

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, PRINCIPAL
BENCH, NEW DELHI

ORIGINAL APPLICATION NO. 555/2024

IN THE MATTER OF:

News item titled "India lost 2.33 million hectares of tree cover since 2000
Global Forest Watch" appearing in The Indian Express date 13.04.2024.

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Arvind Kumar

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International Boundary Directorate & DSA
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Wing-A, Pushpa Bhawan, New Delhi-110062

Respondent No.3

Date: 05.11.24
New Delhi

Through

Gigi C. George Adv

Standing Council (UOI)

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, PRINCIPAL
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REPLY ON BEHALF OF RESPONDENT NO. 3 SURVEYOR GENERAL
OF INDIA

Most Respectfully Showeth:

1. That the instant original application is registered *suo-motu* on the basis of the news item titled "India lost 2.33 million hectares of tree cover since 2000 Global Forest Watch" appearing in The Indian Express date 13.04.2024.
2. That the matter was listed on dated 20.05.2024 and Hon'ble Tribunal impleaded the following as respondents in the matter:
 - i. Central Pollution Control Board, through its Member Secretary Parivesh Bhawan, East Arjun Nagar, Delhi-110032

- ii. Ministry of Environment and Forest, through its Secretary, Indira Paryavaran Bhawan, Jorbagh Road, New Delhi – 110003.
 - iii. Survey of India, through its Director, Hathibarkala Estate, Dehradun, PIN - 248 001,
3. That Hon'ble Tribunal further directed Respondent No. 3, Director, Surveyor of India to submit a report showing the position of forest cover in India with specific reference to northeast from the year 2000 onwards with each five year interval covering the period upto March, 2024.
4. That the matter further listed on 28.08.2024 and Hon'ble Tribunal impleaded
- i. Respondent No. 4: Forest Survey of India through the Director General, Dehradun, Uttarakhand
- and also has served a notice directing the Answering Respondent (Respondent No. 3) to submit the report in terms of the previous order showing the position of forest cover in India with specific reference to Northeast from the year 2000 onwards with each five years interval covering the period upto March, 2024. In this regard, most respectfully following points are submitted for kind consideration of the Hon'ble National Green Tribunal;-
- (a) That Survey of India is National mapping agency established in 1767, an oldest scientific department. Survey of India created the national geodetic frame which became the basis of all further Surveying and Mapping in the country. Subsequently Survey of India prepared maps of entire country on 1:250 K scales with 100

m contour interval by 1960s, 1:50K scale map with 20m contour interval by 1980s and also nearly 60% of the country was mapped on 1:25K scale maps with 5-10m contour interval.

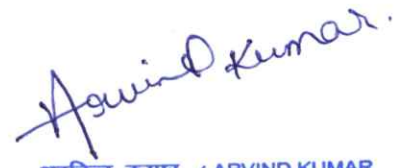
- (b) In December 2022 National Geospatial Policy(NGP- 2022) has been promulgated in which the mandate of Survey of India is to establish and maintain Geodetic Reference Frame (GRF), Digital Elevation Model, Administrative and functional areas Boundary, Geographical names and Ortho imagery. As per NGP-2022, the responsibility of main Geospatial themes are responsibility of various Ministries/Departments is as below;-

S. No.	Responsibility	Nodal Ministry/Department (Organizations)
i.	Geodetic Reference Frame	Department of Science & Technology(Survey of India)
ii.	Orthoimagery	Department of Science & Technology (Survey of India) Department of Space (Space based technology)(National Remote Sensing Centre)
iii.	Functional Areas (Administrative Boundaries)	Department of Science & Technology (Survey of India)
iv.	Geographical Names (Toponymy)	Department of Science & Technology (Survey of India)
v(a).	Elevation	Department of Science & Technology (Survey of India)
v(b).	Depth	Ministry of Ports, Shipping & Waterways (Inland Water) Ministry of Earth Science (Ocean & Sea)
vi.	Water	Department of Water Resources, River Development and Ganga Rejuvenation

vii.	Transport Networks	Ministry of Road Transport and Highways Ministry of Railways Ministry of Ports, Shipping & Waterways Ministry of Civil Aviation
viii.	Buildings and Settlements	Ministry of Housing and Urban Affairs (Urban) Ministry of Panchayati Raj (Rural)
ix.	Land Cover and Land Use	Department of Space (National Remote Sensing Centre) Ministry of Environment, Forest & Climate Change (Forests) (Forest Survey of India)
x.	Physical Infrastructure	Ministry of Housing and Urban Affairs (Urban) Ministry of Panchayati Raj (Rural)
xi.	Land Parcels	Department of Land Resources (Rural) Ministry of Housing and Urban Affairs (Urban)
xii.	Addresses	Ministry of Housing and Urban Affairs (Urban) Ministry of Panchayati Raj (Rural)
xiii(a)	Geology	Ministry of Mines (Geological Survey of India)
xiii(b)	Soils	Department of Agricultural Research and Education (National Bureau of Soil Survey and Land Use Planning)
xiv.	Population Distribution	Ministry of Home Affairs (Office of the Registrar General & Census Commissioner, India)

5. That as mentioned in above table, the National Geospatial Policy-2022, outlines a responsibility matrix that assigns specific roles to the relevant Nodal Ministries and Departments, including their respective organizations.
6. That as per sl.no.(ix) of the above table, the forest cover area falls under the "Land Cover and Land Use" category, for which the Forest Survey of India (under the Ministry of Environment, Forest & Climate Change) is designated as responsible authorities.

