

IN THE NATIONAL GREEN TRIBUNAL, NEW DELHI

INDEX

IN

**SUPPLEMENTARY AFFIDAVIT ON BEHALF OF
UTTARAKHAND POLLUTION CONTROL BOARD**

Execution Application No. 27/2023 in
Original Application No. 561/2022 (M.A. No. 54/2023)

Urvashi Shobhna Kachari

Applicant

Versus

Union of India & Ors.

Respondents

Shashikant Purohit

Applicant in EA No. 27/2023

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Dated: March 11, 2024

Advocate
(Counsel for the UKPCB)

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AFFIDAVIT of Dr. Parag Madhukar Dhakate, aged about 47 years, S/o Shri M. B. Dhakate presently posted as Member Secretary, Uttarakhand Pollution Control Board, Dehradun.


Deponent

I, the above-named deponent does hereby solemnly affirm and state on oath as under: -

- 1) That the deponent is presently posted as Member Secretary and has been duly authorized to sign and swear the instant response affidavit.



2) That this Hon'ble Tribunal vide order dated 05.01.2024 was *inter-alia* pleased to direct Uttarakhand Pollution Control Board Uttarakhand as under: -

"...7. Learned Counsel appearing for UEPPCB has fairly admitted that till now no carrying capacity study has been carried out. He submits that the carrying capacity study will now be carried out within a period of two months and a report disclosing the carrying capacity of all the concerned areas under consideration will be filed positively within a period of two months before the Tribunal....."

3) That in compliance of the aforementioned direction, it is humbly submitted:-

i. Having highest regard for the order of the Hon'ble Tribunal, the matter was escalated to the Chief Secretary, Government of Uttarakhand who issued necessary directions for immediate compliance.

ii. Thereafter on 06.03.2024, a meeting was conducted under the Chairmanship of the Chief Secretary along with officials of various other departments. Copy of the minutes of the meeting is being marked and filed as **Annexure No. 1** to this affidavit.

iii. In the said meeting it was clarified that the figures mentioned by the applicant which find mention in the order dated 05.01.2024 could not be considered as the

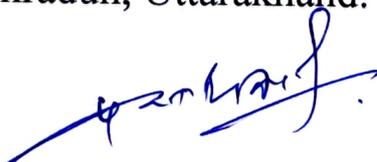


[Handwritten Signature]

carrying capacity. The said figures provided by the State Government were indicative of the *darshan* of the pilgrims for regulating their numbers and did not include the number of tourists enroute. Moreover, the figure had no scientific backing at all. Therefore, it is humbly stated that it would be inappropriate to consider these figures as the carrying capacity of the shrines for pilgrims and equines.

- iv. In the said meeting representatives of Wildlife Institute of India, Chandrani, Dehradun and G.B. Pant National Institute of Himalayan Environment, Kosi-Katarmal, Almora were also present. It was agreed that in order to obtain the “scientific carrying capacity” of pilgrims and equines, a systematic study needs to be conducted considering various factors such as infrastructure and other environmental variables and such scientific study would require at least 12 to 18 months time period.
- v. Therefore, to proceed with the scientific study of the carrying capacity of pilgrims and equines, a formal communication were made with the following institutions: -

- a. Director, Wildlife Institute of India, Chandrani, Dehradun, Uttarakhand.




- b. Director, G.B. Pant National Institute of Himalayan Environment, Kosi-Katarmal, Almora, Uttarakhand.
 - c. Director, Wadia Institute of Himalayan Geology GMS Road, Dehradun, Uttarakhand.
 - d. Vice Chancellor, GB Pant University of Agriculture and Technology, Pantnagar, Uttarakhand.
 - e. Vice Chancellor, HNB Garhwal University, Srinagar, Distt. Pauri Garhwal, Uttarakhand.
- vi. That in response, on 07.03.2024, the Director, Wildlife Institute of India via email informed that the said study of carrying capacity will take approximately 1.5 years as 12 months are needed for data collection and 6 months are required for data analysis and preparation of report. The Director, G.B. Pant National Institute of Himalayan Environment, Kosi-Katarmal via email dated 11.03.2024 has submitted a concept proposal and stated that 24 months will be required to carry out the study for all the four pilgrimage track regions of Uttarakhand. Copies of the communication made by Director, Wildlife Institute of India and Director, G.B. Pant National Institute of Himalayan Environment, Kosi-



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Katarmal is being marked and filed as **Annexure No. 2 (colly)** to this affidavit.

