMMG-2016. In the executive

summary of the said Guidelines, it is said that sand and gravel are one of the most required construction materials. There are different sources of sand and gravel, the most important among them is the river. On the one hand, requirement of these construction material is on rise and on the other hand, these materials are also vital for the health and physical character of the river and different operational functions of the river. Extraction of sand and gravel from river bodies, therefore, has to be regulated by adopting required safeguards.

34. Sand is provisioning eco-system service and often extracted from aquatic environment such as rivers and course. The reason being that water is an important means of transportation for sediments. Rivers carrying water play important part in terrestrial and aquatic eco-system. Various kinds of natural and anthropogenic activities are putting immense pressure on rivers. These activities include indiscriminate extraction of construction grade sand and stones. Across the world, RBM is the major activity observed for taking out construction material like sand and gravels necessary for constructing buildings, roads and other infrastructure. Fresh water eco-system wherein rivers are important and plays a major role, constitute a very relevant nourishing system of nature in the terrestrial and aquatic eco-system.

35. In India, we have large number of rivers; perennial, annual and seasonal rivers, which carry a huge quantity of natural resources like sand, gravel, and boulders. RBM is the process for removal of sand, gravel and boulders from the river. The generally accepted size of material are the stones of more than 256 mm categorized as boulders; for cobbles, size varies between 64-256 mm; and gravel/pebble size is between 2-64 mm, divided into 5 types based on their sizes, for example, if size varies between

32-64 mm it is called 'very coarse gravel'; 16-32 mm gravel size is called 'coarse gravel'; 8-16 mm is identified as 'medium gravel', 4-8 mm as 'fine gravel' and 2-4 mm 'very fine gravel'.

36. Sand is a movable, non-cohesive granular material and its size varies between 0.063 mm and 2 mm. Sand has also 5 types based on size as under:

- | | | | |
|-------|------------------------|---|------------------|
| (i) | 1-2 mm | - | Very Coarse Sand |
| (ii) | 0.5-1 mm | - | Coarse Sand |
| (iii) | 0.25-0.5 mm | - | Medium Sand |
| (iv) | 125-250 μm | - | Fine Sand and |
| (v) | 62.5-125 μm | - | Very Fine Sand |

37. The term "Sand" is used to cover almost any rock or mineral, but technically it is limited to quartz sand with a minor impurity of mica, iron oxides and feldspar. Sand and gravel occur as sedimentary beds, lenses and pockets lying on or close to the surface or inter-bedded with other sedimentary formations. They take place in the river channel and floodplain deposits, fluvial glacial deposits, seashore deposits, windblown deposits along and near water bodies, marine and freshwater sedimentary beds and desert sand dune. The sand acts as a buffer against strong tidal waves and storm surges by reducing their impact as they reach the shore and it is also a habitat for crustacean species and other related marine organisms.

38. RBM activity in and around covert eco-system affects it in various manner as under:

(I) Effect on River Morphology:

39. River morphology means the shape and direction of river channels. In the work of Rosgen D., 'Applied River Morphology', 2nd Ed. (Fort Collins, CO: Wildland Hydrology, publication, it is said that river channel morphology is a combination of many processes and environmental condition in which erodibility and composition of the bed and banks for example, sand, stone, boulder erosion by natural and anthropogenic activity, affect the formation of river path.

40. The anthropogenic activity like mining of river bed materials within river channel causes erosion and degradation of river bank. In a research paper titled as "Environmental Impact of River Bed Mining- A Review" by Vishal Kamboj, Nitin Kamboj and Shalini Sharma published in IJSRR 2018, 7(1), 504–520, it is said,

*"The major effect of river morphology by the riverbed Mining activity is given by many others follows **Upstream incision:** the head cutting of the river system for many kilometers by the mining process in the slope of the channel bed stream. The upstream incision causes the lowering of bed material of the main channel also lower the bed material of tributaries, by increasing their slope and causes their rapid erosion. **Downstream incision:** The downstream incision occurs when the sediment mining is excessive and prolonged in river or stream. The excessive mining of sediments in downstream disturbs the sediment transport and its show the sediment deficit in the downstream. **Lateral channel instability:** the mining activity shows the channel instability, bank erosion, changing in channel width. **Bed armoring:** the excessive instream mining show the sediments deficit leads to washing of finer grains from bed material and it developed the bed armor. **Effects of gravel bar skimming:** The changes in the continuity of sediment transport induce downstream incision and lateral it shows instability of the channel. It removes the coarser surface layer of sediment that occurs in many natural rivers, favoring bed erosion and increasing bed load transport."*

(II) Effect on Water quality:

41. The second adverse effect, RBM results is the effect on water quality. It is well-known fact that rivers are the major sources of fresh water eco-

system. Rivers also recharge ground water continuously. The quality of water ecosystem i.e., surface and groundwater get disturbed due to RBM activity. In other words, RBM effect surface water quality of a river due to the removal of materials in the bed of the river. The major effect of mining activity on the surface water of any river is turbidity level, TDS Concentration and conductivity of water which are increased due to the mining. In some studies, it has been found that RBM operations have led to cause Arsenic, Selenium and zinc metals presence in river water to a high level. The effect on ground water quality is in the form of depletion of ground water level by lowering water table which affect the process of ground water recharge.

(III) Effect on Aquatic Biodiversity:

42. Many aquatic animals found their habitat in and around the river. It covers major portion of fresh water animal's phytoplankton, Zooplankton, Benthos and fishes. The bed material like sand, stone and boulders are habitat of these animals. RBM activity affects these animals when sand, boulders and stones are removed from the river. Turbidity of water affects Phytoplankton and zooplankton. Benthos are found on the lower side of stones and boulders and by removing the stones and boulders, habitat of benthos get destroyed and affects population of benthos in a river system. RBM activities affect reproduction and characteristics of spawning nests of various fishes.

(IV) Effect on Riparian Bio-diversity:

43. It includes vegetation cover on and near the river banks, which is beneficial to control bank erosion and provide nutrients for aquatic bio-diversity. Mining activity, in stream and floodplain area of a river, destroy riparian vegetation of the river and causes bank erosion. Riparian flora

diversity is the interaction zone between terrestrial and aquatic life. They provide food and other nutrients to aquatic animals, which is beneficial for the growth and development of the aquatic life. RBM and floodplain mining destroy riparian floras of rivers.

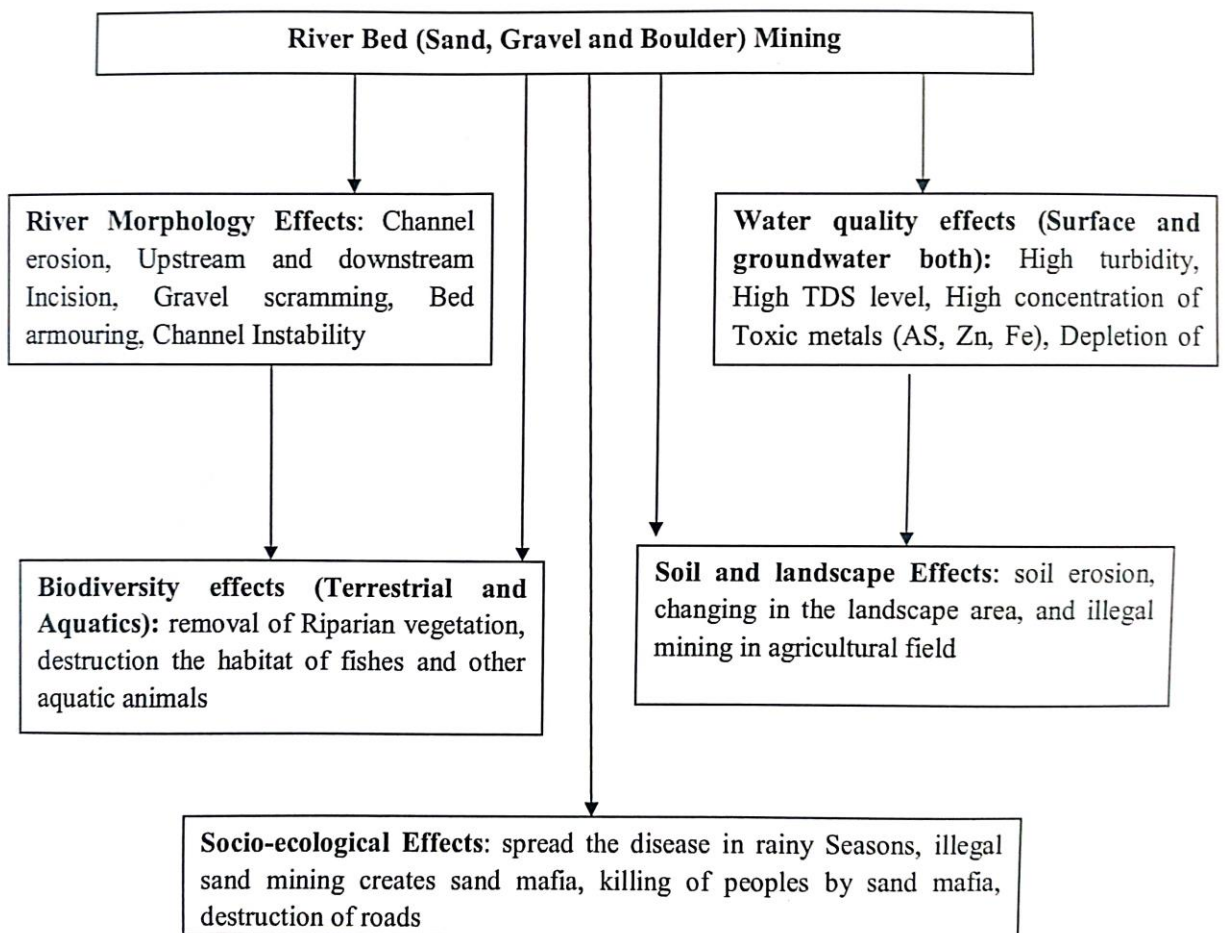
44. The degradation of riparian zone is also caused by the need to create space for stockpiles and haul roads. These haul roads are created by vehicle wheels and they form the bare tracks. In rainy season, when water flows on these tracks in continuous flow, they cause erosion which increases sedimentation, turbidity and deposition of pollutants in the river.

