

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

Original Application No. 51/2023

News item published in The Tribune dated 16th January 2023 titled Joshimath disaster a warning for Mussoorie

Date of hearing: 02.04.2024

**CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER**

Respondent: Mr. Kaushal Gautam & Ms. Snehpreet Kaur, Advs. for UKPCB
Mr. Deepak Bora, Adv. for the State of Uttarakhand

ORDER

1. In this original application, registered *suo moto* on the basis of the news report relating to Joshimath disaster resulting in displacement of number of inhabitants and damage to the properties with the report of sinking of earth surface due to displacement of subsurface material.

2. Tribunal on the basis of the report, in the initial order, had noted that this was on account of excessive unplanned construction beyond carrying capacity and also on account of unplanned human settlements, over concretization, traffic congestion, excessive building activities beyond the capacity etc.

3. Tribunal in the order dated 31.01.2023 accordingly had observed as under:-

“9. In above background, study of carrying capacity of eco-sensitive areas in Himalayan regions in holistic manner appears to be imperative for protection of environment. Without undermining need for study in all eco sensitive areas as already directed, we direct specific study for Mussoorie in the light of apprehensions expressed in above media report. Such study may cover as to how much constructions can be allowed and with what safeguards, what safeguards be used for existing buildings and all other relevant and associated aspects including vehicular traffic, sanitation

management, maintaining ecological integrity in terms of soil stability and flora/fauna. For this purpose, we constitute a nine member joint Committee to be headed by Chief Secretary, Uttarakhand. Other members will be Wadia Institute of Himalayan Geology Dehradun, Govind Ballabh Pant National Institute of Himalaya and Environment, National Institute of Hydrology (NIH), Roorkee, Prof. J.S Rawat, Kumaon University, Almora, Space Application Centre, Ahmadabad National Institute of Rock Mechanics, Bangalore, CPCB and ACS Environment, Uttarakhand who will act as nodal agency for coordination and compliance. ACS, Environment will provide for travel and logistics for members to the extent necessary. Meetings may be held online or offline as may be necessary except for visit to the site. The Committee may suggest remedial measures to prevent environmental damage in the light of carrying capacity, hydro-geology studies, geo-morphological studies and also covering other allied and incidental issues. The Committee will be at liberty to take assistance from any other expert/institution. The Committee may meet within two weeks and complete its studies within two months. It may furnish its report by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF on or before April 30, 2023. The Committee will be free to interact with the stakeholders including the inhabitants/members of civil societies. The Committee may also consider the concerns in the media report. It will be open to the Chief Secretary, Uttarakhand to take preventive and remedial measures found necessary in the light of the media report otherwise.”

4. Nine Member Joint Committee so constituted by the Tribunal had submit the report.

5. Tribunal in the proceedings dated 26.07.2023 had directed as under:

“16. State of Uttarakhand is required to take necessary steps and to ensure that the remedial measures which have been suggested by Committee shall be taken on priority basis in a time bound manner for which an action plan identifying issue, remedial action to be taken and agencies accounted for implementation/execution will be prepared. The entire action plan needs to be monitored by the Chief Secretary on quarterly basis and monthly reviewed by the senior Nodal Officer to be deputed by Chief Secretary. Action Taken Report to these effects be filed within three months.”

6. It is worth noting that in terms of the direction of the Tribunal dated 26.07.2023, no report by the State of Uttarakhand has been filed

till now nor the detailed plan, remedial action or time bound proposal has been placed on record.

7. The action taken report dated 08.11.2023 under the signature of Scientific Officer, Uttarakhand PCB, Dehradun has been filed.

8. A perusal, thereof, disclose that a meeting was held under the Chairmanship of the Chief Secretary, Government of Uttarakhand in which the Principal Secretary/Secretary, Environment Protection and Climate Changes, Government of Uttarakhand was designated as nodal officer for reviewing the progress made by the concerned departments with regards to prescribe preventive and remedial measures.

9. This report was considered by the Tribunal in the proceedings dated 09.11.2023 and was found in that report no time bound schedule was disclosed and only some general proposals were mentioned. Hence, the prayer of Counsel for the UKPCB seeking three weeks time to place on record, action plan in terms of the direction of the Tribunal was allowed.