- vii. In so far as the issue of equines is concerned, it is humbly submitted that an assessment has been conducted by the Animal Husbandry Department, Uttarakhand for Kedarnath and Hemkund routes. Based on the said assessment, a Standard Operating Procedure (SOP) was issued that deals with issues in detail such as registration, health check-up, tagging, insurance, and disposal mechanism of dead bodies etc. Copy of assessment report and SOP is already filed as **Annexure-1** with Response Affidavit filed by UKPCB on 04.03.2024 (Page No. 640).
- 4) That in addition to the ongoing proceedings before the Hon'ble Tribunal, it is pertinent to mention that two PILs bearing WP (PIL) No. 79 of 2022, Gauri Maulekhi Vs. State of Uttarakhand & Others along with WP (PIL) No.105 of 2023, Ajay Gautam Vs. State of Uttarakhand & Others are pending before the Hon'ble High Court of Uttarakhand at Nainital. Both these PILs pertain to the similar issue of carrying capacity. The State is actively ensuring compliance with the orders and directions issued by both the Hon'ble High Court and the Hon'ble Tribunal. Copy of order dated 10.08.2024 passed by the Hon'ble High Court of Uttarakhand



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is already filed as **Annexure-2** with Response Affidavit filed by UKPCB on 04.03.2024 (Page No. 650).

- 5) In view of the above it is in the interest of justice that this Hon'ble Tribunal may graciously be pleased to grant sufficient time so that the "scientific carrying capacity" can be assessed and presented before this Hon'ble Court for just and fair disposal of the matter.
- 6) The deponent is a responsible Government servant having the highest regards for the Hon'ble Tribunal and orders passed by them. The deponent has always made his sincerest efforts to carry out the orders passed by this Hon'ble Tribunal in its letter and spirit and shall continue to do so in the future.




Deponent

I,, Advocate, do hereby declare that the person making this affidavit and alleging himself to be is the same person who is known to me from the papers produced by him before me in this case.

.....
Advocate
Enrol. No.



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Solemnly affirmed before me on this day of 11 March, 2024 at Dehradun at about 6.00 AM/PM by the deponent who has been identified by the aforesaid person. I have satisfied myself by examining the deponent who understood the contents of this affidavit.

The person has signed in my presence on the affidavit.

Notary

[Handwritten signature]



This affidavit is sworn before me by
Shri. *Dr. Pray Madhwar Dhillon*
who is identified by Shri.....
at Dehradun on *11/3/24*

(Rajender Singh Negi)
Advocate & Notary, Dehradun

11/3/24

मा.राष्ट्रीय हरित प्राधिकरण, नई दिल्ली में योजित **Execution Application No.-27/2023 in Original Application No. 561/2023 Urvashi Shobhna Kachari Vs Union of India & Ors.** के सम्बन्ध में मुख्य सचिव, उत्तराखण्ड शासन की अध्यक्षता में गठित कमेटी की दिनांक 06 मार्च, 2024 को सम्पन्न बैठक का कार्यवृत्त :-

उपस्थिति:-

1. श्री रमेश कुमार सुधांशु, प्रमुख सचिव, पर्यावरण संरक्षण एवं जलवायु परिवर्तन विभाग, उत्तराखण्ड शासन।
2. श्री अभिनव कुमार, पुलिस महानिदेशक, उत्तराखण्ड।
3. श्री अरविन्द कुमार ह्याँकी, सचिव, परिवहन विभाग, उत्तराखण्ड शासन।
4. श्री वाई.के.पंत, अपर सचिव, पर्यटन विभाग, उत्तराखण्ड शासन।
5. डॉ० पराग मधुकर धकाते, सदस्य सचिव, उत्तराखण्ड प्रदूषण नियंत्रण बोर्ड, देहरादून।
6. श्री राहुल, मुख्य वन संरक्षक, सतर्कता एवं विधि प्रकोष्ठ, वन विभाग, उत्तराखण्ड।
7. श्री ए.के.राजपूत, ग्राम्य विकास विभाग, उत्तराखण्ड।
8. श्रीमती हिमाली जोशी पेटवाल, संयुक्त निदेशक, पंचायती राज विभाग, उत्तराखण्ड।
9. डॉ० नीरज सिंघल, निदेशक, पशुपालन विभाग, उत्तराखण्ड।
10. डॉ० उर्वशी, उप निदेशक, पशुपालन विभाग, उत्तराखण्ड।

Virtul Mode में उपस्थित अधिकारीगण :-

1. जिलाधिकारी, चमोली, उत्तराखण्ड।
2. जिलाधिकारी, रुद्रप्रयाग, उत्तराखण्ड।
3. अपर जिलाधिकारी, उत्तरकाशी, उत्तराखण्ड।
4. डा० बी०एस० अधिकारी, वैज्ञानिक-‘जी’ भारतीय वन्य जीव संस्थान, देहरादून के प्रतिनिधि।
5. डा० सुमित राय, वैज्ञानिक-‘डी’ गोविन्द बल्लभ पंत राष्ट्रीय हिमालयी पर्यावरण संस्थान, कोसी-कटारमल के प्रतिनिधि।
6. लोक निर्माण विभाग, भटवाड़ी के प्रतिनिधि।