(V) Effect on Soil and Landscape:

45. Sand, gravel and boulders mining activity is responsible for shifting of river channel, degradation of river bank land, loss of fertile land and change in the landscape area.

(VI) Socio-Ecological Impacts:

46. Some studies show that RBM activities result in socio-ecological affects in the form of loss or reduction of farm land due to mining pits which are breeding habitat of mosquitoes in rainy seasons and spread many diseases in local environment. Sometimes river bed erosion increases due to RBM sand mining activities causing slipping of the land affecting nearby habitation and agricultural field. Kamboj and Sharma in their paper “Environmental Impact of River Bed Mining- A Review” have given a flow chart to demonstrate effect of RBM activity on various environmental variables and it will be useful to refer the said chart as under:



Impact on river/aquatic ecology due to removal of boulders from river bed:

47. Extraction of boulders from river bed has significant ecological implications. When boulders are removed from river channels, the same disrupts the natural balance and may lead to environmental degradation. Boulders, massive rocks strewn across riverbeds, play a pivotal role in shaping the dynamics of river eco-systems. Significance of boulders qua river ecology can be explored under the following heads:

- (a) Channel Stability, Hydrology and Morphology:** Boulders act as natural anchors, steadfastly holding the riverbed in place. Boulders serve as natural bulwarks against the relentless force of flowing water. Boulders, like skilled architects, shape river channels. They dictate flow patterns, sediment movement, and erosion dynamics. When we remove these boulders, the river's hydraulic character

transforms. Water rushes differently, sediment accumulates elsewhere, and habitats shift. These changes reverberate through aquatic ecosystems, affecting fish spawning grounds and the delicate dance of macroinvertebrates.

(b) Erosion and Sediment Dynamics: Boulders act as natural armour, shielding riverbanks from erosion. Their removal exposes vulnerable banks, leading to accelerated soil loss. The increased sediment load muddies water downstream, impacting water quality and disrupting aquatic life. They resist erosion caused by the relentless flow of water, maintaining channel's shape and structure. Without boulders, the riverbed becomes vulnerable, leading to alterations in its form and flow patterns. This instability can exacerbate flooding and disrupt the delicate balance of the ecosystem. Their weight and irregular shapes anchor the riverbed, prevent excessive erosion. When boulders are removed, riverbanks become vulnerable. The unimpeded flow of water scours the soil, leading to accelerated erosion. It has two kinds of implications; one is in respect of 'land stability' in as much as eroded riverbanks compromise the stability of adjacent land and infrastructure such as roads, bridges, and buildings may be at risk and second is 'sediment transport'. Erosion dislodges soil particles and thereby increases sediment load downstream. This affects water quality and aquatic habitats.

(c) Habitat Creation and biodiversity and biodiversity loss: Boulders are not mere obstacles; they create intricate microhabitats within the river. Fish, insects, and other aquatic organisms seek refuge among these rocky nooks. The spaces between boulders provide shelter, breeding grounds, and hiding places. When boulders are

removed, these habitats vanish affecting biodiversity. The loss of diverse species impacts the entire food web and ecosystem resilience. Boulders create a mosaic of microhabitats within the river ecosystem. These rocky crevices and interstices provide refuge for various organisms. Fish, macro invertebrates, and other aquatic life find shelter, breeding sites, and hiding places among boulders. When boulders are removed, it results in disruption of habitat. Sessile organisms lose their homes. Algae, mosses, and invertebrates that cling to boulders suffer. Further impact on food web. The loss of diverse habitats affects the entire food web. Predators prey, and decomposers are interconnected. Within the crevices of boulders lie microhabitats—nooks and crannies where life thrives. Fish find refuge, algae cling, and insects colonize. However, when we extract boulders, we dismantle these niches. Species lose their homes, and the intricate tapestry of biodiversity unravels.

(d) Flow Regulation and Water Quality: Boulders influence water flow dynamics. They create turbulence, eddies, and riffles, which oxygenate the water and enhance nutrient cycling. The presence of boulders ensures that the river remains a dynamic and healthy environment. When boulders are extracted, river's natural flow patterns are disrupted. Sediment transport, nutrient distribution, and overall water quality are affected.

(e) Flood Mitigation: Boulders dissipate energy during high-flow events. Without boulders there may be flow alterations. The absence of natural flow regulators leads to altered channel patterns. Further, flood vulnerability also increases. Riverbanks become less resilient;

flood waters can breach banks more easily, affecting nearby communities. During high-flow events, such as floods, boulders serve as nature's defence mechanism. They break the force of the water, dissipate energy and reduce erosion. Removing boulders weakens this protective barrier, making riverbanks and adjacent areas more susceptible to flooding. Thus, their presence is crucial for flood control.

(f) Aesthetic and Recreational Value: Boulders contribute to the scenic beauty of river landscapes. They create captivating features like rapids, cascades, and waterfalls. Beyond aesthetics, boulders offer recreational opportunities like rock climbing, fishing, and photography. Their removal diminishes these experiences, impacting both nature enthusiasts and local communities. They have their recreational value. When boulders vanish, there may be loss of scenic appeal. The natural allure diminishes. Removal of boulders may also have cultural significance in as much as rivers hold cultural and spiritual importance for communities. Their altered appearance affects local identity.

(g) Changes in Water Quality: Boulders play a role in sediment transport. They trap and release sediments, influencing water clarity and nutrient cycling. When boulders are removed, it may result in sediment imbalance. Sediment transport patterns shift. Excessive sedimentation downstream can smother aquatic habitats. Boulders removal may also result adversely on nutrient dynamics. Boulders affect nutrient exchange between water and sediment.

- (h) Riverine Vegetation and Riparian Zones:** Boulders stabilize riverbanks, allowing vegetation to take root. Riparian plants—willows, grasses, and shrubs—cling to their surfaces. Without boulders, banks erode, vegetation falters, and the buffer zone between land and water weakens. Riparian zones, those green guardians, provide essential services—filtration, flood control, and habitat—for both humans and wildlife.
- (i) Human Dependence and Livelihoods:** Indigenous communities have coexisted with rivers for generations. Their lives intertwine with the ebb and flow. Boulders serve as resources: building materials, tools, and symbols. They construct homes, line pathways, and feature in rituals. Yet, when extraction becomes rampant, livelihoods hang in the balance. The delicate dance between sustenance and sustainability wavers, challenging our harmonious relationship with these ancient stones.