10. Along with the action taken report, minutes of the meeting dated 11.09.2023 are enclosed wherein in tabulated form as many as 19 issues/remedial measures were taken note of and responsibility was fixed to the different departments as under:

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Sl. No	Preventive & Remedial Measures	Concern Department
1.	<i>For tunnel and major civil structures projects like hotel, hospital etc. it is suggested that detailed engineering geological and geotechnical investigations should be done as per BIS Codes and construction permission should only be granted after clearance of the report from the State/Centre appointed Statutory Body.</i>	कार्यवाही लोक निर्माण विभाग / एन०एच०ए०आई० पर्यटन विभाग/से सम्बन्धित है। सम्बन्धित विभाग उक्त का अनुपालन सुनिश्चित करते हुए आख्या प्रेषित करना सुनिश्चित करें।
2.	<i>The MDDA should develop a GIS based Decision Support System (DSS) for the use of the decision makers, planners, managers and administrators, by putting all the</i>	कार्यवाही आवास विभाग एवं एम०डी०डी०ए० के स्तर से की जानी है। एम०डी०डी०ए० द्वारा

	<p>data/information (i.e. geological, geomorphological, hydrological, environmental and developed infrastructures) of the Mussoorie Town area in an integrated high resolution (i.e., 1:10,000) common geospatial web-based platform, viz., geoportal.</p>	<p>आई०टी०डी०ए० से आवश्यक समन्वय कर GIS based Decision Support System (DSS) के सम्बन्ध में आवश्यक कार्यवाही सुनिश्चित करते हुए समयवद्ध कार्ययोजना तैयार एवं कर क्रियान्वयन सुनिश्चित करें।</p>
3.	<p>Proper examination of existing building and it may be necessary to strengthen the retrofitting of structures to prevent them from sliding or collapsing. This could involve underpinning or adding reinforcement to the foundations. Technical auditing of multi-story buildings (≥3) by experts on annual or biennial basis can be conducted at MDDA level to know about the health of the building.</p>	<p>कार्यवाही आवास विभाग , एम०डी०डी०ए० एवं नगर पालिका परिषद, मसूरी द्वारा की जानी है। सम्बन्धित विभाग उक्त सम्बन्ध में समयवद्ध कार्ययोजना का विवरण प्रस्तुत करेंगे। Retrofitting of structures के सम्बन्ध में लोक निर्माण विभाग को तकनीकी संस्था के रूप में नामित किया जा सकता है।</p>
4.	<p>When repairing roads or building structures, it was recommended that the boulders not be removed by digging or blasting the hillsides. In landslide prone areas, stones and boulders should not be removed from the bottom of the hill because this would remove toe support, increasing the likelihood of landslides. It is necessary to fill in any cracks that have appeared on the slopes.</p>	<p>सचिव, पेयजल द्वारा अवश्य Technical दिशा निर्देश जारी किया जायेगा।</p>
5.	<p>Provision of effective drainage system should be ensured. Due to the lack of proper surface draining system, the rainwater of most of the buildings is being infiltrated into the ground which generates sub-surface flow and accelerates the process of land creeping resulting in damage to buildings and other properties causing economic and environmental disruptions. For safeguarding the buildings and environmental conservation, it is necessary to ensure that the rainwater of each building roof is being drained out properly into the nearest natural drainage line.</p>	<p>कार्यवाही हेतु सिंचाई विभाग द्वारा मसूरी शहर का ड्रेनेज प्लान तैयार किये जाने के सम्बन्ध में कार्यवाही सुनिश्चित करें।</p>
6.	<p>Phytoremediation of degraded slopes can be initiated, that can help to anchor the soil and prevent erosion. Broad leaved native trees can be promoted for stabilizing slopes, especially in the landslide prone areas.</p>	<p>कार्यवाही हेतु वन विभाग एवं आपदा प्रबंधन विभाग द्वारा की जानी है। सम्बन्धित विभाग समयवद्ध कार्ययोजना तैयार कर</p>