सर्वप्रथम बैठक में उपस्थित समस्त प्रतिभागियों का स्वागत करते हुए बैठक का शुभारम्भ किया गया। बैठक में अधोहस्ताक्षरी द्वारा प्रश्नगत मूल आवेदन संख्या-561/2022 में मा० प्राधिकरण द्वारा समय-समय पर पारित आदेशों संबंध में मुख्य सचिव महोदया को अवगत कराते हुए उल्लेख किया गया कि वाद मूलतः केदारनाथ, यमुनोत्री, गंगोत्री-गौमुख एवं हेमकुण्ड साहिब मार्ग पर पर्यावरणीय मानकों के उल्लंघन, अनियंत्रित रूप से कूड़े/प्लास्टिक वेस्ट के निस्तारण, अनियंत्रित रूप से घोड़े-खच्चरों के शवों एवं मल-मूत्र के निस्तारण के सम्बन्ध से जनित समस्याओं के संबंध में दाखिल किया गया है।

2- अधोहस्ताक्षरी द्वारा यह भी अवगत कराया गया कि मा.एन०जी०टी० द्वारा दिनांक 05.01.2024 को पारित आदेश में उत्तराखण्ड प्रदूषण नियंत्रण बोर्ड को उपरोक्त चारों स्थानों की Carrying Capacity सम्बन्धी रिपोर्ट 02 माह के अन्तर्गत जमा करने हेतु निर्देशित

किया गया है। सुनवाई के समय अपीलार्थी की ओर से अनुरोध किया गया कि Carrying Capacity के अभाव में पूर्व में राज्य सरकार द्वारा विभिन्न स्थलों हेतु निर्धारित तीर्थयात्रियों की संख्या यथा— केदारनाथ—13,000, गंगोत्री—8,000, तथा यमुनोत्री—5,000 निर्धारित की जाये। इसी प्रकार संयुक्त कमेटी की आख्या के आधार पर घोड़े/खच्चरों की संख्या यथा— केदारनाथ मार्ग—2250, हेमकुण्ड साहिब—2375, गंगोत्री—2250 एवं यमनोत्री—875 निर्धारित की जाये। प्रश्नगत वाद की अगली सुनवाई दिनांक 13.3.2024 को निर्धारित है।

3— उक्त के अतिरिक्त यह भी उल्लेखनीय है कि पूर्व में मा.उच्च न्यायालय नैनीताल के आदेशों के अनुपालन में पशुपालन विभाग द्वारा केदारनाथ मार्ग एवं हेमकुण्ड साहिब मार्ग में घोड़े/खच्चरों के संचालन का अध्ययन किया गया तथा उक्त अध्ययन के आधार पर राज्य सरकार द्वारा Standard Operating Procedure (SOP) जारी की गयी, जिसके अनुसार केदारनाथ यात्रा मार्ग में 5000 तथा हेमकुण्ड साहिब यात्रा मार्ग हेतु 1050 अश्ववंशीय पशुओं की अधिकतम धारिता क्षमता निर्धारित की गयी है। उक्त अध्ययन रिपोर्ट एवं SOP को मा0 एन0जी0टी0 में दाखिल किया जा चुका है, अतः उक्त निर्धारित क्षमता को ही अन्तिम रूप से अधिकतम धारित क्षमता माना जाय। बैठक में पशुपालन विभाग द्वारा एक सप्ताह के अन्तर्गत यमुनोत्री यात्रा मार्ग में अश्ववंशीय पशुओं की धारिता क्षमता अध्ययन किये जाने पर सहमति व्यक्त की गयी।

4— अपर सचिव, पर्यटन विभाग द्वारा अवगत कराया गया कि पूर्व में उक्त तीर्थ स्थलों में तीर्थयात्रियों की संख्या का निर्धारण अवस्थापना व्यवस्थाओं की उपलब्धता तथा तीर्थयात्रियों को सुगमता से दर्शन की दृष्टि से निर्धारित की गयी थी। उक्त हेतु किसी प्रकार का Carrying Capacity सम्बन्धी अध्ययन नहीं किया गया है।

5— मुख्य सचिव महोदया द्वारा मा0 एन0जी0टी0 के अनुपालन में चारों तीर्थ स्थलों की Carrying Capacity का अध्ययन किये जाने के सम्बन्ध में बैठक में शोध संस्थानों के प्रतिनिधियों से उनका अभिमत चाहा गया।

6— भारतीय वन्यजीव संस्थान, देहरादून के वैज्ञानिक, डा0 बी0एस0 अधिकारी द्वारा अवगत कराया गया कि सभी पर्यावरणीय एवं अवस्थापना अवयवों आदि को सम्मिलित करते हुए तीर्थ स्थल की Carrying Capacity सम्बन्धी वैज्ञानिक अध्ययन हेतु न्यूनतम 01 वर्ष के समय की आवश्यकता होगी। यात्रा सीजन के अध्ययन की आवश्यकता होगी। डा0 अधिकारी द्वारा उपरोक्त Carrying Capacity सम्बन्धी वैज्ञानिक अध्ययन किये जाने हेतु संस्थान की ओर से सहमति व्यक्त की गयी।