48. The effect of sand and gravel mining within or near river bed has also been recognized by MoEF&CC in SSMMG-2016 and they have summarized the effect of sand and gravel mining, as under:

- “a) Extraction of bed material in excess of replenishment by transport from upstream causes the bed to lower (degrade) upstream and downstream of the site of removal.*
- b) In-stream habitat is impacted by increase in river gradient, suspended load, sediment transport and sediment deposition. Excessive sediment deposition for replenishment increases turbidity which prevents penetration of light required for photosynthesis and reduces food availability of aquatic fauna.*
- c) Riparian habitat including vegetative cover on and adjacent to the river banks it controls erosion, provide nutrient inputs into the stream and prevents intrusion of pollutants in the stream through runoff. Bank erosion and change of morphology of the river can destroy the riparian vegetative cover.*

- d) *Bed degradation are responsible for channel shifting, causing loss of properties and degradation of landscape, it can also undermine bridge supports, pipe lines or other structures.*
- e) *Degradation may change the morphology of the river bed, which constitutes one aspect of the aquatic habitat.*
- f) *Degradation can deplete the entire depth of gravelly bed material, exposing other substrates that may underlie the gravel, which could in turn affect the quality of aquatic habitat. Lowering of ground water table in the flood plain because of lowering of riverbed level as well as river water level takes place because of extraction and draining out of excessive ground water from the adjacent areas. So, if a floodplain aquifer drains to the stream, groundwater levels can be lowered as a result of bed degradation.*
- g) *Lowering of the water table can destroy riparian vegetation.*
- h) *Excessive pumping of ground water in the process of mining in abandoned channels depletes ground water causing scarcity of irrigation and drinking water. In extreme cases it may create ground fissures and subsidence in adjacent areas.*
- i) *Flooding is reduced as bed elevations and flood heights decrease, reducing hazard for human occupancy of floodplains and the possibility of damage to engineering works.*
- j) *The supply of overbank sediments to floodplains is reduced as flood heights decrease.*
- k) *An un-scientific and unregulated sand and gravel mining tends to increase channel bank scouring and erosion. This causes a large degree of meandering of rivers and sometimes it could be in kms.*
- l) *Rapid bed degradation may induce bank collapse and erosion by increasing the heights of banks.*
- m) *Polluting ground water by reducing the thickness of the filter material especially if mining is taking place at top of recharge fissures.*
- n) *Choking of sand layer which acts as filter for ingress of ground water from river by dumping of finer material, compaction of filter zone due to movement of heavy vehicles. It also reduces the permeability and porosity of the filter material.*

- o) *Removal of gravel from bars may cause downstream bars to erode if they subsequently receive less bed material than is carried downstream from them by fluvial transport.*
- p) *Ecological effects on bird nesting, fish migration, angling, etc.*
- q) *Indiscrete mining activities lead to increased concentration of suspended sediment in the river which in turn causes siltation of water resources projects.*
- r) *Un-scientific and unregulated sand and gravel mining leads to the severe health hazards like air quality degradation and dust fog.*
- s) *Direct destruction from heavy equipment operation; discharges from equipment and refueling.*
- t) *Biosecurity and pest risks.*
- u) *Impacts on coastal processes.”*

49. Certain impact due to extraction of sand and gravel from an activating channel have been referred to in the above guidelines, as under:

- a) *Extracting gravel from an excavation that does not penetrate the water table and is located away from an active stream channel should cause little or no change to the natural hydrological processes unless the stream captures the pit during periods of flooding.*
- b) *In-stream extraction of gravel from below the water level of a stream generally causes more changes to the natural hydrologic processes than limiting extraction to a reference point above the water level.*
- c) *In-stream extraction of gravel below the deepest part of the channel (the thalweg) generally causes more changes to the natural hydrological processes than limiting extraction to a reference point above the thalweg.*
- d) *Excavating sand and gravel from a small straight channel with a narrow floodplain generally will have a greater impact on the natural hydrological processes than excavations on a braided channel with a wide floodplain.*

- e) *Extracting sand and gravel from a large river or stream will generally create less impact than extracting the same amount of material from a smaller river or stream.*
- f) *Over-extraction of gravel can destabilise channels and banks, and/or affect the ecologic functioning of rivers particularly if undertaken at the wrong time, or in the wrong place, or in a way that damages the river bed or margins.”*

50. It is in this backdrop; the said Guidelines have provided for sustainable sand and gravel mining stating broad principle on which any sustainable sand mining Guidelines/policy can be based. It says that river/ natural resources must be utilized for the benefit of the present and future generation so river resources should be prudently managed and developed. Preparation of District Survey Report (hereinafter referred to as ‘**DSR**’) is an important initial step. Guidelines says that following processes are necessary:

- “(a) Identification of areas of aggradation / deposition where mining can be allowed; and identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited. Use of satellite imagery for identifying areas of sand deposit and quantity be done.*
- (b) Calculation of annual rate of replenishment and allowing time for replenishment after mining in area.**
- (c) Identifying ways of scientific and systematic mining.*
- (d) Identifying measures for protection of environment and ecology.*
- (e) Determining measures for protection of bank erosion.*
- (f) A bench mark (BM) with respect to mean sea level (MSL) should be made essential to in mining channel reaches (MCR). Below which no mining shall be allowed.*
- (g) Identifying steps for conservation of mineral.*
- (h) Permanent gauging facilities (for discharge and sediment both) should be made compulsory for the sites having excessive mining*

in consultation with Central Water Commission or any competent State Agency.

(i) Implementing safeguards for checking illegal and indiscrete mining.”

51. Guidelines further provide that following the above processes, it is important to prepare a survey document, mapping the status of sand sources in a district. This survey should be conducted and report be prepared for each district. Though, it is an acceptable fact that rivers cut across districts and States and every river is an ecosystem in itself but keeping in view the fact that the district is the most established unit of administration at which this kind of survey, planning and monitoring can be ensured effectively, it is suggested that every district will prepare DSR taking the river stretch in that district as an ecological unit and inventorying other sources of sand in the district. Guidelines further provides as to what survey shall contain, and give details as under:

“The survey shall contain:

- 1. District wise detail of river or stream and other sand source.*
- 2. District wise availability of sand or gravel or aggregate resources.*
- 3. District wise detail of existing mining leases of sand and aggregates.*

Based on this survey document, the action plan shall divide the river/ stream/ other sources of the District into the following categories:

- 1. River / Stream beds sections / other sources suitable for extraction of sand and aggregates.*
- 2. River / Stream beds sections / other sources prohibited for extraction of sand and aggregates.*

The river/ streams/ other sources of sand and aggregate are studied on following parameters:

a) Geomorphological studies

- i) Place of origin
- ii) Catchment area.
- iii) General profile of river stream.
- iv) Annual deposition factor.
- v) **Replenishment.**
- vi) Total potential of minor mineral in the river bed.

b) Geological studies

- i) Lithology of catchment area.
- ii) Tectonics and structural behavior of rocks.

c) Climatic Factors

- i) Intensity of rainfall.
- ii) Climate Zone.
- iii) Temperature variation.”

52. The above discussion and the contents of SSMMG-2016 show that replenishment which is part of geomorphological study is an important aspect for preparation of DSR.

53. EMGSM-2020 is supplemental to SSMMG-2016 and deals with subject of replenishment study in details in para 5.0. In para 4.1.1(a), it is said that preparation of DSR before auction/e-auction/grant of the mining lease/Letter of Intent (hereinafter referred to as '**LoI**') is necessary. It reads as under:

“4.1 Identification of possible sand mining sources and preparation of District Survey Report (DSR)

4.1.1 Preparation of District Survey Report.

*a) District Survey Report for sand mining **shall be prepared before the auction/e-auction/grant of the mining lease/Letter of Intent (“LoI”)** by Mining department or department dealing the mining activity in respective states.”*

54. Statutory and mandatory requirement of replenishment study as a condition precedent i.e., before mining activities can be allowed, has been

considered by this Tribunal vide judgment dated 28.09.2022 in **Appeal 24/2022, Raja Muzaffar Bhat vs. SEIAA, J&K**. In para 138, Tribunal has said as under:

*“138. The manner of preparation of DSR and the aspects required to be considered including **replenishment study** is also provided in the provisions of EIA 2006 as well as the directions contained in SSMG-2016 and EMGSM-2020. It is not disputed before us that **SSMG-2016 and EMGSM-2020, being directions issued under EP Act, 1986, are statutory and have to be implemented and followed in letter and spirit.**”*

55. Replenishment study is an integral part of preparation of DSR and if the replenishment study has not been conducted, meaning thereby, there is no preparation of proper DSR as per the requirement of the Statute. If this fact has not been disclosed to the Competent Authority for grant of EC then it amounts to concealment of material fact, which justify action on the part of the competent authority who has granted EC to revoke EC obtained by concealment of relevant facts or non-disclosure of full and correct facts. This aspect has also been considered by Tribunal in **Appeal 24/2022 (supra)**.