		क्रियान्वयन सुनिश्चित करें।
7.	<p>Water availability concerning to current demand in summer and winter months should be maintained and proper supply system to be ensured. Recharge / rejuvenation of natural springs should be explored with scientific intervention. Natural spring in the region should be monitored and re-charge activities (proper plantation) can be initiated on proper scientific basis.</p> <p>Springs (act as natural piezometers) are good indicators for any change in the groundwater in the mountainous area. Therefore, there is an urgent need to inventories all springs located in the vicinity/periphery of Mussoorie towns. Their periodic monitoring may be a good tool for detecting any natural calamities events in advance in the mountainous regions.</p>	कार्यवाही पेयजल विभाग , वन विभाग एवं जलागम विभाग से अपेक्षित है। सम्बन्धित विभाग समयवद्ध कार्ययोजना तैयार कर क्रियान्वयन सुनिश्चित करें।
8.	<p>Spring-shed rejuvenation and management activities can be initiated on proper scientific basis for safeguarding and augmentation of the discharge of the springs and subsequently the local streams fed by springs. Since most of the water supply schemes of Mussoorie town are from the local springs/brooklet, incentive-based mechanism (IBM) can be adopted for effective protection and preservation of the springs/brooklet. Beside that recharge zones shall also increase soil moisture content which will help in enriching biodiversity through natural regeneration of trees, shrubs and grasses, etc. and shall increase both flora and fauna in the forest. On the other hand, due to increase in soil moisture content on forest land the incidences of forest fire, which are causing irreparable loss to environment and the entire ecosystem will be controlled as a result of this mitigation measure.</p>	कार्यवाही पेयजल विभाग , वन विभाग एवं जलागम विभाग से अपेक्षित है। सम्बन्धित विभाग समयवद्ध कार्ययोजना तैयार कर क्रियान्वयन सुनिश्चित करें।
9.	<p>Roof top Rain water harvesting can be promoted to meet the deficit water demand, at least in the peak tourist period.</p>	कार्यवाही एम०डी०डी०ए० द्वारा की जानी है। Rain water harvesting के अन्तर्गत वर्षा जल को पक्के टैंक में एकत्र कर प्रयोग किये जाने को प्रोत्साहित किया जाना है। उक्त सम्बन्ध में सम्बन्धित विभाग कार्यवाही सुनिश्चित करें।
10.	<p>Open rain water seepage must be stopped through the construction of a pucca drainage system. Water should not be allowed to accumulate in any depression; instead,</p>	बिन्दु पर कार्यवाही हेतु प्रमुख सचिव, वन एवं पर्यावरण की ओर

	<i>drains should be built to transport it to safe areas.</i>	<i>से आवश्यक निर्देश निर्गत जायें। सिंचाई विभाग द्वारा मसूरी शहर का ड्रेनेज प्लान तैयार किये जाने के सम्बन्ध में कार्यवाही सुनिश्चित करें।</i>
11.	<i>Proper sewerage network and appropriate treatment facilities should be ensured. The sewage water should not be allowed to percolate or connect with natural ground water. Feasibility of reuse of treated water for secondary uses can be explored.</i>	<i>कार्यवाही पेयजल विभाग से अपेक्षित है। सम्बन्धित विभाग सीवरेज नेटवर्क के सम्बन्ध में कार्ययोजना एवं उसके क्रियान्वयन का प्रस्ताव तैयार करें। सीवेज ट्रीटमेंट प्लांट द्वारा शुद्धीकृत उत्प्रवाह के प्रयोग के सम्बन्ध में कार्ययोजना प्रस्तुत करें।</i>
12.	<i>Construction of new buildings are already restricted. Further, the new /additional construction related extension should be properly monitored. All the building foundations should be mapped by a competent engineering geologist to know about the safe bearing capacity of the foundation and treatment of cut slope. In consultation with the designer, type of foundation (footing, strip, raft) and height of building can be finalized. Then only after this, the map can be submitted to MDDA for approval.</i>	<i>मसूरी क्षेत्र में नये निर्माण कार्यों के सम्बन्ध में पूर्व से ही कतिपय प्रतिबंध लागू हैं। आवास विभाग एवं एम०डी०डी०ए० द्वारा उक्त प्रतिबंधों को लागू करते हुए Building safety assessment plan and accordingly approval process plan को उपलब्ध कराया जाय।</i>
13.	<i>The regulations related to waste management should be strictly followed. Dumping sites around water bodies should be strictly restricted to prevent pollution threats on the important sources of drinking water of the city. QR code based Digital Direct Refund System should be implemented for management of plastic waste. IEC activities to be promoted amongst visiting tourist towards solid waste and plastic waste management.</i>	<i>कार्यवाही शहरी विकास विभाग , उत्तराखण्ड प्रदूषण नियंत्रण बोर्ड एवं नगर पालिका परिषद मसूरी के स्तर से की जानी है। सम्बन्धित विभाग अद्यतन स्थिति के साथ कार्ययोजना तैयार कर क्रियान्वयन सुनिश्चित करें।</i>
14.	<i>Strict measures should be made to promote the usage of biodegradable materials and ban on use of Single Use Plastics (SUPs) items should be strictly enforced.</i>	<i>कार्यवाही शहरी विकास विभाग , नगर पालिका परिषद मसूरी एवं उत्तराखण्ड प्रदूषण नियंत्रण बोर्ड द्वारा की जानी है। SUPs प्रतिबंध के सम्बन्ध में उक्त विभागों द्वारा संचालित विभिन्न गतिविधियों के संबंध में Status</i>

