

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

IN

ORIGINAL APPLICATION NO. 618 OF 2025

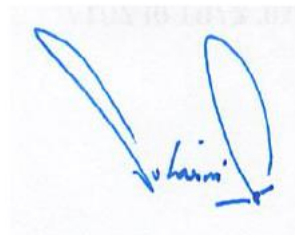
IN THE MATTER OF:

THE RESEARCH ARTICLE TITLED AS “TRANSFORMING FOOD, LAND AND WATER SYSTEMS TO COMBAT CLIMATE CRISIS IN LADAKH INDIA” APPEARING IN CURRENT SCIENCE VOLUME 129 NUMBER 8 DATED 25.10.2025

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THROUGH



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New Delhi

Date : 20.05.2026

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

Original Application No. 618/2025

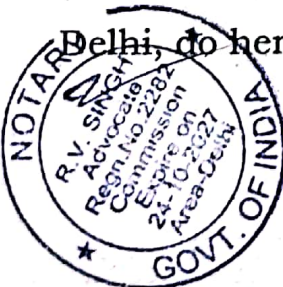
IN THE MATTER OF:

The Research Article titled as "Transforming food, land and water systems to combat climate crisis in Ladakh India" appearing in Current Science Volume 129 Number 8 dated 25.10.2025

**COUNTER AFFIDAVIT ON BEHALF OF MINISTRY OF
ENVIRONMENT, FOREST & CLIMATE CHANGE (MoEF&CC),
RESPONDENT NO. 1**

MOST RESPECTFULLY SHOWETH:

I, Dr. Susan George K., aged 47 years, working as Scientist 'E' in the Ministry of Environment, Forest and Climate Change (MoEF&CC), Indira Paryavaran Bhawan, Jorbagh Road, New Delhi, do hereby solemnly affirm and declare as under:



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1. That I am duly authorized to swear this affidavit in the above-mentioned matter on behalf of Respondent No. 1 i.e., Ministry of Environment, Forest and Climate Change (MoEF&CC), I am conversant with the facts and circumstances of the case on the basis of official records, and as such authorized and competent to swear this affidavit.
2. That the present Original Application has been registered suo motu on the basis of an article titled "Transforming food, land and water systems to combat climate crisis in Ladakh, India" published in Current Science, Volume 129, No. 8 dated 25.10.2025 as a Meeting Report of the one-day workshop organised by the Indian Council of Agricultural Research-Central Arid Zone Research Institute (ICAR-CAZRI), Regional Research Station, Leh, Ladakh on 12.08.2025.

3. At the outset, it is respectfully submitted that climate change is a global phenomenon transcending national boundaries and requiring coordinated international cooperation and collective action by all nations. In recognition of this shared responsibility countries have adopted multilateral frameworks under the United Nations Framework Convention on Climate Change (UNFCCC), including its two instruments, namely the Kyoto Protocol and the Paris Agreement, with the objective of stabilizing greenhouse gas concentrations, promoting sustainable development and strengthening global efforts to combat climate change.



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4. It is respectfully submitted that the Government of India (GoI) has consistently undertaken proactive measures to combat climate change in accordance with the principles of equity and Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC), while balancing developmental priorities and environmental sustainability.

INDIA'S CLIMATE ACTION

5. It is submitted that India is a Party to the UNFCCC, Kyoto Protocol and Paris Agreement and has undertaken substantial mitigation and adaptation actions in furtherance of its Nationally Determined Contributions (NDCs).
6. That India has submitted its Long-Term Low Carbon Development Strategy to the UNFCCC reaffirming the national goal of achieving net-zero by 2070.
7. It is further submitted that India updated its Nationally Determined Contributions in August 2022 and subsequently submitted NDCs for the period 2031–2035 on 25.03.2026. India's updated commitments inter alia include:

- reduction of emissions intensity of GDP by 45% by 2030 from 2005 levels;
- achieving about 50% cumulative electric power installed capacity from non-fossil fuel sources by 2030;