56. Incomplete information or incomplete documents would render an application for grant of prior EC liable to be rejected as held by Supreme Court judgment in **Hanuman Laxman Aroskar vs. UoI & Others (2019)1SCC401**. It was an appeal taken to Supreme Court, from a judgment/order dated 21.08.2018 passed by this Tribunal in **Appeal No. 5/2018 (earlier Appeal No. 61/2015/WZ), Federation of Rainbow Warriors vs. Union of India & Others and Appeal No. 6/2018, Hanuman Laxman Aroskar vs. Union of India**, wherein grant of EC for development of green field International Airport at Mopa, Goa, was challenged. Project was in category ‘A’ hence as per EIA 2006 ‘Prior EC’

was to be granted by MoEF. EC was granted on 28.10.2015. It was challenged by M/s. Federation of Rainbow Warriors in Appeal No. 61/2015 at Tribunal's Western Zonal Bench, Pune. Another Appeal No. 1/2016 was filed by Hanuman Laxman Aroskar at NGT, Western Zonal Bench, Pune. Both these appeals were transferred to Principal Bench at New Delhi and numbered as Appeal No. 5 and 6 of 2018 respectively. **One of the issues raised before Supreme Court was; PP did not give complete information in Form 1 submitted to the Competent Authority for grant of EC; PP is duty bound to make a proper disclosure and highest level of transparency is required; and there was concealment of certain facts** by leaving certain columns blank or by not giving required details. It was contended that for these reasons, application for EC ought to have been rejected.

57. Supreme Court considered scheme of EIA 2006 in detail. Going into historical backdrop of EIA 2006, Court said that by Constitution (Forty-second Amendment) Act 1976 w.e.f. 03.01.1977, Article 48A was inserted to the Constitution which mandates that State shall endeavour to protect and improve environment and safeguard forests and wildlife of the country; Article 51A(g) of Constitution places a corresponding duty on every citizen to protect and improve natural environment including forests, lakes, rivers and wild life and to have compassion for living creatures; following decisions taken at United Nations Conference on Human Environment held at Stockholm (Stockholm Conference) in June 1972, in which India also participated, Parliament enacted EP Act, 1986 to protect and improve environment and prevent hazards to human beings, other living creatures, plants and property; on 27.01.1994, MoEF&CC, in exercise of powers under Section 3(1) read with (2)(v) of EP Act, 1986 and

Rule 5(3)(d) of EP Rules, 1986, issued notification, S.O. 60(E), 1974, imposing restrictions and prohibitions on the expansion and modernization of any activity or new project unless an EC was granted under the procedure stipulated in the notification; Notification contemplated that any person undertaking a new project or expanding and modernizing an existing project, would submit an application to the Secretary, MoEF; application to be made in accordance with Schedule, also provided that, it shall accompany project report including EIA Report, an Environment Management Plan (hereinafter referred to as 'EMP') and other details as per the Guidelines issued by Government from time to time; Competent Impact Assessment Agency would then evaluate application and submit report; and if necessary, it is also empowered to constitute a Committee of Experts which would have a right of entry into and inspection of the site during or after the commencement of the preparations relating to the project; **concealment of any factual data or submitting false or misleading information would make the application liable for rejection and would lead to cancellation of any EC already granted on that basis;** EIA 1994 was superseded by EIA 2006; real distinction between EIA 1994 and EIA 2006 is that in the later **EC must be granted by Regulatory Authority prior to commencement of any construction work or preparation of land;** EIA 2006 divides all projects in Category A and Category B projects; under EIA 1994, PP was required to submit application along with all reports including EIA report but under EIA 2006 prior to preparation of EIA report by PP, the authority concerned would formulate comprehensive Terms of Reference (hereinafter referred to as '**ToR**') on the basis of information furnished by PP addressing all relevant environmental concerns; this would form the basis for preparation of EIA Report; a pre-feasibility Report is also required to

submit with the application unless exempted in the Notification; under EIA 1994, final approval was granted by Impact Assessment Authority but under Notification of 2006, final regulatory approval is granted by MoEF&CC or SEIAA, as the case may be; but approval is to be based on recommendations of EAC functioning in MoEF&CC or State Expert Appraisal Committees (SEACs) which are constituted for that specific purpose; thus the salient objective which underlies EIA 2006 is protection, preservation and continued sustenance of environment when the execution of new projects or the expansion or modernization of existing projects is envisaged; it imposes certain restrictions and prohibitions based on the potential environmental impact of projects unless 'Prior EC' has been granted by the authority concerned.

58. Supreme Court said that an application must be submitted prior to the commencement of any construction activity or preparation of the land at the site. The process to obtain EC comprised broadly 4 stages i.e. (i) Screening, (ii) Scoping, (iii) Public Consultation and (iv) Appraisal. The step of screening is restricted to Category B projects. It entails an examination of whether the proposed project or activity requires further environmental studies for preparation of an EIA for its appraisal prior to grant of EC. The projects requiring an EIA are further categorized as Category B1 projects and remaining projects are categorized as Category B2 projects. Category B2 projects do not require an EIA. The categorization is in accordance with the guidelines issued by MoEF&CC in this regard from time to time. The stage of scoping requires formulation of comprehensive ToR so as to address all relevant environmental concerns for the preparation of EIA. Amongst other things, **information furnished by applicant in Form 1 and Form 1A along with the proposed ToR**

forms the basis for preparation of ToR. Public consultation at the third stage is attracted in all Category A and Category B1 projects. Summary of EIA is prepared in the format given in Appendix IIIA on the basis of ToR furnished to the applicant. This stage involves the process by which concerns of local affected persons and others who have plausible stake in the environmental impact of the project or activity are ascertained with a view of taking into account all the material concerns in the project or activity design as appropriate. The stage of appraisal involves detailed scrutiny by EAC or SEAC of all documents submitted by applicant for the grant of EC. The appraisal is carried out in a transparent manner in a process to which PP is also invited for furnishing clarification in person or through an authorized representative. The scheme requires Regulatory Authority to examine documents strictly with reference to ToR and if there is any inadequacy to communicate to EAC or SEAC within 30 days of receipt of the documents; recommendations made by EAC or SEAC are then required to be considered by MoEF&CC or concerned SEIAA who are supposed to communicate their decision to PP within 45 days of receipt of the recommendations. Ordinarily Regulatory Authorities are supposed to accept recommendations of EAC or SEAC. In case of disagreement, Regularity Authority is required to seek a reconsideration of recommendations by the concerned recommending body. Importance of provisions of EIA 2006 in reference to protection of environment has been stressed upon by Supreme Court in **para 56** of the report (**SCC**) as under:

“The 2006 notification embodies the notion that the development agenda of the nation must be carried out in compliance with norms stipulated for the protection of the environment and its complexities. It serves as a balance between development and protection of the environment: there is no trade-off between the two. The protection of the environment is an essential facet of development. It cannot be reduced to a technical formula. The notification demonstrates an increasing awareness of the complexities of the environment and the

heightened scrutiny required to ensure its continued sustenance, for today and for generations to come. It embodies a commitment to sustainable development. In laying down a detailed procedure for the grant of an EC, the 2006 notification attempts to bridge the perceived gap between the environment and development.”

59. Court also observed that under EIA 2006, **process of obtaining an EC commences from the production of information stipulated in Form 1/Form 1A; crucial information regarding particulars of proposed project is sought to enable EAC or SEAC to prepare comprehensive ToR which applicant is required to address during the course of preparation of EIA.** Relevant observations in para 60 of judgment are as under:

“60. Under the 2006 Notification, the process of obtaining an EC commences from the production of the information stipulated in Form 1/Form 1A.

*.....
.....*

Some of the information sought is produced thus:

*60.1. **Construction, operation or decommissioning** of the project involving actions, which **will cause physical changes in the locality (topography, land use, changes in water bodies, etc.).***

*60.2. **Use of natural resources** for construction or operation of the project (such as land, **water**, materials or energy, especially any resources which are non- renewable or in short supply).*

60.3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about the actual or perceived risks to human health.

*60.4 **Production of solid wastes during construction, operation or decommissioning.***

60.5. Release of pollutants or any hazardous, toxic or noxious substances to air.

60.6. Generation of noise and vibration, and emissions of light and heat.

60.7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea.

60.8. Risk of accidents during construction or operation of the project, which could affect human health or the environment.