7— डा0 सुमित राय, वैज्ञानिक—'डी', गोविन्द बल्लभ पंत राष्ट्रीय हिमालयी पर्यावरण संस्थान, कोसी—कटारमल द्वारा अवगत कराया गया कि Carrying Capacity सम्बन्धी वैज्ञानिक अध्ययन विभिन्न पर्यावरणीय घटकों तथा उपलब्ध संसाधनों के दृष्टिगत यात्रा सीजन के विभिन्न चरणों तथा यात्रा मार्ग के मुख्य पड़ावों/स्थलों को भी अध्ययन में सम्मिलित किया जाना होगा। इस प्रकार के वैज्ञानिक अध्ययन हेतु लगभग 12 से 18 माह का समय आवश्यक होगा। डा0 राय द्वारा Carrying Capacity सम्बन्धी वैज्ञानिक अध्ययन में संस्थान की विशेषज्ञता के दृष्टिगत संस्थान की ओर से अध्ययन में सहमति व्यक्त की गयी।

8— सचिव, परिवहन विभाग द्वारा यह भी सुझाव दिया गया कि चूंकि Carrying

Capacity के अध्ययन हेतु 12 से 18 माह की संभावना बतायी गयी है एवं वर्तमान में चारधाम में सुलभ पहुंच भी नहीं है, अतः मा0 प्राधिकरण को 13 मार्च, 2023 से पूर्व सरकार द्वारा प्रस्तावित अध्ययन के Time Frame से अवगत कराया जा सकता है।

9— जिलाधिकारी, चमोली द्वारा अवगत कराया गया कि Carrying Capacity तैयार किये जाने से पूर्व चार धामों में स्थित होटलों/धर्मशालाओं में कमरों की उपलब्धता, पानी की उपलब्धता/सप्लाई, कूड़ा निस्तारण, आने-जाने वाले वाहनों की संख्या, पार्किंग व्यवस्था आदि को भी सम्मिलित किया जाना होगा।

उक्त के क्रम में प्रमुख सचिव, पर्यावरण विभाग, उत्तराखण्ड शासन द्वारा अवगत कराया गया कि Carrying Capacity सम्बन्धी वैज्ञानिक अध्ययन हेतु भारतीय वन्य जीव संस्थान, देहरादून, जी.बी.पंत राष्ट्रीय हिमालयी पर्यावरण संस्थान, कोसी-कटारमल, अल्मोड़ा; वाडिया हिमालयी भूगर्भ संस्थान, देहरादून तथा अन्य संस्थानों से पत्राचार कर अभिमत प्राप्त किया जा सकता है।

10— प्रकरण के संबंध में विचार-विमर्शोपरान्त मुख्य सचिव महोदया द्वारा निम्नानुसार निर्देशित किया गया :-

(क) भारतीय वन्य जीव संस्थान, देहरादून, जी.बी.पंत राष्ट्रीय हिमालयी पर्यावरण संस्थान, कोसी-कटारमल, अल्मोड़ा; वाडिया हिमालयी भूगर्भ संस्थान, देहरादून आदि से Carrying Capacity सम्बन्धी वैज्ञानिक अध्ययन हेतु एक संक्षिप्त नोट 02 दिवसों में प्राप्त कर लिया जाये।

(कार्यवाही— WII, GBP-NIHE, UKPCB)

(ख) पशुपालन विभाग द्वारा यमुनोत्री यात्रा मार्ग हेतु अश्ववंशीय पशुओं की Carrying Capacity हेतु आवश्यक अध्ययन एक सप्ताह के अन्तर्गत कर सम्बन्धित विभाग एवं राज्य प्रदूषण नियंत्रण बोर्ड को प्रेषित की जाये।

(कार्यवाही—सचिव/निदेशक पशुपालन विभाग)

(ग) सम्बन्धित संस्थानों से अभिमत प्राप्त कर Carrying Capacity सम्बन्धी वैज्ञानिक अध्ययन हेतु वांछित समय की आवश्यकता के सम्बन्ध में मा0 एन0जी0टी0 में अपना पक्ष रखने की कार्यवाही 13 मार्च, 2023 से पूर्व सदस्य सचिव, उत्तराखण्ड प्रदूषण नियंत्रण बोर्ड द्वारा की जाये।

(कार्यवाही— UKPCB)

अन्त में सभी प्रतिभागियों का धन्यवाद ज्ञापित कर बैठक का समापन किया गया।

Signed by Ramesh Kumar
Sudhanshu

Date: 11-03-2024 11:50:42
(रमेश कुमार सुधाशु)