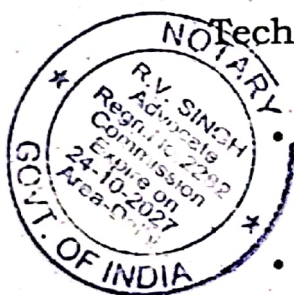
- creation of additional carbon sink of 2.5 to 3 billion tonnes of CO₂ equivalent through forest and tree cover by 2030; and
- strengthening adaptation in vulnerable sectors including Himalayan region, water resources, agriculture and disaster management.

NATIONAL AND STATE ACTION PLAN ON CLIMATE CHANGE

8. It is submitted that the Government of India is implementing the National Action Plan on Climate Change (NAPCC), which presently comprises nine National Missions relating to solar energy, sustainable habitat, water, sustainable agriculture, Green India, sustaining the Himalayan ecosystem, strategic knowledge on climate change, energy efficiency and human health.

9. It is submitted that one the Missions under NAPCC - the National Mission for Sustaining the Himalayan Ecosystem (NMSHE), implemented by the Department of Science and Technology (DST), focuses inter alia upon:

- vulnerability assessments in the Indian Himalayan Region;
- glacier and cryosphere research;
- climate modelling and disaster-risk assessment;
- ecosystem protection and adaptation planning; and
- strengthening scientific and institutional capacities in Himalayan States and Union Territories, etc.

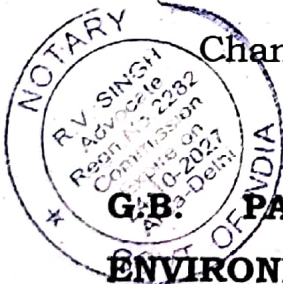


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10. It is further submitted that under the NMSHE, State Climate Change Centres (SCCCs) have been established in Himalayan States and Union Territories including Ladakh. The SCCCs network with various experts and agencies to build capacities in areas such as disaster risk reduction, Glacial Lake Outburst Flood (GLOF) risk assessment, Himalayan ecosystem dynamics, hydrology and water resource management, and climate resilience. NMSHE promotes training (80 scholars at Machoi Glacier, Drass), and catalyses research using Artificial Intelligence (AI), Internet of Things (IoT), remote sensing, and climate analytics for resilience and sustainable livelihoods.

11. It is further submitted that various States and Union Territories have prepared State Action Plans on Climate Change (SAPCCs) aligned with the objectives of NAPCC.

12. It is submitted that prior to the reorganization under the Jammu & Kashmir Reorganisation Act, 2019, climate-related issues and priorities for the Ladakh region were incorporated in the Jammu & Kashmir State Action Plan on Climate Change.



G.B. PANT NATIONAL INSTITUTE OF HIMALAYAN ENVIRONMENT

13. It is respectfully submitted that MoEF&CC has also set up G.B. Pant National Institute of Himalayan Environment

(GBPNIHE), Almora, an autonomous body, to serve as a focal agency mandated to:

- a. Undertake in-depth research and development studies on environmental problems of the Indian Himalayan Region (IHR);
- b. Identify and strengthen the local knowledge of the environment and contribute towards strengthening researches of regional relevance in the scientific Institutions, Universities/NGOs and Voluntary agencies working in the Himalayan region, through interactive networking; and
- c. Evolve and demonstrate suitable technological packages and delivery systems for sustainable development of the region in harmony with local perceptions.

14. It is submitted that GBPNIHE is not a direct party, and no faculty/researcher is an author/co-author of the published article. However, the faculty of the Ladakh Regional Centre of GBPNIHE participated in the workshop and the following points were highlighted during the workshop:

- i. Changthan region in Ladakh is dominated by grassland, which stores carbon and provides ample ecosystem services. Therefore, mapping and monitoring of these grasslands is important. In this regard, GBPNIHE has initiated a research project on



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“Carbon Budget and Eco- hydrological Dynamics of Selected Himalayan High-altitude Grasslands and Their Carrying Capacity,” funded by the National Mission on Himalayan Studies (NMHS), MoEF&CC, Gol. The project will help to identify the total carbon storage in these grasslands and their dynamics.