60.9. **Environment sensitivity which includes**, amongst other things, the furnishing of the following details:

60.9.1. **Areas protected under international and national legislation.**

60.9.2. **Ecologically sensitive areas**

60.9.33 **Areas used by protected, important or sensitive species of flora or fauna.”**

(Emphasis added)

60. The importance of correctness and transparency of the information and that any false statement or concealment of the same would be fatal, was particularly stressed by Court in para 62 of judgment, observing:

“62. The information provided in Form 1 serves as a base upon which the process stipulated under the 2006 notification rests. An applicant is required to provide all material information stipulated in the form to enable the authorities to formulate comprehensive ToR and enable persons concerned to provide comments and representations at the public consultation stage. The depth of information sought in Form 1 is to enable the authorities to evaluate all possible impacts of the proposed project and provide the applicant an opportunity to address these concerns in the subsequent study. Missing or misleading information in Form 1 significantly impedes the functioning of the authorities and the process stipulated under the notification. For this reason, any application made or EC granted on the basis of a defective Form 1 is liable to be rejected immediately. Clause (vi) of paragraph 8 of the notification provides thus:

“Deliberate concealment and/or submission of false or misleading information or data which is material to screening or scoping or appraisal or decision on the application shall make the application liable for rejection, and cancellation of prior environmental clearance granted on that basis. Rejection of an application or cancellation of a prior environmental clearance already granted, on such ground, shall be decided by the regulatory authority, after

giving a personal hearing to the applicant, and following the principles of natural justice.”

(Emphasis added)

61. Supreme Court also referred and approved two judgments of this Tribunal in **Save Mon Region Federation vs. Union of India, 2013 (1) All India NGT Reporter 1** and **Shreeranganathan K P vs. Union of India 2014 SCC online NGT 15** wherein, on the basis of information furnished in Form 1, the deficiencies in EIA Report, process of appraisal etc., were considered in detail to find out whether EC was granted in accordance with law or not. Court distinguished an earlier judgment in **Lafarge Umiam Mining Private Limited vs. Union of India 2011 (7) SCC 338** observing that it was the case under EIA 1994 when provisions of EIA 2006 were not applicable. Court said that decision was based on facts of that case, summarized by Court in **Hanuman Laxman Aroskar (supra)** in para 138 of judgment. It was also held that, relevant material, if has been excluded for consideration or extraneous circumstances were brought in mind, there was a failure to observe binding norms under EIA 2006 and consequential serious flaw in the decision-making process, would amount to an illegal exercise and failure of statutory duty, so as to vitiate EC. In para 157 of judgment, importance of the correct and complete disclosure of information by PP in his application, Form 1 and Form 1A, and further consideration by Competent Authority has been discussed, as under:

“The 2006 Notification must hence be construed as a significant link in India’s quest to pursue the SDGs. Many of those goals, besides being accepted by the international community of which India is a part, constitute a basic expression of our own constitutional value system. Our interface with the norms which the international community has adopted in the sphere of environmental governance is hence as much a reflection of our own responsibility in a context which travels beyond our borders

*as much as it is a reflection of the aspirations of our own Constitution. **The fundamental principle which emerges from our interpretation of the 2006 Notification is that in the area of environmental governance, the means are as significant as the ends. The processes of decision are as crucial as the ultimate decision. The basic postulate of the 2006 Notification is that the path which is prescribed for disclosures, studies, gathering data, consultation and appraisal is designed in a manner that would secure decision making which is transparent, responsive and inclusive.***

(Emphasis Added)

62. Further, in para 158 of the judgment, in **Hanuman Laxman Aroskar (supra)**, Court observed:

*“Repeatedly, it has been urged on behalf of the State of Goa, MoEFCC and the concessionaire that the **need for a new airport is paramount with an increasing volume of passengers and consequently the flaws in the EIA process should be disregarded.** The need for setting up a new airport is a matter of policy. The role of the decision-makers entrusted with authority over the EIA process is to ensure that every important facet of the environment is adequately studied and that the impact of the proposed activity is carefully assessed. **This assessment is integral to the project design because it is on that basis that a considered decision can be arrived at as to whether necessary steps to mitigate adverse consequences to the environment can be strengthened.**”*

(Emphasis Added)

63. Supreme Court ultimately held that report of EIA based on incomplete information supplied by PP is vitiated. In para 159, it is said:

*“In the present case, as our analysis has indicated, **there has been a failure of due process commencing from the non-disclosure of vital information by the project proponent in Form 1. Disclosures in Form 1 are the underpinning for the preparation of the ToR. The EIA report, based on incomplete information has suffered from deficiencies which have been noticed in the earlier part of this judgment including the failure to acknowledge that within the study area contemplated by the Guidance manual, there is a presence of ESZs.**”*

(Emphasis Added)

64. Manner in which application submitted for grant of EC has to be dealt with by SEIAA or MoEF, has been considered in ***Bengaluru Development Authority v. Sudhakar Hegde & Others (2020) 15 SCC 63***. Supreme Court had an appeal arising from NGT's judgment dated 08.02.2019, whereby EC granted to appellant (BDA) for development of an eight lane Peripheral Ring Road connecting Tumkur Road to Hosur Road, a length of 65 kilometres was quashed, on the ground that report was based on primary data collected more than three years prior to submission to SEIAA. Tribunal directed that PP will not proceed on the basis of EC, which was quashed. Three issues were raised before Supreme Court. For our purpose, relevant question is, "whether EIA 2006 was followed or not". In para 87 of judgment, Supreme Court said:

*" - - appraisal by SEAC is structured and defined by EIA Notification, 2006. At this stage, **SEAC is required to conduct "a detailed scrutiny" of the application and other documents including EIA report submitted by applicant for grant of an EC.** Court also said that upon completion of appraisal processes, SEAC makes "categorical recommendations" to SEIAA either for grant of a 'Prior EC' on stipulated terms and conditions or rejection of the application. The **recommendations made by the SEAC for the grant of EC, are normally accepted by the SEIAA and must be based on "reasons".**"*

(Emphasis Added)

65. Above discussion shows that if in the application for grant of EC, this fact has not been disclosed that replenishment study has not been conducted, meaning thereby, no DSR following the procedure prescribed in the Statute has been prepared and that being so, neither EC could have granted and if granted, the same cannot be acted upon since preparation of DSR in accordance with law which include that replenishment study is a mandatory condition precedent before even grant of mining lease i.e., auction, e-auction, LoI for mining permission etc.

66. In the present case, pleadings have been referred to above showing that applicant has categorically said that no replenishment study was conducted before grant of mining permission to respondents 5 and 6. On this aspect, respondents 5 and 6 have not shown to us that any replenishment study was actually conducted, hence, applicant's averment remain uncontroverted. This fact was also not disclosed in the application submitted for grant of EC. Hence, we have no hesitation in accepting the submission of applicant. In view of above discussion, we are clearly of the view that RBM activities cannot be allowed to respondents 5 and 6 in absence of replenishment study. **This answers ISSUE I.**

67. Coming to issues II, III, and IV, we find that respondents 5 and 6 were clearly restrained from carrying out mining activity in flowing water channel area within the mining block. It is clearly stated in condition no. 56 of specific conditions of ECs.

68. Further, Joint Committee Report very categorically has said that Dhoodh Ganga Nallah has no scope for keeping mining patches outside stream since the width of nallah is very less i.e., very narrow. That being so, mining activities go parallel to the running water of the stream by diverting the water. Respondents 5 and 6 have taken stand that once they were allowed RBM due to the site conditions, they had no other option but to proceed in the manner as has been found by Joint Committee but the fact remains that running water mining activities were prohibited vide specific condition no.56 of ECs granted to respondents 5 and 6. Since they have carried on such activities, it is evident that respondent 5 and 6 have committed breach of specific condition no. 56 of ECs and are liable to face consequences of such breach.

69. **Issues I, II, III and IV are answered accordingly, i.e., in favour of applicant and against respondents 5 and 6.**

Issue V:

70. On this question, we find that photographs have been filed by applicant as annexure A-2 and A-3 to show use of heavy machinery by respondents 5 and 6. Respondents 5 and 6 have not disputed correctness of the photographs but what they have said is that GPS co-ordinates have not been disclosed and, therefore, above photographs are not admitted but denied. Applicant in the rejoinder has clearly said that GPS co-ordinates are based on the information supplied by respondents 5 and 6. This fact has not been denied. No substantial argument has been advanced by respondents 5 and 6 on this aspect. Respondents 5 and 6 were well aware of their own GPS co-ordinates and once the date and time of photographs are evident from the photographs with their own GPS co-ordinates of the site in question, it was open to respondents 5 and 6 to get the correctness of photographs confirmed but they have not done so. Having failed to do so and also considering the fact that use of heavy machines for lifting heavy boulder at the initial stage of mining is admitted by respondents 5 and 6, we find it reasonable to conclude that what has been stated by applicant is correct and respondents are/were conducting mining activities of sand, gravel and boulders by using heavy machines.