प्रमुख सचिव।

उत्तराखण्ड शासन

पर्यावरण, संरक्षण एवं जलवायु परिवर्तन अनुभाग

संख्या— 197123 /XXXVIII—1—2024

देहरादून: दिनांक:— 11 मार्च, 2024

प्रतिलिपि:— निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित—

1. अपर मुख्य सचिव/प्रमुख सचिव/ सचिव, पशुपालन विभाग, पंचायती राज विभाग, शहरी विकास विभाग, ग्राम्य विकास विभाग, पर्यटन विभाग एवं परिवहन विभाग, उत्तराखण्ड शासन।
2. पुलिस महानिदेशक, उत्तराखण्ड।
3. निदेशक, गोविन्द वल्लभ पन्त राष्ट्रीय हिमालयी पर्यावरण संस्थान, उत्तराखण्ड।
4. निदेशक, वन्यजीव संस्थान, भारत सरकार, देहरादून।
5. जिलाधिकारी, रुद्रप्रयाग/उत्तरकाशी/चमोली।
6. अध्यक्ष, जिला पंचायत, रुद्रप्रयाग/उत्तरकाशी।
7. प्रमुख वन संरक्षक (हॉफ), उत्तराखण्ड।
8. निदेशक, राज्य पर्यावरण, संरक्षण एवं जलवायु परिवर्तन निदेशालय, देहरादून।
9. सदस्य सचिव, उत्तराखण्ड प्रदूषण नियंत्रण बोर्ड, देहरादून।
10. मुख्य कार्यकारी अधिकारी, उत्तराखण्ड टूरिज्म डेवलपमेंट बोर्ड, देहरादून।
11. प्रभागीय वनाधिकारी, रुद्रप्रयाग/उत्तरकाशी।
12. अपर आयुक्त, ग्राम्य विकास विभाग, उत्तराखण्ड।
13. संयुक्त निदेशक, पंचायती राज विभाग, उत्तराखण्ड।
14. निदेशक, पशुपालन विभाग, उत्तराखण्ड।
15. गार्ड फाइल।

आज्ञा से,

Signed by Ashutosh Shukla

Date: 11-03-2024 14:34:58

(आशुतोष शुक्ल)

उप सचिव।



Fwd: Sub.: Scientific Study for carrying capacity of pilgrims and carrying capacity of Equines - reg.

1 message

BS Adhikari <adhikaribs@wii.gov.in>
To: rskathait2009@gmail.com

Thu, Mar 7, 2024 at 3:39 PM

Sir,

Forwarding the mail for your kind information.

Regards,

Dr BS Adhikari

----- Forwarded Message -----

Subject:Sub.: Scientific Study for carrying capacity of pilgrims and carrying capacity of Equines - reg.**Date:**Thu, 07 Mar 2024 13:21:59 +0530**From:**Director, Wildlife Institute of India <dwii@wii.gov.in>**To:**Uttarakhand PCB <msukpcb@yahoo.com>**CC:**adhikaribs@wii.gov.in, Dean WII <dean@wii.gov.in>

Dear Sir,

The Wildlife Institute of India, Dehradun is willing to carry out the afore-mentioned study for Uttarakhand State. The Institute would like to take up the study with one more additional objective i.e. assessment of ecosystem services.

The study would require almost 1.5 years (12 months of data collection and 6 months of report writing) to achieve the targets. Once agreed, the detailed proposal will be submitted to the concerned department to carry out the study.

Regards,

Virendra R Tiwari

Director

On 2024-03-06 19:05, Uttarakhand PCB wrote:

IMPORTANT

To,

Director,

Wildlife Institute of India

Chandrabani, Dehradun (Uttarakhand)

Email: wii@wii.gov.in

Kind Attention: Dr. B.S. Adhikari, Scientist 'G'

Email: adhikaribs@wii.gov.in

Sub.: Scientific Study for carrying capacity of pilgrims and carrying capacity of Equines - reg.

Sir/Mam,

The Uttarakhand Pollution Control Board, Dehradun is entrusted to carry out carrying capacity of Chardham pilgrims viz. _Kedarnath, Hemkund Sahib, Yamunotri_ _and Gangotri _of State of Uttarakhand. Carrying capacity assessment study would be conducted tentatively in

term of ecological sensitivity, available infrastructures, _inter alia_ following variables:

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1. Assessment of available infrastructure for tourists/pilgrims in the concerned areas.
2. Limiting Number & Types of vehicles with respect to available/proposed infrastructure.
3. Numbers of equines that can be permitted and their monitoring mechanism.
4. Mechanism of operation of equines and disposal of dead mules.
5. Management of solid & liquid wastes.
6. Measures for protection of flora & Fauna of the concerned areas.
7. Identification of prohibited/regulated activities which are incompatible with environment.
8. Safety precautions & Preventive measures.
9. Compliances of environment Acts/Rules.
10. Environmental awareness.
11. Monitoring Mechanism.

Through this communication, we would like to know your willingness to carry out carrying capacity studies of the above mentioned areas. An approximate time frame to carry out these carrying capacity assessment studies along with broad outline of study may please be mentioned in your reply. An earliest reply is highly solicited from your end.