7. Since 1987, the Forest Survey of India has been entrusted with the biennial task of updating the tree cover across the country. The National Remote Sensing Centre (NRSC) is responsible for preparing thematic maps related to "Land Cover and Land Use". A copy of printout of webpage of Forest Survey of India and National Remote Sensing Centre (NRSC) affirming the above information is annexed herewith as **Annexure A (Colly)**.
8. That it is humbly submitted that the survey of India does not maintain thematic data of this nature which this Hon'ble bench Ordered on dated 20.05.2024 and 28.08.2024, wherein directives were issued to "Respondent No. 3 survey of India to submit a report, detailing the status of forest cover in India, with particular reference to the Northeast, from the year 2000 onwards, in intervals of five years, covering the period up to March 2024."
9. That, Since the Survey of India does not maintain thematic data of this nature, the relevant data can be provided by the Forest Survey of India (FSI) and the National Remote Sensing Centre (NRSC), as these organizations are the custodians of Land Cover and Land Use data.
10. Therefore, in the light of the submissions made hereinabove the Answering Respondent (Respondent No.3) Survey of India is not the custodian of the data that asked to provide by this Hon'ble Tribunal.
11. That it is submitted that the Answering Respondent will file additional reply/report if the same is required or this Hon'ble Tribunal directs for the same.



अरविन्द कुमार / ARVIND KUMAR
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Wing-A, Pushpa Bhawan, New Delhi-110062

Respondent No.3

Survey of India

Date:05-11.24
New Delhi

Through

Gigi C. George Advocate
Standing Counsel (UOI)
National Green Tribunal
Ch.No.457, L.B-I
Delhi High Court, N.D.

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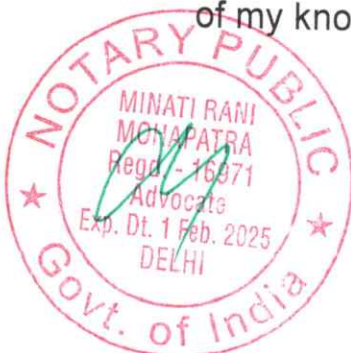
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AFFIDAVIT

I, Arvind Kumar, S/o of Sh. Chaturgun Ram, aged about 36 years, working as Superintending Surveyor having office at International Boundary Directorate & DSA, Wing-A, Pushpa Bhawan, New Delhi-110062, do hereby solemnly affirm and declare as under:

1. I say that I am the authorized to file the present reply on behalf of Respondent No.3 and is well conversant with the facts and circumstances of the instant case and thus competent to swear the affidavit.
2. I say that the accompanying reply has been drafted by my Counsel under my instruction and the contents of the same have been read over to me and explained to me in vernacular language and I have understood the same.
3. I say that the facts mentioned therein are true and correct to best of my knowledge and belief.



4. I say that the Annexures annexed to the application are down loaded from the official web site.

Arvind Kumar

अरविन्द कुमार / ARVIND KUMAR
अधीक्षण सर्वेक्षक / Superintending Surveyor
अन्तरराष्ट्रीय सीमा निदेशालय एवं डी एस ए
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Wing-A, Pushpa Bhawan, New Delhi-110062

Deponent

VERIFICATION

4 NOV 2024

Verified at New Delhi on this ____ day of October, 2024, do hereby solemnly affirm and declare that contents of above affidavit are true and correct and nothing material has been concealed.

IDENTIFIED



Arvind Kumar

अरविन्द कुमार / ARVIND KUMAR
अधीक्षण सर्वेक्षक / Superintending Surveyor
अन्तरराष्ट्रीय सीमा निदेशालय एवं डी एस ए
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Wing-A, Pushpa Bhawan, New Delhi-110062

Deponent

ATTESTED

4 NOV 2024

MINATI RANI MOHAPATRA
ADVOCATE (NOTARY)
Mob. No.: 8130128457

ATTESTED

MINATI RANI MOHAPATRA
NOTARY DELHI-R-16971
GOVERNMENT OF INDIA
SUPREME COURT OF INDIA
COMPOUND NEW DELHI
REGISTER Pg./Sl. No.