71. Learned Counsel appearing for respondents 5 and 6 submitted that specific condition no. 53 permitted to some extent semi-mechanized methods but could not explain as to how use of JCB etc. can be said to be use of semi-mechanized method. Condition no. 53 very categorically prohibits heavy machines like JCBs and once a particular kind of machine is specifically prohibited, use of such machine amounts to violation of

prohibitory condition and, therefore, we have no hesitation in holding that respondents 5 and 6 in carrying out mining activities in question are violating specific condition no. 53 of ECs.

72. Issue V is accordingly answered in affirmative and against respondents particularly respondents 5 and 6 and in favour of applicant.

Issue VI:

73. In view of our findings and conclusions drawn holding that specific condition no. 53 and 56 of ECs have been violated by respondents 5 and 6, **we answer this issue also against respondents 5 and 6 and in favour of applicant.**

Issues VII and VIII:

74. Both these questions can be considered together and we are proceeding accordingly.

75. The findings recorded above show that RBM has been carried out by respondents 5 and 6 not only in violation of mandate of Guidelines contained in SSMMG-2016 and EMGSM-2020 but also by committing breach of conditions of ECs. In these circumstances, JK EIAA is under a statutory obligation to consider the question of revocation of ECs granted to respondents 5 and 6. Similarly, by carrying out illegal mining in breach of the conditions of ECs, respondents 5 and 6 have caused aquatic ecological damage to *flora and fauna* as we have already discussed. Hence, by application of principle of 'Polluter Pays', they are also liable to pay environmental compensation.

76. Section 20 of NGT Act 2010 requires Tribunal to apply principles of 'Sustainable Development', 'Precautionary Principle' and '**Polluter Pays Principle**'.

77. JKPCC is under obligation in law to compute and levy environmental compensation from respondents 5 and 6 by applying 'Polluter Pays' Principle for illegal mining and thereby causing damage to environment.

78. This Principle was recognized as part of environmental law in India in ***Indian Council for Enviro-Legal Action vs. Union of India, (1996) 3 SCC 212***. Certain industries producing assets were dumping their waste. Even untreated waste water was allowed to flow freely polluting atmosphere and sub-terrain supply of water which ultimately caused darkening and dirtiness of wells and the streams water rendering it unfit for human consumption. Certain environmentalists' organizations broadly alleging severe damage to villager's health, filed a Writ petition as PIL in 1989 before Supreme Court. By that time, some of the units were already closed. Referring to Article 48-A in Directive Principles of State Policy and 51-A in the Fundamental duties of citizens, Supreme Court observed that said provisions say that State shall endeavour to protect and improve environment and to safeguard the forest and wildlife of the country. One of the fundamental duties of citizens is to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creature. Where a **Proponent has established its commercial unit and operate contrary to law flouting norms provided by law, Statutory Regulator is bound to act and if it fails, a judicial forum can direct it to act in accordance with law**. Referring to Oleum Gas leak case, i.e., ***M.C. Mehta vs. Union of India, (1987) 1 SCC 395***, Court observed in para 58 that the constitution bench held that

enterprise must be held strictly liable for causing such harm as a part of social cost of carrying on the hazardous or inherently dangerous activity. Hazardous or inherently harmful activities for private profits can be tolerated only on the condition that the enterprise engaged in such hazardous or inherently dangerous activity indemnifies all those who suffer on account of carrying on of such hazardous or inherently dangerous activity, regardless of whether it is carried on carefully or not.

79. Court also referred to its earlier decision in ***Indian Council for Enviro Legal action vs. Union of India, (1995) 3 SCC 77***, wherein concerned Pollution Control Board identified about 22 industries responsible for causing pollution by discharge of their effluent and a direction was issued by Court observing that they were responsible to compensate the farmers. It was the duty of State Government to ensure that this amount was recovered from the industries and paid to the farmers. In para 67 of the judgment, Court said that the **question of liability of respondent units to defray the costs of remedial measures can also be looked into from another angle which has now come to be accepted universally as a sound principle**, for example, 'Polluter Pays' principle. On this aspect, Court further observed as under:

“67. ...The Polluter Pays principle demands that the financial costs of preventing or remedying damage caused by pollution should lie with the undertakings which cause the pollution, or produce the goods which cause the pollution. Under the principle it is not the role of government to meet the costs involved in either prevention of such damage, or in carrying out remedial action, because the effect of this would be to shift the financial burden of the pollution incident to the taxpayer. The ‘Polluter Pays’ principle was promoted by the Organization for Economic Co-operation and Development (OECD) during the 1970s when there was great public interest in environmental issues. During this time there were demands on government and other institutions to introduce policies and mechanisms for the protection of the environment and the public from the threats posed by pollution in a modern industrialized

society. Since then, there has been considerable discussion of the nature of the polluter pays principle, but the precise scope of the principle and its implications for those involved in past, or potentially polluting activities have never been satisfactory agreed.

Despite the difficulties inherent in defining the principle, the European Community accepted it as a fundamental part of its strategy on environmental matters, and it has been one of the underlying principles of the four Community Action Programmes on the Environment. The current Fourth Action Programme ([1987] OJ C 328/1) makes it clear that **the cost of preventing and eliminating nuisances must in principle be borne by the polluter**, and the polluter pays principle has now been incorporated into the European Community Treaty as part of the new Articles on the environment which were introduced by the Single European Act of 1986. Article 130-R(2) of the Treaty states that environmental considerations are to play a part in all the policies of the Community, and that action is to be based on three principles: the need for preventative action; the need for environmental damage to be rectified at source; and that the polluter should pay.”

80. Court further said that **according to the above principle of ‘Polluter Pays’, responsibility for repairing the damage is that of the offending industry**. Sections 3 and 5 of Environment (Protection) Act, 1986 empower Central Government to give directions and take measures for giving effect to this principle. Court further said:

*“...In all the circumstances of the case, **we think it appropriate that the task of determining the amount required for carrying out the remedial measures, its recovery/realisation and the task of undertaking the remedial measures is placed upon the Central Government in the light of the provisions of the Environment [Protection] Act, 1986**. It is, of course, open to the Central Government to take the help and assistance of State Government, R.P.C.B. or such other agency or authority, as they think fit.”*

81. The above principle has been followed in **Vellore Citizen Welfare Forum vs. Union of India, 1996 (5) SCC 647**. In para 25, direction no. 2 reads as under:

2. The authority so constituted by the Central Government shall

implement the “precautionary principle” and the “polluter pays” principle. **The authority shall, with the help of expert opinion and after giving opportunity to the concerned polluters assess the loss to the ecology/environment in the affected areas and shall also identify the individuals/families who have suffered because of the pollution and shall assess the compensation to be paid to the said individuals/families. The authority shall further determine the compensation to be recovered from the polluters as cost of reversing the damaged environment. The authority shall lay down just and fair procedure for completing the exercise.**

82. In ***Bittu Sehgal and Another vs Union of India & Others, (2001) 9 SCC 181***, referring the earlier judgments, Supreme Court has said that ‘Precautionary Principle’ and ‘Polluter Pays Principle’ have been accepted as part of the law of the land.

83. In ***Research Foundation for Science vs. Union of India & Ors., (2005) 13 SCC 186***, in para 26 and 29, Court, on ‘Polluter Pays’ Principle, has said as under:

“26. The liability of the importers to pay the amounts to be spent for destroying the goods in question cannot be doubted on applicability of precautionary principle and polluter-pays principle. These principles are part of the environmental law of India. There is constitutional mandate to protect and improve the environment. In order to fulfill the constitutional mandate various legislations have been enacted with attempt to solve the problem of environmental degradation.

29. The polluter-pays principle basically means that the producer of goods or other items should be responsible for the cost of preventing or dealing with any pollution that the process causes. This includes environmental cost as well as direct cost to the people or property, it also covers cost incurred in avoiding pollution and not just those related to remedying any damage. It will include full environmental cost and not just those which are immediately tangible. The principle also does not mean that the polluter can pollute and pay for it. The nature and extent of cost and the circumstances in which the principle will apply may differ from case to case.”

84. In ***Karnataka Industrial Areas Development Board vs. C. Kenchappa & Others, (2006) 6 SCC 371***, principle of 'Polluter Pays' has been explained in detail referring to the earlier judgments in ***Indian Council for Enviro-Legal Action vs. Union of India (supra)*** and ***Vellore Citizen Welfare Forum (supra)***.