Looking forward a long term institutional association towards environmental cause.

Yours Sincerely,

Dr. Parag Madhukar Dhakate, IFS
Member Secretary
Uttarakhand Pollution Control Board
Dehradun

Contact Person:
Dr. Rajendra Singh,
Scientific Officer
Mob.: 09412383118

Member Secretary
Uttarakhand Pollution Control Board
Dehradun

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Scientific Study for carrying capacity of pilgrims and carrying capacity of Equines - reg.

From: Director (psdir@gbpihed.nic.in)
 To: msukpcb@yahoo.com
 Cc: rai.sumit@gbpihed.nic.in; sumit.nihe@gmail.com; jckuniyal@gmail.com
 Date: Monday, March 11, 2024 at 01:54 PM GMT+5:30

Dear Sir,

This has reference to your trailing mail on the above subject. Please find attached herewith a concept proposal for your kind perusal.

With regards,

Steno to Director

प्रो. (डॉ.) सुनील नौटियाल (अलेक्जेंडर वॉन हम्बोल्ट फैलो)
 Prof. (Dr.) Sunil Nautiyal (Alexander von Humboldt Fellow)
 निदेशक/Director
 गोविंद बल्लभ पंत राष्ट्रीय हिमालयी पर्यावरण संस्थान
 G.B. Pant National Institute of Himalayan Environment (NIHE)
 (पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार का एक स्वायत्त संस्थान)
 (An Autonomous Institute of Ministry of Environment, Forest and Climate Change, Government of India)
 कोसी - कटारमल, अल्मोड़ा - 263 643, उत्तराखंड, भारत
 Kosi - Katarmal, Almora - 263 643, Uttarakhand, India
 फोन | Phone: (05962) 241015, ई-मेल | E-mail: psdir@gbpihed.nic.in
 वेबसाइट | Website: <http://gbpihed.gov.in>



----- Forwarded message -----

From: **Uttarakhand PCB** <msukpcb@yahoo.com>
 Date: Wed, Mar 6, 2024 at 7:13 PM
 Subject: Sub.: Scientific Study for carrying capacity of pilgrims and carrying capacity of Equines - reg.
 To: Director GBPIHED <psdir@gbpihed.nic.in>
 Cc: sumitssac101@gmail.com <sumitssac101@gmail.com>, sumit.rai101@yahoo.com <sumit.rai101@yahoo.com>

IMPORTANT

To,
Director,
G.B. Pant National Institute of Himalayan Environment
Kosi-Katarmal, Almora- 246343 (Uttarakhand)
Email: psdir@gbpihed.nic.in

Kind Attention: Dr. Sumit Rai, Scientist 'D'
Email: sumitssac101@gmail.com; sumit.rai101@yahoo.com

Sub.: Scientific Study for carrying capacity of pilgrims and carrying capacity of Equines - reg.

Sir/Mam,

684

The Uttarakhand Pollution Control Board, Dehradun is entrusted to carry out carrying capacity of Chardham pilgrims viz. *Kedarnath, Hemkund Sahib, Yamunotri and Gangotri* of State of Uttarakhand. Carrying capacity assessment study would be conducted tentatively in term of ecological sensitivity, available infrastructures, *inter alia* following variables:

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Looking forward a long term institutional association towards environmental cause.

Yours Sincerely,

Dr. Parag Madhukar Dhakate, IFS
Member Secretary
Uttarakhand Pollution Control Board
Dehradun

Contact Person:
Dr. Rajendra Singh,
Scientific Officer
Mob.: 09412383118

Member Secretary
Uttarakhand Pollution Control Board
Dehradun



Concept Note on Carrying capacity assessment of the IHR_nihe 11th March, 2024.pdf
224.4kB

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Proposal

on

“Carrying Capacity Assessment for Fostering Sustainable Development in Chardham, Uttarakhand”

(Thresholds Development for Pilgrimages in the Uttarakhand including Infrastructure, Track regions & Tourist place, equines, etc.)

Prepared by:



Centre for Environment Assessment & Climate Change (CEA&CC)
G.B. Pant National Institute of Himalayan Environment (NIHE)
Kosi-Katarmal, Almora – 263643, Uttarakhand, India

Submitted to



Uttarakhand Pollution Control Board (UKPCB)

Gauradevi Parayavaran Bhawan, 46-B, SIDCUL, IT Park
Sahastradhara Road, Dehradun – 244001, Uttarakhand, India

March 2024

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“Carrying Capacity Assessment for Fostering Sustainable Development in Chardham, Uttarakhand”

(Thresholds Development for Pilgrimages in the Uttarakhand including Infrastructure, Track regions & Tourist place, equines, etc.)