- ii. In Ladakh, the GBPNIHE is also working on a *“sustainable hydroponic cultivation system that utilizes treated wastewater from Faecal Sludge Treatment Plants”*. A gravity- driven irrigation system delivers nutrient-rich solutions, enabling eco-friendly and energy-efficient crop cultivation while addressing wastewater management challenges. This system may be up-scaled and adopted by the locals for the production of vegetables in the harsh climate of Ladakh. A national patent has been granted for the system. One medicinal plant and one vegetable production protocol are finalized and published in a peer-reviewed journal.
- iii. GBPNIHE, with the support received through NMHS, MoEF&CC, is implementing an ambitious project titled *‘Assessment of glacier- climate functional relationships across the Indian Himalayan region through long-term network observations’* since 2023. The project aims at (a) assessing glacial dynamics, changes in the glacial morphometry and mass balance using space-based resources and field measurements



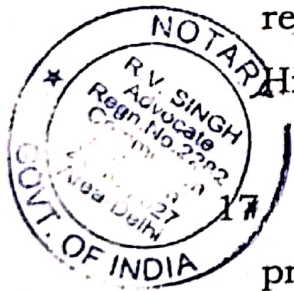
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(b) identifying changes in the glacier hydrodynamics and glacier melt-water chemistry using in-situ observations, and (c) investigating glacial mass balance as a response to changing climatic parameters using functional relationships through real-time and memory-based networks.

15. It is submitted that the published article/Meeting Report, which forms the basis of this Original Application, can be considered as a generic opinion of the organisers, wherein the GBPNIHE is not a direct party.

GENERAL SUBMISSIONS

16. It is submitted that various Ministries, scientific institutions and research organizations are actively engaged in glacier monitoring, climate vulnerability assessments, sustainable agriculture, water conservation, ecosystem restoration and resilience-building initiatives in the Himalayan region.



It is also most respectfully submitted that several projects and research initiatives relating to climate resilience, glacier monitoring, sustainable agriculture, water management and ecosystem conservation are being undertaken in the Ladakh region by different institutions supported by different Ministries. For instance, specific projects in the Ladakh region include "Reconstruction of Late

Quaternary climate change records from lakes in Trans-Himalayan Ladakh” hosted by the University of Ladakh, and “Development of climate-resilient and sustainable agri-based systems for better food, feed, nutritional and livelihood security in cold arid region of Ladakh” hosted by the National Dairy Research Institute, Karnal, Haryana, etc.

18. The answering respondent remains committed to continuing efforts for sustainable environmental management and climate resilience in Ladakh and the broader Himalayan ecosystem.

19. That in view of the foregoing facts and circumstances, it is most respectfully prayed that this Hon’ble Tribunal may be pleased to take the present affidavit on record and pass such further orders/directions as it may deem fit and proper in the interest of justice, equity and good conscience.



Susan
20/05/2026

(डा. **DEPONENT**
(Dr. Susan George K.)
वैज्ञानिक 'ई'/Scientist 'E'
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
M/o Environment, Forest and Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

VERIFICATION

Verified at New Delhi on this 20 day of MAY 2026 2026 that the contents of the above affidavit are true and correct to my knowledge and belief, based on official records, and nothing material has been concealed therefrom.

Susan
I identified the deponent and
no has signed in my presence

Solemnly affirmed before me, read
over & explained to the deponent

Susan
Notary Public, DELHI

20 MAY 2026

Susan
20/05/2026

(डा. **DEPONENT**
(Dr. Susan George K.)
वैज्ञानिक 'ई'/Scientist 'E'
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
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Govt. of India, New Delhi