85. Here, a question would arise about the principle/methodology which shall be followed by JK PCC for computation of environmental compensation. Broad principles of environmental laws are given in Section 20 of NGT Act 2010 particularly, application of principle of 'Polluter Pays' for imposing liability of environmental compensation but methodology for assessing/determining environmental compensation is not provided in the Statute. Even Rules framed under NGT Act 2010 are silent on this aspect.

86. Issue of determination of EC is significant in the sense that it should be proportionate to or bears a reasonable nexus with the environmental damage and its remediation/restoration. Similarly in case of compensation to be determined for a victim, it needs to co-relate to injury caused or damage suffered by such person as also cost incurred for treatment/remediation. Computation of environmental compensation may involve some degree of subjectivity but broadly it must be based on objective considerations as it saddles financial liability upon the violator.

87. Taking into consideration multifarious situations relating to violation of environmental laws *vis-a-vis* different proponents, nature of cases involving violation of environmental laws can be categorized as under:

- (i) Where Project/Activities are carried out without obtaining requisite statutory permissions/consents/clearances/NOC

etc., affecting environment and ecology. For example, EC under EIA 2006; Consent under Water Act, 1974 and Air Act, 1981; Authorization under Solid Waste Management Rules, 2016 and other Rules; NOC for extraction and use of ground water, wherever applicable, and similar requirements under other statutes.

- (ii) Where proponents have violated conditions imposed under statutory Permissions, Consents, Clearances, NOC etc. affecting environment and ecology.
- (iii) Where proponents have carried out their activities causing damage to environment and ecology by not following standards/norms regarding cleanliness/pollution of air, water etc.

88. The above categories are further sub-divided, i.e., where the polluters/violators are corporate bodies/organizations/associations and group of the people, in contradistinction, to individuals; and another category, the individuals themselves responsible for such pollution.

89. Further category among above classification is, where, besides pollution of environment, proponents/violators action also affect the community at large regarding its source of livelihood, health etc.

90. The next relevant aspect is, whether damage to environment is irreversible, permanent or is capable of wholly or partial restoration/remediation/rejuvenation.

91. Determination/computation/assessment of environmental restoration/remediation/rejuvenation should also take care of damage

caused to the environment, to the community, if any, and should also be preventive, deterrent and to some extent, must have an element of “being punitive”. The idea is not only for restoration/remediation or to mitigate damage/loss to environment, but also to discourage people/proponents from indulging in the activities or carrying out their affairs in such a manner so as to cause damage/loss to environment.

92. To impose appropriate ‘environmental compensation’ for causing harm to environment, besides other relevant factors as pointed out, one has to understand the kind and nature of ‘Harmness cost’. This includes risk assessment. The concept of risk assessment will include human-health risk assessment and ecological risk assessment. U.S. Environmental Protection Agency has provided a guideline to understand harm caused to environment as well as people. For the purpose of human-health risk assessment, it comprised of three broad steps, namely, planning and problem formulation; effects and exposure assessment and risk categorization. The first part involves participation of stakeholders and others to get input; in the second aspect health effect of hazardous substances as well as likelihood and level of exposure to the pollutant are examined and the third step involves integration of effects and exposure assessment to determine risk.

93. Similarly, ecological risk assessment is an approach to determine risk of environmental harm by human activities. Here also we can find answer following three major steps, i.e., problem codification; analysis of exposure and risk characterization. First part encompasses identification of risk and what needs to be protected. Second step insists upon crystallization of factors that are exposed, degree to exposure and further comprised of two components, i.e., risk assessment and risk description.

94. In totality, problem is multi-fold and multi-angular. Solution is not straight but involves various shades and nuances and vary from case to case. Even Internationally, there is no thumb-rule to make assessment of damage and loss caused to environment due to activities carried out individually or collectively by the people, and for remediation/restoration. Different considerations are applicable and have been applied. As the term suggest, compensation means a return for loss or damage sustained. Therefore, it must always be just and not based on a whim or capricious.

95. In India, where commercial activities were carried out without obtaining statutory permissions/consents/clearance/NOC, Courts have determined, in some matters, compensation by fixing certain percentage of cost of project. In some cases, volume of business transactions, turnover, magnitude of establishment of proponent have also been considered as guiding factors to determine environmental compensation. In some cases, a lump sum amount has been imposed.

96. Nature is extremely precious. It is difficult to price elements of nature like light, Oxygen (air), water in different forms like rain, snow, vapour etc. When nature is exploited beyond carrying capacity, results are harmful and dangerous. People do not understand the value of what nature has given free. Recently, in COVID-19 Wave-II, scarcity of Oxygen proved its worth. In dreadful second phase of the above pandemic, any amount offered, in some cases, could not save life for want of Oxygen. Further, damage to environment, sometimes do not reflect in individuals immediately and may take time but injury is there. In such cases, process of determination of compensation may be different.

97. In an article, '*the cost of pollution-Environmental Economics*' by Linas Cekanavicius, 2011, it has been suggested, where commercial activities have been carried out without consent etc., and pollution standards have been violated, Total Pollution Cost (hereinafter referred to as '**TPC**') can be applied. It combines the cost of abatement of environmental pollution and cost of pollution induced environmental damage. The formula comes to **TPC(z)=AC(z)+ED(z)**, where **z** denotes the pollution level. Further, clean-up cost/remediation cost of pollution estimated to be incurred by authorities can also be used to determine environmental compensation.

98. When there is collective violation, sometimes the issue arose about apportionment of cost. Where more than one violator is indulged, apportionment may not be equal since user's respective capacity to produce waste, contribution of different categories to overall costs etc. would be relevant. The element of economic benefit to company resulting from violation is also an important aspect to be considered, otherwise observations of Supreme Court that the amount of environmental compensation must be deterrent, will become obliterated. Article 14 of the Constitution says that unequal cannot be treated equally, and this principle must also be given due consideration and be taken care.

99. Determination/assessment/computation of environmental compensation cannot be arbitrary. It must be founded on some objective and intelligible considerations and criteria. Simultaneously, Supreme Court also said that its calculations must be based on a principle which is simple and can be applied easily. In other words, it can be said that wherever Court finds it appropriate, expert's assessment can be sought but sometimes experts also go by their own convictions and belief and fail to take into account judicial precedents which have advanced cause of

environment by applying the principles of 'sustainable development', 'precautionary approach' and 'polluter pays', etc. In such circumstances, it is the ultimate responsibility of court's to assess and compute environmental compensation, rationally.

100. Clean-up cost or TPC, may be a relevant factor to evaluate damage, but in the diverse conditions as available in this Country, no single factor or formula may serve the purpose. Determination should be a quantitative estimation; the amount must be deterrent to polluter/violator and though there is some element of subjectivity but broadly assessment/computation must be founded on objective considerations. Appropriate compensation must be determined to cover not only the aspect of violation of law on the part of polluter/violator but also damage to the environment, its remediation/restoration, loss to the community at large and other relevant factors like deterrence, element of penalty etc.

101. **CPCB Guidelines:** This Tribunal, vide order dated 31.08.2018 passed in **OA 593/2017, Paryavaran Suraksha Samiti and another vs. Union of India and others** observed that "*CPCB may also assess and recover compensation for damage to the environment and said fund may be kept in a separate account and utilized in terms of an action plan for protection of the environment*". CPCB, accordingly, published a report on 15.07.2019, suggesting methodology for assessment of environmental compensation which may be levied or imposed upon industrial establishments who are guilty of violation of environmental laws and have caused damage/degradation/loss to environment. **It does not encompass individuals, statutory institutions and Government etc.**

102. The above Guidelines, therefore, would be of little use in present case.

103. The elements of nature like air, water, light and soil in materialistic manner may not be priced appropriately and adequately. Most of the time, whenever price is determined, it may be extremely low or highly exorbitant meaning thereby disproportionate. Still, since some of the assets of nature are marketable, on that basis price may be determined but when such elements are damaged or degraded, restoration thereof, in effect is priceless. Many a times, it may be almost impracticable and improbable to recover and remediate damaged environment to its position as it was. Moreover, its cost might be very high. It also cannot be doubted that once there is a pollution or damage to environment, it would affect adversely not only the environment but also inhabitants and all biological organisms. Damage is there, only degree may differ whether to the environment or to the inhabitants and other organisms. To find out simultaneously degree of damage and to ascertain the same in many cases may not be possible or practicable with mathematical precision. For example, a polluted air causes respiratory diseases but the people do not get infected and starts reflection of the disease immediately but it takes some time. The time taken in reflection of injury on the person or body also differs from person to person depending upon his immunity and other health conditions. In some cases, damage to environment i.e., air pollution may be fatal to a person who already has respiratory problem. For some a minor inconvenience, minor injury to others, and some may not suffer to the extent of showing symptoms of any diseases at all. When we talk of environmental compensation for causing degradation to environment and for its restoration or remediation, it is not a formal or casual or symbolic

amount which is required to be levied upon the violator. It is substantive and adequate amount which must be levied for restoration of environment.