1. Introduction

The recent tragedies in Uttarakhand serve as poignant reminders of the region's vulnerability. Loss of lives, destruction of critical infrastructure, depletion of biodiversity, and disruption of livelihoods stand as solemn testaments to the challenges faced by this Himalayan state. Known as Dev Bhoomi, the land of Gods, Uttarakhand is home to numerous ancient temples, including the revered Char Dham pilgrimage sites: Badrinath, Kedarnath, Gangotri, and Yamunotri. These sites hold immense significance in Hinduism, with every Hindu expected to undertake the Char Dham Yatra at least once in their lifetime to seek blessings. Moreover, Hemkund Sahib, a Sikh pilgrimage site, adds to the cultural richness of the region. However, despite its spiritual significance and breathtaking landscapes, Uttarakhand faces significant challenges, exacerbated by climate change. Extreme climate events, such as flash floods and landslides, have become increasingly frequent and severe, wreaking havoc on both the environment and local communities.

In recent years, Uttarakhand has witnessed a surge in tourist influx especially after Covid-19, drawn by its natural beauty and religious significance. This influx has led to the development of associated infrastructure to accommodate the growing numbers, putting additional strain on the fragile ecosystem. Additionally, traditional modes of transportation, such as mules and equines, extensively used for transportation in the mountainous terrain, face challenges due to increased tourist activity and infrastructure development.

The recent disasters underscore the urgent need for sustainable development practices in the Himalayan region. There is a growing consensus among researchers, policymakers, and stakeholders on the importance of balancing development with environmental conservation. This entails reevaluating existing development paradigms to address the region's vulnerability to climate-induced challenges while also managing the impacts of increased tourism and associated infrastructure development.

In response to these challenges, this project aims to develop a Carrying Capacity Assessment Framework specifically tailored to the Chardham pilgrimage trails in Uttarakhand. The framework will address the management of mules and equines, ensuring their welfare and sustainable use in the region's transportation system. The development of a robust Carrying Capacity Assessment Framework, integrating environmental considerations with socio-economic and developmental aspirations, is crucial for building sustainable and climate-resilient communities in Uttarakhand. It is a proactive step towards mitigating the adverse effects of climate change and ensuring the long-term well-being of the region and its inhabitants, by fusing environmental considerations with socio-economic, livelihood and developmental aspirations, will equip policy planners and local communities with the tools needed for a sustainable tourism and development in the Chardham pilgrimage sites.

2. Scope of the Study

The proposed research project titled "Carrying Capacity Assessment for Fostering Sustainable Development in Chardham, Uttarakhand, is based on the recommendations made by the joint committee appointed by the Hon'ble National Green Tribunal (NGT) in response to the case of Urvashi Shobhna Kachari v. Union of India & Ors. The joint committee identified significant ecological damage near and around sacred pilgrim trails in Uttarakhand, particularly in the Kedarnath, Yamunotri, Hemkund Sahib, and Gangotri tracks. The observations highlighted poor solid and plastic waste management practices, inadequate shelter facilities, and a lack of proper disposal mechanisms for mule/equine dung and deceased animals. To address these challenges, the joint committee recommended several measures, including conducting a socio-ecological study to assess carrying capacity, establishing site-specific waste management mechanisms, setting up solid waste processing plants, and ensuring proper treatment of liquid waste. Furthermore, the committee emphasized the need for veterinary care for animals, efficient post-mortem procedures, and regular surveillance to enforce waste management rules effectively.

The proposed study aims to conduct a comprehensive study focused on assessing the carrying capacity and ecological sensitivity of pilgrimage tracks in Uttarakhand, particularly the Chardham routes encompassing Kedarnath, Yamunotri, Hemkund

Sahib, and Gangotri. The research will investigate various factors contributing to ecological degradation, including the influx of pilgrims and equines, inadequate waste management practices, and deficiencies in infrastructure. Additionally, the project will examine the socio-economic dynamics of the region, considering the livelihoods of local communities reliant on tourism. Through stakeholder consultation and engagement, the research will integrate local perspectives and concerns into the assessment process. The ultimate goal is to propose evidence-based recommendations and guidelines for policymakers and stakeholders to address environmental challenges and promote sustainable tourism in Uttarakhand's pilgrimage tracks.

3. Objectives

1. To develop a robust Carrying Capacity Assessment Framework tailored for the diverse landscapes-based needs of the Chardham track regions, identifying eco-sensitive regions and addressing urban areas, infrastructure, track regions & tourist place, mules, etc.
2. To assess the current and potential future carrying capacity limits in terms of population, infrastructure, water resources, waste management, energy, and biodiversity conservation.
3. To provide evidence-based recommendations, policy tools and remedial plans to foster sustainable land use, infrastructure development, and conservation strategies for urban planning, land-use policies, tourism management, and community-based conservation initiatives.