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FOREST SURVEY OF INDIA
Ministry of Environment, Forest & Climate Change
वनीकरण विभाग

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FOREST COVER MAPPING

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- [Scale of Interpretation](#) >
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- [Limitations](#) >

INTRODUCTION

Forest Survey of India assess the forest cover mapping of the country on a two-year cycle using satellite data. The main objective is presentation of the information on forest resources of the country at state and district level and to prepare forest cover maps on 1:50,000 scale. First assessment of forest cover of the country was made in 1987 and thereafter eight more assessments have been made. District wise information on forest cover has been made available from the third assessment (i.e. from 1991) onwards.

Till the fourth assessment interpretation of data for the entire country had been done visually. During fifth and sixth assessment interpretation of data for Madhya Pradesh and Maharashtra which comprises 28% forest cover of the country had been done digitally and for rest of the States/UTs, it had been done visually. In seventh assessment interpretation has been done digitally for thirteen states namely: Andhra Pradesh, Arunachal Pradesh, Assam, Delhi (UT), Himachal Pradesh, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura, which comprises 63% of the forest cover of the country. By eighth assessment the entire country was covered by digital assessment.

Cycle of Assessment	Year	Data Period	Sensor	Spatial Resolution	Scale	Minimum Mappable Unit (ha)	Mode of Interpretation
First	1987	1981-1983	LANDSAT-MSS	80 m	1:1 million	400	Visual
Second	1989	1985-87	LANDSAT-TM	30 m	1:250,000	25	Visual
Third	1991	1987-89	LANDSAT-TM	30 m	1:250,000	25	Visual
Fourth	1993	1989-91	LANDSAT-TM	30 m	1:250,000	25	Visual
Fifth	1995	1991-93	IRS-1B LISSIII	36.25 m	1:250,000	25	Visual & Digital
Sixth	1997	1993-95	IRS-1B LISSIII	36.25 m	1:250,000	25	Visual & Digital
Seventh	1999	1996-98	IRS-1C/1D LISS III	23.5 m	1:250,000	25	Visual & Digital



FOREST SURVEY OF INDIA
Ministry of Environment, Forest & Climate Change
शुद्धीत वन रक्षण



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MAJOR ACTIVITIES

- ▶ Forest Cover Assessment
- ▶ Inventory of Forest areas.
- ▶ Inventory of Trees Outside Forests (Rural & Urban).
- ▶ Inventory data processing.
- ▶ Methodology/ Design.
- ▶ Training and Extension.
- ▶ Projects and Consultancies.

TECHNICAL DETAILS

- + Overview
- + Applications
- + Sensors
- + Users
- + Portals

Applications » Forestry & Ecology » Applications

Forestry and Ecology

Applications

Identification of Forest Cover Loss Locations

Forest survey of India, MOEF&CC brings about comprehensive Biennial reporting of the forest cover status, however, there is a need of annual/sub-annual actionable forest cover loss information.

[Read more](#)

Long term forests cover change

Multi-source and multi-temporal data from earliest possible topographical maps and satellite remote sensing datasets were used to map the forest cover in the country over last eight decades (1930, 1975, 1985, 1995, 2005 and 2013/2014). Forest fraction cover information was hosted on Bhuvan-Forest Fraction Cover

[Read more](#)

Monitoring of Biosphere Reserves

The Biosphere Reserves (BRs) are internationally designated landscapes / seascape units under UNESCO's flagship programme: "Man and Biosphere (MAB)". To undertake activities of biodiversity conservation and development of sustainable management

[Read more](#)

FORESTRY APPLICATIONS



THEMATIC MAPS

- + Overview
- + CartoDEM
- + WMS Layers
- + Any Query

Data Products » Thematic Maps

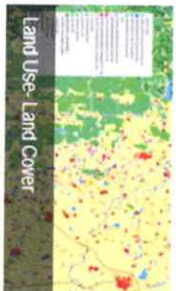
Thematic Maps

Overview


NRSC / ISRO in collaboration with State remote sensing applications centres has generated database on natural resources and other thematic information. These databases are hosted on Bhuvan portal under thematic services. Bhuvan-Thematic Services facilitate the users to select, browse and query the thematic datasets from this portal. Users can consume these thematic maps and integrate into their systems as OGC Web Services.

1	Carto DEM
2	Land Use Land Cover 1:250K
3	Land Use Land Cover 1:50K
4	Land Use Land Cover 1:10K
5	Urban Land Use: NUIS
6	Wastelands Information
7	Geomorphology
8	Lineament
9	Flood Hazard Zonation
10	Flood Annual Layers
11	Erosion Maps
12	Sail Affected & Waterlogging
13	Water Bodies Information System
14	Urban Sprawl


THEMATIC PRODUCTS



Land Use- Land Cover



Waste Land Information



Lineaments