104. Environmental compensation is not a kind of fee which may result in profiteering to violators and after adjusting a nominal amount of environmental compensation, a violator may find it profitable to continue with such violations. The objective of environmental compensation is that not only the loss and damage already caused, is made to recover and restore but also in future, the said violator may not repeat the kind of violation already committed and others also have a fear of not doing the same else similar liability may be enforced upon them. Unless amount of compensation is more than maximum permissible profit arising from violation, the purpose of environmental compensation would always stand defeated.

105. Loss caused to surroundings of the environment, may also include *flora-fauna* and human beings.

106. It is in this backdrop that in various matters when the issues were considered by Courts and Tribunal and found necessary to impose environmental compensation upon Proponent/Violator of environmental laws, they have followed different mechanisms. Sometimes, Committee's reports confirming violations have been referred but for quantum of compensation, directions have been issued in different ways. In some cases, CPCB Guidelines have been applied while in many other, project cost has been made basis and, in some matters, other modes of computation have been applied.

107. In fact, quantum of EC should have nexus with State's efforts for protection and preservation of environment and control of pollution.

Compensation regime must be a deterrent to violators and incentivize eco-friendly proponents. No one should get profited by violating environmental laws and community should also not suffer for violation of environmental norms by defaulting proponents. There is no reason, if beside the aspects noticed above, the computation process also incorporates the elements of inflation, quality of life, and economic prosperity.

108. In the matter of illegal mining causing damage to environment, methodology for determining environmental compensation was examined in **OA No. 360/2015, National Green Tribunal Bar Association vs. Virender Singh (State of Gujarat)** and other connected matters decided on 26.02.2021. Here a report was submitted by CPCB on 30.01.2020, placing on record recommendations made by Committee comprising:

- i.) Dr Purnamita Dasgupta, Professor, IEG, Delhi,
- ii.) Dr K.S. Kavi Kumar, Professor, MSE, Chennai,
- iii.) Dr. Yogesh Dubey, Associate Professor, IIFM, Bhopal,
- iv.) Shri Sundeep, Director, MoEF&CC, Delhi and
- v.) Shri A. Sudhakar, Additional Director, CPCB, Delhi

109. Report was considered by Tribunal vide order dated 17.08.2020. Report said:

“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				
<i>Permitted Quantity (in MT or m³)</i>	<i>Total Extraction (in MT or m³)</i>	<i>Excess Extraction (in MT or m³)</i>	<i>Exceedance in Extraction:</i>	<i>Compensation Charge (in Rs.)</i>
X	Y	Z=Y-X	Z/X	D* (1+RF+DF) Where D=Z x Market Value of the material per MT-or-m ³
				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:

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

110. Here, in both the approaches, element of illegality committed by PP in carrying on mining was not considered at all. For example, if EC and/or consent is not obtained. Similarly, cost of remediation/restoration was also not taken into consideration.

111. In some cases, compensation has been awarded by Tribunal on lump sum basis without referring to any methodology. For example: (i) ***in Ajay Kumar Negi vs Union of India, OA No. 183/2013***, Rs.5 Crores was imposed. (ii) In ***Naim Shariff vs M/s Das Offshore Application no. 15(THC) of 2016***, Rs.25 Crores was imposed (iii) ***Hazira Macchimar Samiti vs. Union of India***, Rs. 25 Crores was imposed.

112. In respect of illegal mining, the manner in which environmental compensation should be imposed has been specifically dealt with by Supreme Court in ***Goa Foundation vs. Union of India & Others, (2014) 6 SCC 590***. Supreme Court relied on ***Samaj Parivartana Samudaya & Others vs. State of Karnataka & Others, (2013) 8 SCC 209*** and held that **ten per cent of the sale price** of iron ore during e-auction should be taken as compensation. To arrive at the above view, Court observed that this was an appropriate compensation given that mining could not

completely stopped due to its contribution towards employment and revenue generation for the State. Further, Court directed to create a special purpose vehicle, i.e., “Goan Iron Ore Permanent Fund” for depositing above directed compensation and utilization of above fund for remediation of damage to environment.

113. On the issue of assessment of compensation for damage to environment in the matter of illegal mining, recently Supreme Court in ***Bajri Lease LOI holders Welfare Society vs. State of Rajasthan and others, SLP (Civil) No. 10584 of 2019*** (order dated 11.11.2021) has said that compensation/penalty to be paid by those indulging in illegal sand mining cannot be restricted to be value of illegally mined minerals. The cost of restoration of environment as well as the cost of ecological services should be part of compensation. ‘Polluter Pays’ principle as interpreted by this Court means that absolute liability for harm to the environment extends not only to compensate victims of pollution but also cost of restoring environmental degradation. Remediation of damaged environment is part of the process of “sustainable development” and as such the polluter is liable to pay the cost the individual sufferers as well as the cost of reversing the damaged ecology.

114. In the present case, therefore, environmental compensation for illegal mining has to be computed in the light of the principles laid down by Supreme Court in ***Goa Foundation vs. Union of India & Others (supra)***.

115. Respondent JKPCC is, therefore, under an obligation to consider the issue of imposition of environmental compensation and other prohibitive and punitive action against respondents 5 and 6 in accordance with law.

116. Environmental compensation could have been determined by this Tribunal also but in absence of the requisite information regarding quantum of mineral extracted by respondents 5 and 6, sale price of mineral and actual period of mining activities, we find it difficult to make any such final computation, therefore, we find it appropriate to direct JKPCC to proceed to compute environmental compensation in accordance with law, besides taking other prohibitive and punitive action against respondents 5 and 6 and remedial action for rejuvenation and restoration of the damage cause to environment.

117. However, the quantum of RBM by extraction of minor mineral has been provided in ECs of respondents 5 and 6. Respondent 5 Danish Yousuf has been allowed extraction of 37320 MT in 3 months while respondent 6 Rouf Ahmad has been allowed to extract 41676 MT of the minor minerals i.e., sand, gravel and boulders. If we take a very considerate sale price on average basis at the rate of 200 per MT, it will come to Rs.74,64,000/- in case of Danish Yousuf and in case of Rouf Ahmad, it will come to Rs.83,35,200/- and 10% thereof, in each case would come to Rs.7,46400/- and Rs.8,33,520/- respectively. We therefore impose the aforesaid amount as interim environmental compensation upon respondents 5 and 6 respectively which shall be paid by them to JK PCC and it shall be subject to final determination of environmental compensation by JK PCC as directed above.

118. Further, since we have already found that mining activities carried out by respondents 5 and 6 are patently illegal and in violation of the conditions of ECs, we, therefore, direct that respondents 5 and 6 shall henceforth stop mining activities pursuant to ECs dated 06.07.2021 and

compliance of this order shall be carried out by Statutory Regulator i.e., JKPCC and District Magistrate, Budgam.

119. Issues VII and VIII are answered accordingly.

120. In view of the above discussion, OA is partly allowed with the following directions:

- (i) An interim environmental compensation of Rs.7,46,400/- shall be paid by respondent 5 and Rs.8,33,520/- by respondent 6 by depositing the same within two months with JK PCC and the said amount shall be subject to final computation of environmental compensation by JK PCC as directed above.
- (ii) We direct JKPCC to proceed to compute final environmental compensation and impose the same upon respondents 5 and 6 in accordance with law.
- (iii) The amount of environmental compensation shall be used for remediation/rejuvenation/restoration of environment in the said area on the basis of a rejuvenation plan which shall be prepared jointly by JK PCC and Collector, Budgam.
- (iv) Besides environmental compensation, JKPCC shall also take other prohibitive and punitive action against respondents 5 and 6 and remedial action for rejuvenation and restoration of the damage cause to environment.
- (v) Respondents 5 and 6 are directed to stop mining activities pursuant to ECs dated 06.07.2021 forthwith and

compliance of this judgment shall be carried out by Statutory Regulators i.e., JKPCC and District Magistrate, Budgam.

121. Pending IA also stands disposed of.

122. Copy of this judgment be forwarded to JK EIAA/JK SEIAA; JKPCC and District Magistrate, Budgam by e-mail for compliance.

SUDHIR AGARWAL,
JUDICIAL MEMBER

DR. A. SENTHIL VEL,
EXPERT MEMBER

March 15, 2024
Original Application No. 351/2023
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