4. Brief outline of Methodology

The carrying capacity study will be carried out for Chardham pilgrims viz. Kedarnath, Hemkund Sahib, Yamunotri and Gangotri of State of Uttarakhand. Carrying capacity assessment study would be conducted tentatively in term of ecological sensitivity of the pilgrimage track/area, available infrastructures and future needs, *inter alia* following variables:

1. Assessment of available infrastructure for tourists/pilgrims in the concerned areas.
2. Limiting number/types of vehicles w.r.t available/proposed infrastructure.

3. Numbers of equines that can be permitted and their monitoring mechanism.
4. Mechanism of operation of equines and disposal of dead mules.
5. Management of solid & liquid wastes.
6. Measures for protection of flora & fauna of the concerned areas.
7. Identification of prohibited/regulated activities which are incompatible with environment.
8. Safety precautions & preventive measures
9. Environmental awareness and compliances to environment and/or SWM acts/rules
10. Capacity building and Monitoring mechanism

The project will employ a multidisciplinary approach involving environmental scientists, urban planners, ecologists, economists, and social researchers. The methodology will include:

4.1 Stakeholder Consultation and involvement: Engage with local communities, government agencies, NGOs, and other stakeholders to incorporate local knowledge and concerns to incorporate the real issues and challenges of each sacred pilgrim trails of Chardham, Uttarakhand.

4.2 Data Collection: The relevant data on population dynamics, land use, biodiversity, water resources, infrastructure, and socio-economic indicators will be collected from all sacred pilgrim trails of Chardham, Uttarakhand.

4.3 Ecological Assessment: Analyze the impact of developmental, tourism and other anthropogenic activities on ecosystem health, species diversity, and habitats.

Infrastructure Analysis: Evaluation of the capacity of existing infrastructure to support current and projected population and economic growth.

4.4 Socio-Economic Study: Understand the social and economic dynamics of the region's communities and their dependence on natural resources.

4.5 Carrying capacity assessment (Parameters, Indicators and Thresholds): Develop indicators on the basis of ecological, infrastructure, environmental and socio-economic studies and suggest the mitigative measures for the sustainable development.

4.6 Remedial plan for adaptive management: Unique plans will be developed for each pilgrimage sites based on the needs & challenges of each site and carrying capacity assessment.

5. Expected Outcomes

- i. Carrying Capacity Assessment Framework: A comprehensive and adaptable framework for assessing the carrying capacity of different landscapes within the other regions of Uttarakhand/IHR.
- ii. Sustainable Development Guidelines: Actionable recommendations for sustainable land use, infrastructure development, and conservation practices.
- iii. Policy Support: Informed inputs for policy formulation at regional and national levels, promoting sustainable development.
- iv. Remedial plans: A unique/site specific remedial plans will be devised for each Chardham pilgrimage site, taking into account the unique socio-ecological indicators identified through a comprehensive assessment of carrying capacity.
- v. Community Awareness: Increased awareness among local communities about the importance of balancing development and conservation.

6. Timeline of activities

24 months will be required to carry out the study for all the 4 pilgrimage track regions of Uttarakhand. The brief outline of the timeline for proposed activities are given below:

Task	Activities	1 st Year				2 nd Year			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Task 1	Manpower recruitment	✓	✓						
	Equipment purchasing	✓							
	Literature review	✓							
	Stakeholder Consultation and involvement (Preparatory phase)	✓							
Task 2	Data Collection		✓	✓	✓				
Task 3	Ecological Assessment		✓	✓	✓	✓	✓	✓	✓
Task 4	Infrastructure Analysis		✓	✓	✓	✓	✓	✓	✓
Task 5	Socio-Economic Study		✓	✓	✓	✓	✓	✓	✓
Task 6	Carrying capacity assessment based on Task 1-5			✓	✓	✓	✓	✓	✓
Task 7	Remedial plan for each Chardham Track/sites based on the					✓	✓	✓	✓

	outcomes of Task 1 & 6								
Task 8	Report Writing							✓	✓

7. Financial aspects:

The financial aspects of the project entail comprehensive funding to cover scientific manpower, extensive travel for data collection during the pilgrimage season, procurement of consumables and equipment, organization of meetings and workshops, provision for essential services and utilities, overhead charges, external payments for outsourcing, hiring additional project personnel, and allocation of a contingency fund. Ensuring adequate financial resources is crucial for successful implementation of carrying capacity assessment of Chardham facilitating thorough data collection, analysis, stakeholder engagement, and remedial plan development for adaptive management practices across all pilgrimage regions. The financial assistance is mainly required for Mandays (Scientist, Administration, Finance & Other S&T Staff), Consumables, Meeting & workshops, Services/Utilities, Overhead charges, Equipment usage (Existing/new equipment), External payments (Outsourcing/Honorarium), Hiring of Manpower (Senior Consultant-01, Project scientist II-1 Nos., Senior Project Associate-1 Nos., Project Associate I – 4 Nos., Field/Project Assistants – 4 Nos.), Travel (TA/DA), Contingencies, Intellectual fees, Service Tax/GST etc.