		Report प्रस्तुत की जायेगी।
15.	Local people should be involved in the Environmental Conservation programs and awareness/training on landslides, mountain risks, etc. to be initiated.	कार्यवाही शहरी विकास विभाग , राज्य प्रदूषण नियंत्रण बोर्ड, वन विभाग द्वारा की जानी है। सम्बन्धित विभाग कार्ययोजना का विवरण एवं क्रियान्वयन सुनिश्चित करेंगे।
16.	Registration of tourists should be done according to carrying capacity of the area, especially the available parking space, guest room availability, etc. Tourist can be charged for visiting the Mussoorie area and the payment can be utilized for managing waste and cleanliness.	कार्यवाही पर्यटन विभाग एवं शहरी विकास विभाग द्वारा की जानी है। उक्त सम्बन्ध में सम्बन्धित विभाग कार्ययोजना एवं क्रियान्वयन का प्रस्ताव तैयार करेंगे।
17.	New construction can be allowed for land owners/local inhabitants as per plan and by-laws of building construction of MDDA and carrying capacity with a specific control on height of the building, slope percentage, drainage and control construction in freeze zone.	कार्यवाही आवास विभाग/ एम०डी०डी०ए० से अपेक्षित है। सम्बन्धित विभाग अविलम्ब आवश्यक Action Plan प्रस्तुत करें।
18.	At present, the preparation of Master Plan of Mussoorie is in progress. The mitigation and preventive measures call be incorporated in the Master Plan for sustainable development.	कार्यवाही आवास विभाग/एम०डी०डी०ए० से अपेक्षित है। सम्बन्धित विभाग आवश्यक कार्यवाही सुनिश्चित करें।
19.	For the smooth traffic management and to avoid traffic congestion the total number of permissible vehicles may not be exceeded beyond the capacity of parking facility provided by Nagar Palika, Mussoorie, Tourism Department, MDDA, Hotels, Dhramshalas, Gurudwaras etc. The road side parking may be allowed subject to free flow of traffic as managed by the local police.	कार्यवाही जिला प्रशासन एवं पुलिस विभाग से अपेक्षित है। सम्बन्धित विभाग कार्ययोजना तैयार कर क्रियान्वयन , सम्बन्धी प्रस्ताव तैयार कर अवगत करायें।

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11. Learned Counsel for State of Uttarakhand submits that he has been recently engaged in the matter.

12. More than a year has passed after the matter was taken up *suo-moto* but till now neither the proper response has been filed before the Tribunal by the authorities of the State of Uttarakhand nor any effective measure has been taken. Hence, in the circumstances of the case, we

grant **last opportunity** to the State of Uttarakhand to file the action taken report indicating the positive action to remediate the situation within a period of six weeks by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF.

13. List on 09.07.2024.

Prakash Shrivastava, CP

Sudhir Agarwal, JM

Dr. A. Senthil Vel, EM

April 02, 2024
Original Application No. 51/2023
JG.